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FINAL TANK MANAGEMENT PLAN NAS KEY WEST FL
6/1/1997
RUST ENVIRONMENTAL AND INFRASTRUCTURE

0088

FINAL

TANK MANAGEMENT PLAN
NAVAL AIR STATION KEY WEST
KEY WEST, FLORIDA

JUNE 1997

SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
CHARLESTON, SOUTH CAROLINA
29419-9010

FINAL
TANK MANAGEMENT PLAN
NAVAL AIR STATION KEY WEST,
KEY WEST, FLORIDA

Prepared For:

SOUTHERN DIVISION
NAVAL FACILITIES ENGINEERING COMMAND
2155 Eagle Drive
North Charleston, South Carolina 29419-9010
Contract N62467-93-D-0662

Rust Project No. 37147.100
June 1997

Prepared By:

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EXECUTIVE SUMMARY

Rust has developed a comprehensive Tank Management Plan (TMP) under Southern Division Contract N62467-93-D-0662 for NAS Key West, Key West, Florida. The TMP provides information on all oil and hazardous substance storage tanks at the following locations: Boca Chica Field, Trumbo Point Annex, Fleming Key, Truman Annex, Sigsbee Park, Naval Regional Medical Center, and Saddlebunch Key. The Plan also includes recommendations for each tank to meet the regulatory requirements of Federal Regulations, EPA 40 CFR 280 and 40 CFR 112; Florida Department of Environmental Protection (FDEP) Chapters 62-761 and 62-762; and OPNAVINST 5090.1B. In addition, the TMP evaluates each tank's throughput and strategic value and makes recommendations for tank consolidation, change in type (AST vs. UST), and other management options as appropriate. The following tasks were performed in the preparation of this Plan:

- research of current tank inventory;
- physical verification and survey of each tank site sufficient to determine tank usage, content, and value, and preparation site specific maps;
- review of federal and state aboveground storage tank (AST) and underground storage tank (UST) regulations;
- review of available Navy records (contracts, construction drawings, regulations, and various plans);
- review of FDEP tank registrations and other applicable environmental records;
- development of an action potential priority rating and environmental risk rating system;
- evaluation of site specific tank criteria; and
- site specific recommendations and cost estimates.

Additional storage tank sites which were not previously entered into the NAS Key West Tank Inventory Management System (TIMS), were identified. TIMS is a computer database program designed to organize information about storage tanks. This system has been updated as a result of this TMP and contains all available information associated with each identified NAS Key West storage tank.

This Tank Management Plan presents recommendations for each tank regarding regulatory compliance, provides a comprehensive tank inventory, and offers a guide for planning and management of the Activity's storage tanks.

ACRONYMS

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

AST	Aboveground Storage Tank
BCTF	Boca Chica Tank Farm
bls	below land surface
BOSC	Base Operations Services Contractor
CAP	Corrective Action Plan
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CFR	Code of Federal Regulations
DNA	Data Not Available
FRP	Fiberglass Reinforced Plastic
FDEP	Florida Department of Environmental Protection
mg/l	milligrams per liter
MSL	mean sea level
NAS	Naval Air Station
NFPA	National Fire Protection Association
OPNAVINST	Chief of Naval Operations Instruction
OWS	Oil/Water Separator
RUST E&I	RUST Environment and Infrastructure
SCB	Secondary Containment Basin
SOP	Standard Operating Procedures
SOUTHNAVFACENGCOM	Southern Division Naval Facilities Engineering Command
TIMS	Tank Inventory and Management System
TPTF	Trumbo Point Tank Farm
USEPA (EPA)	United States Environmental Protection Agency
USGS	United States Geological Survey
UST	Underground Storage Tank

1.0 INTRODUCTION

Naval Air Station (NAS) Key West is located in Monroe County, FL. approximately 150 miles southwest of Miami, FL. on U.S. Highway 1 (see Figure 1-1). The Naval Complex at NAS Key West is spread throughout several areas of the lower Florida Keys and encompasses approximately 5,600 acres. This plan addresses the Naval Complexes at Boca Chica Key, Key West, Trumbo Point Annex, Fleming Key, Truman Annex, Sigsbee Park and Saddlebunch Key. These areas are concentrated around Key West and Boca Chica Key (see Figure 1-2).

Rust has prepared this Tank Management Plan for SOUTHNAVFACENGCOM under Contract N62467-93-D-0662. The Tank Management Plan provides an inventory of all aboveground and underground petroleum and hazardous substance storage tanks at NAS Key West, FL. In addition, this plan provides a schedule for maintaining existing and future storage tanks in order to comply with applicable AST and UST regulations. The plan addresses each tank's potential action priority based on the potential for releases and subsequent environmental impact due to a release. Finally, the plan provides cost estimates for the work that may be required to obtain regulatory compliance and reduce tank release potential.

1.1 Background

This management plan satisfies the requirements of OPNAVINST 5090.1B, Chapter 16; the UST Guidance Document, Chapter 8; and addresses the regulatory requirements promulgated in the following federal and state documents:

- USEPA 40 CFR 280
- USEPA 40 CFR 112
- FDEP AST Regulations Chapter 62-762
- FDEP UST Regulations Chapter 62-761

The purpose of this plan is to identify and locate all existing petroleum storage tanks at NAS Key West and to assess each tank for regulatory compliance with USEPA and FDEP AST/UST regulations. The regulatory status information has been compiled into the existing TIMS database program provided by the activity. The TIMS is a computerized management system that organizes the tank inventory information such as tank size, contents, materials of construction, and date of installation. The regulatory compliance status of the tank is entered together with the compliance action to be taken, a target date for the action, and an estimate of the associated costs.

1.2 Project Approach

Prior to visiting the NAS Key West facility, Rust was provided two TIMS reports dated December 7, 1992 and April 18, 1995. These reports supplied data (tank age, construction, content, etc.) on known tanks at the activity and were used to compile the initial list of tanks to be evaluated. A review of available construction drawings, contract documents, several site visits and interviews of key personnel were used to verify the data included in the TIMS reports.

Information contained within the construction drawings provided tank dimensions, tank material of construction, location of piping, and information on corrosion protection or leak detection. Construction drawings on all tanks were not available because many older drawings had been forwarded to the National Archives in Pennsylvania making verification of tank data impossible. Contract files were also reviewed as part of this records search.

Site visits were made to each tank location during the period May through July 1996. The aboveground tanks, associated piping and secondary containment at each site were inspected for compliance with state and federal regulations. A physical survey of each site was also conducted via a Topcon Total Station to verify tank size and the location of aboveground piping, secondary containment and surface drainage. Data collected by this survey was used in the preparation of the site maps found in section 6.0. Due to the inaccessibility of underground tanks, data found in the provided TIMS reports, construction drawings and contract files were used. Surveys of the UST sites identified of the location of any visible piping, fill ports, vent piping and/or other system components. Attempts were made to located the USTs and associated piping by ground probing. During these site visits many tanks that were not included in the provided TIMS reports were identified. These tanks have been reviewed, surveyed, and evaluated in the same manor as described in this section and are included in the updated TIMS report.

Key personnel at each tank site were interviewed as to the tank and piping size and construction, tank fuel consumption, mission, and spill history. The following is a partial list of individuals interviewed:

Location	Position
Boca Chica Field	Environmental Coordinator
Boca Chica Fuel	Fuels Director
Boca Chica Tank Farm (BCTF)	BCTF Supervisor
Trumbo Point Tank Farm (TPTF)	TPTF Supervisor
Special Forces	Maintenance Director

Upon completion of field activities all data (field, researched, and provided) was reviewed and evaluated. An updated TIMS report was generated (see Section 3.0). Recommendations included in the updated TIMS can be found in Section 6.0 of this Plan.

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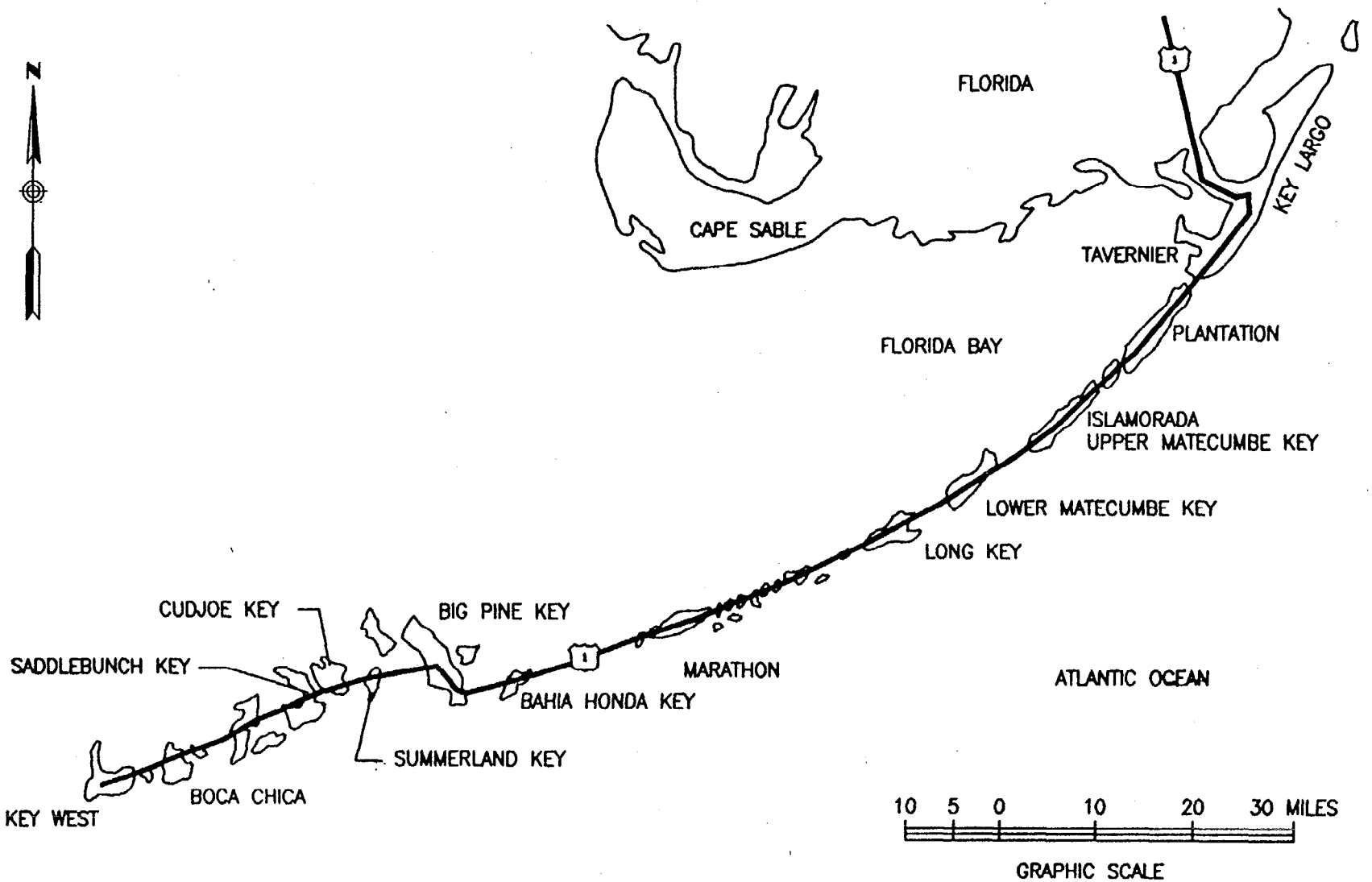
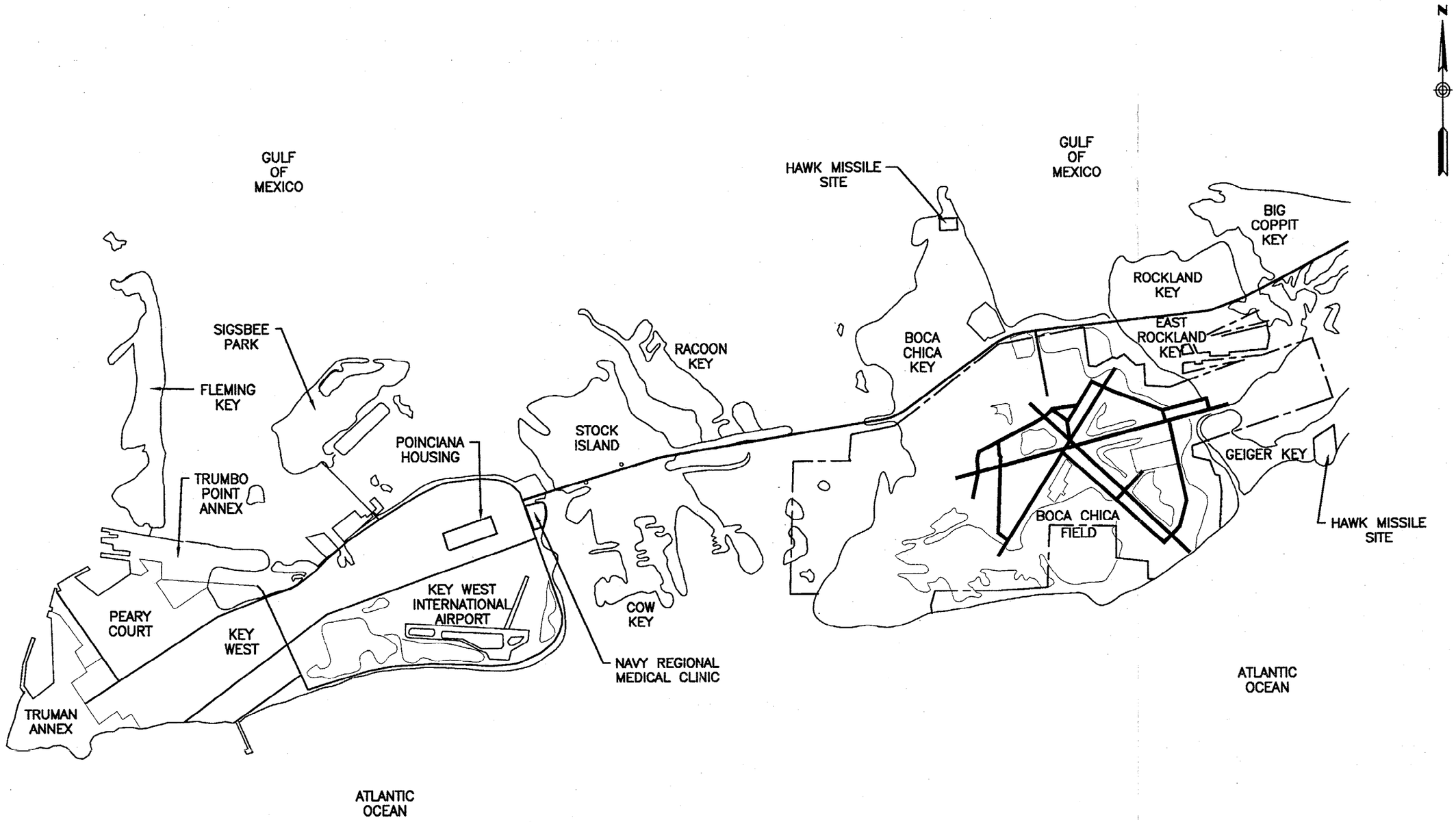


RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 1.1
SITE LOCATION MAP
NAS KEY WEST
KEY WEST, FLORIDA
RUST Project No. 37147

OCTOBER, 1996

DWG: P:\CADD\37147\SITEMAPS\VCINITY PLOTTED: 09/24/96



4000' 0 4000'
SCALE 1"=4000' FEET

RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 1.2
SITE VICINITY MAP
NAS KEY WEST
KEY WEST, FLORIDA
RUST Project No. 37147

OCTOBER, 1996

0089 B017

2.0 SITE CHARACTERISTICS

2.1 Topography

The topography in the NAS Key West area is typically flat and low with ground elevations ranging from 0 to 6 feet mean sea level (MSL). Average elevations are approximately four to five feet MSL and are below the 100-year flood elevation of eight feet MSL. Low tidal flats, which gradually slope into the deep waters of the Atlantic Ocean and the Gulf of Mexico, typically border the islands of the lower Florida Keys.

2.2 Regional Geology

The original soils in this area are shallow marl over limestone with limestone rock outcrops at many locations. Many areas on NAS Key West have been filled and graded. In addition, areas of Trumbo Point and Sigsbee Park were developed from the disposal of dredge materials.

2.3 Regional Hydrogeology

Highly transmissive limestone aquifers underlie the lower Florida Keys. Most contain brackish, saline or hypersaline water. Only the larger Keys (Key West) have fresh groundwater.

Due to the generally low ground elevation the groundwater table is close to the surface. The ground water table aquifer in the lower Keys is developed within the Miami Oolite and Key Largo Limestone. In most areas the limestone occurs at the ground surface. The aquifer is recharged directly from rain water and storm water discharge flow into surrounding surface and tidal waters. The infiltration into the Key Largo Limestone is extremely rapid resulting in an almost immediate discharge into surrounding salt water bodies. In the Miami Oolite Formation found in Key West a fresh water aquifer occurs above the saltwater interface. This freshwater lens is subject to intrusion through the porous Key Largo Formation that underlies the less porous Miami Oolite. No freshwater wells exist at NAS Key West. Potable water is piped from the mainland of Florida.

Groundwater flow direction, overall, is to the nearest surface or tidal water body in the area. Elevations of groundwater vary due to the influence of local rainfall and tidal activity.

3.0 TANK INVENTORY AND MANAGEMENT SYSTEM

3.1 General

The Tank Inventory and Management System database, otherwise known as TIMS, is a D-base algorithm that can be run on standard MS-DOS computer systems. The program was developed by SOUTHNAVFACENGCOM and is used by personnel in the management of petroleum storage tanks. After all storage tank information is researched and confirmed, the data is entered into a Tank Record form displayed on a computer screen. Once into the computer program, there are several fields for data entry which comprise the Tank Record form. The following are included:

- Tank identification number
- Year of tank installation
- Tank contents
- Tank capacity
- Tank design (i.e. aboveground or underground)
- Tank and associated piping materials of construction
- Types of leak detection
- Tank status
- Last date of tank system testing

This physical information is necessary such that applicable regulations can be reviewed and compliance measures planned. Future recommendations can also be made based on this information.

Additional fields for data entry are also included on the Tank Record form. These fields provide management and planning information for current and future compliance measures and tank system strategies. The additional information includes:

- Proposed interim compliance measures
- Target dates
- Estimated budget
- Inventory recording
- Spill history
- Miscellaneous remarks

Data entry into the TIMS consists of identification numbers, numeric values, codes, and verbal descriptions. Identification numbers are used to uniquely identify each tank that has existed or

currently exists. Any tanks installed as replacements for older tanks should have a distinct identification number in name, however similar as to establish a site history. Numeric values are also input as is with tank installation dates and tank capacities. Codes are used to input tank contents, tank and piping construction, leak detection methods, and tank status. These codes can be found as Table 2-1, located at the end of this section, which is printed from the TIMS computer program. An example is an "A" is to be input for tank contents containing leaded gasoline. Verbal descriptions are used to identify proposed interim compliance measures, inventory recording, and spill history.

Once the database has been assembled, program utilities allow indexing and sorting of the data as well as final printouts. The data can be sorted such that regulated tanks are listed prior to unregulated tanks. This allows necessary compliance measures to be located easily for planning and implementation. There are three types of output files available for printing that can be generated by the TIMS:

- Physical Information on Storage Systems (Table 3-1)
- Management and Planning Information (Table 3-2)
- Physical and Planning Information (Table 3-3)

These tables are located at the end of this section.

3.2 NAS Key West TIMS

The TIMS database for NAS Key West which was updated for the purpose of this Plan was provided by SOUTHNAVFACENGCOM. Printouts of the data contained in the tables from TIMS were provided in the scope of work and dated April 18, 1995. Similar printouts containing the exact information were received from NAS Key West dated as early as 1992. Since this time, many new tanks have been installed, either as new systems or as replacements to older systems. Similarly, many existing tanks have since been taken out of service either by removal or closing in place.

The main purpose of this Plan is to update the existing tank inventory at NAS Key West and establish interim measures necessary for compliance with applicable state and federal regulations. The updated TIMS database information is presented in Tables 3-1, 3-2, and 3-3. These tables are the TIMS generated tables with the latest tank inventory incorporated into them. The storage tank information in the now current TIMS database has been compiled from the following:

- Existing TIMS information
- Public Works Tank Inventory Listing

- Tank registration data
- Construction drawings
- Personnel interviews
- NAS Key West OPA 90 report
- NAS Key West SPCC report
- NAS Key West Storage Systems Management Plan
- Physical survey of tank sites

The storage tank identification numbers have been assigned to provide adequate information as to the tanks' location at NAS Key West. During the data gathering process, several discrepancies were discovered between past tank numbers and current tank numbers. These discrepancies were resolved based on the following three criteria and in the order mentioned:

- Existing TIMS database tank identification number
- The number of the building that the tank services
- The most identifiable numbered structure associated with the subject tank.

Data provided as to the tanks' size, age, and design were also used to properly identify tanks with current registration data provided to FDEP.

All petroleum and hazardous substance storage tanks identified at NAS Key West have been incorporated into Section 6.0 of this Plan. This chapter itemizes each tank, providing a description of pertinent tank information including recommended actions to meet regulatory requirements as well as an estimate of their associated costs. However, not all tanks at NAS Key West have been incorporated into the TIMS database update. Tanks found at locations that are not property of the U.S. Navy were not included. Four tanks were found and incorporated into this Plan at the request of NAS Key West that are located on U.S. Department of Agriculture property. These tanks were included solely due to their proximity to Navy property and potential to contaminate Navy property should a spill take place. The Navy is not the owner nor responsible for these storage tanks. One tank located on Base was not included in the TIMS due to it not yet being in service. A total of twenty-seven tanks containing hazardous substances found on Base were also not included in the TIMS. Per the scope of work, only petroleum storage tanks were updated and included. The following is a list of those tanks not included in the updated TIMS database:

- USDA1, 2, 3, and 4 (Owned by U.S. Department of Agriculture)
- A924A (Not yet in service)

- AG(103, 104, 233, 234, 263, 264, 509, 510, 759, 760, 837, and 840)B and C (Contain ethylene glycol hydraulic fluid at runway arresting gear)
- A979A and B (Contain liquid oxygen)
- A979C (Contains liquid nitrogen)

TABLE 2-1
CODE LIST

TABLE 2-1 C O D E LIST
TANK INVENTORY AND MANAGEMENT SYSTEM DATA BASE

FILL TYPE

P	Pressurized System	S	Suction (Negative Pressure) System		

TANK CONTENTS

A	Leaded gasoline	K	Kerosene	T	Hazardous Substance
B	Unleaded gasoline	L	Waste Oil	U	Mineral Acid
C	Gasohol	M	Fuel Oil; On Site Heating	V	Bunker C Residual Oil
D	Vehicular Diesel	N	Fuel Oil; Distribution	W	Petroleum Additive (Pollutant)
E	Aviation Fuel	O	New/Lube Oil	Y	Unknown
F	Jet Fuel	Q	Pesticides	Z	Other
G	Diesel; Emergency Generator	R	Ammonia Compound		
H	Diesel; Generator or Pump	S	Chlorine Compound		

ABOVE GROUND TANK CONSTRUCTION

A	Overfill Protection - Ball Check Valve	J	Secondary Containment, Synthetic Liner	S	Earth Base
B	Interior Lined ord Lined Bottom Steel	K	Secondary Containment, Concrete	T	Small Use Tank
C	Bare, Painted, or Asphalted Steel	L	Compartmented	U	Field Erected Tank
D	Unknown	M	Spill Containment	W	Tank Built on Supports
E	Fiberglass	N	Overfill Protection - Flow Shut Off	X	Concrete
F	Fiberglass-clad Steel Composite	O	Overfill Protection - Tight Fill	Y	Other
G	Sacrificial Anode:Cathodic Prot & Coated	P	Impervious Berm	Z	Department Approved Alternate
H	Impressed Current:Cathodic Prot & Coated	Q	Earth Berm		
I	Double-Walled	R	Impervious Base		

UNDER GROUND TANKS CONSTRUCTION

A	Overfill Protection - Ball Check Valve	J	Secondary Containment, Synthetic Liner	S	Earth Base
B	Interior Lined ord Lined Bottom Steel	K	Secondary Containment, Concrete	T	Small Use Tank
C	Bare, Painted, or Asphalted Steel	L	Compartmented	U	Field Erected Tank
D	Unknown	M	Spill Containment	W	Tank Built on Supports
E	Fiberglass	N	Overfill Protection - Flow Shut Off	X	Concrete
F	Fiberglass-clad Steel Composite	O	Overfill Protection - Tight Fill	Y	Other
G	Sacrificial Anode:Cathodic Prot & Coated	P	Impervious Berm	Z	Department Approved Alternate
H	Impressed Current:Cathodic Prot & Coated	Q	Earth Berm		
I	Double-Walled	R	Impervious Base		

PIPE CONSTRUCTION

A	Aboveground, Not in Contact With Soil	F	Double Walled	K	Dispenser Liners
B	Galvanized or Unprotected Metal	G	Secondary Containment	L	Bulk Product Piping
C	FiberGlass	H	Airport Hydrant Piping	Y	Unknown
D	Steel Protected with Approved Coating	I	Suction Piping System	Z	Department Approved Alternate
E	Cathodically Protected Steel	J	Pressurized Piping System		

LEAK DETECTION METHOD

A	Vapor Monitoring	G	Piping/In-Line Detectors w/Auto Shut Off	M	Manual Tank Gauging System
B	Groundwater Monitoring	H	Piping/In-Line Flow Restrictors	N	Groundwater Monitoring
C	Groundwater Monitoring Plan	I	Not Required, See Rules for Exemptions	X	None
D	SPCC Plan	J	Interstitial Monitoring, Piping Liners	Y	Unknown
E	Interstitial Monitoring, tank liners	K	Interstitial Monitr'g,Dbl-Walled Piping	Z	Department Approved Alternate
F	Interstitial Monitr'g, Double Walled Tnk	L	Automatic Tank Gauging System		

TANK STATUS

A	Properly Closed in Place(Assessment Req)	F	Unmaintained Storage Tank/Abandoned	U	In-Service
B	Removed From the Site (Assessment Req)	T	Temporary Out-of-Service		

INTERIM COMPLIANCE PROCEDURE FOR TANKS LESS THAN THAN 20,000 GALLONS

A	Annual Tank Testing	E	Install Overfill Protection	M	Replace With AboveGround Tank
B	Biennial Tank Testing	F	Inventory Reconciliation	N	Replace With UST System
C	Install Line Leak Detector(pressure sys)	K	Being Investigated Under Other Programs		
D	Install Compliance Monitoring Wells	L	Scheduled for Removal or Abandonment		

INTERIM COMPLIANCE PROCEDURE FOR TANKS GREATER THAN THAN 20,000 GALLONS

G	SPCC Plan	J	Drain, Inspect, Clean and Repair ea 3yrs	F	Inventory Reconciliation (marginal)
H	Groundwater Monitoring Plan	D	Install Compliance Monitoring Wells		
I	Tracer Tests	K	Being Investigated Under Other Programs		

TABLE 3-1

PHYSICAL INFORMATION ON STORAGE SYSTEMS

TABLE 3-1
PHSICAL INFORMATION ON STORAGE SYSTEMS
TANK INVENTORY AND MANAGEMENT SYSTEM DATA BASE
U.S. NAVY STORAGE SYSTEMS MANAGEMENT PLAN

** ACTIVITY ID # : FL44KWTNAS NAVAL AIR STATION CONTACT : STEVE COVELL (305)292-2194

TANK NO.	YEAR	CONTENTS	REGULATED	TANK SIZE Gals	ABOVE/ UNDER	PRESS/ SUCT	TANK CONST	PIPE CONST	LEAK DETECT TYPE	STATUS	LAST TEST DATE	PROPOSED INTERIM COMPLIANCE MEASURES
A969	87	F	YES	5,000	A		CPW	A	X	B	/ /	REMOVED
D27	42	V	YES	10,000	U		MUX	BIJ	BD	T	/ /	UPGRADE
L39	42	A	YES	2,000	U		CW	B	X	B	/ /	REMOVED
L42A	42	A	YES	250	U		C	B	X	B	/ /	REMOVED
L42B	42	A	YES	250	U		C	B	X	B	/ /	REMOVED
L44	42	N	YES	1,000	U		C	B	X	B	/ /	REMOVED
V1552	65	N	YES	280	U		C	B	X	B	/ /	REMOVED
V4111A	90	G	YES	550	U		EIMN	CDGI	DFM	U	/ /	IN COMPLIA
V4111B	90	Z	NO	200	U		X	C	X	U	/ /	
A127-B	0	E	YES	560	A		CW	B	X	B	/ /	REMOVED
A127-C	0	E	YES	560	A		CW	B	X	B	/ /	REMOVED
A127-D	0	E	YES	1,000	A		CW	B	X	B	/ /	REMOVED
A317-A	54	A	YES	2,000	U		C	B	X	B	/ /	REMOVED
A317-B	54	A	YES	2,000	U		C	B	X	B	/ /	REMOVED
A317-C	59	A	YES	2,000	U		C	B	X	B	/ /	REMOVED
A317-D	54	A	YES	2,000	U		C	B	X	B	/ /	REMOVED
A317-E	54	A	YES	2,000	U		C	B	X	B	/ /	REMOVED
A317-F	59	A	YES	2,000	U		C	B	X	B	/ /	REMOVED
A317-G	74	D	YES	6,000	U		EM	CI	BD	U	02/01/96	REPLACE
A317-H	74	B	YES	6,000	U		EM	C	BD	U	02/01/96	REPLACE
A317-I	74	B	YES	6,000	U		EM	C	BD	U	02/01/96	REPLACE
A322-A	74	B	YES	10,000	U		E	B	M	B	09/11/89	REMOVED
A322-B	61	A	YES	6,000	U		C	B	M	B	09/11/89	REMOVED
A322-C	61	B	YES	6,000	U		C	B	M	B	09/11/89	REMOVED
A902-A	0	B	YES	1,500	A		CRP	A	X	B	/ /	REMOVED
A924	51	L	YES	24,600	A		CKUW	ABL	X	F	12/31/81	UPGRADE
A925	51	L	YES	24,600	A		CKUW	ABL	X	F	12/31/81	UPGRADE
A938	53	F	YES	0	A		CQSU	ABIJL	BD	U	03/31/88	UPGRADE
A944	53	F	YES	239,000	A		CQSU	ABIJL	BD	U	01/31/88	UPGRADE
A945	57	F	YES	213,000	A	U	CQSU	ABIJL	BD	U	03/31/88	UPGRADE
A958	61	F	YES	298,000	A		CQSU	ABIJL	BD	U	03/31/88	UPGRADE
B14-A	42	B	YES	25,000	U		C	B	X	A	/ /	CLOSED
B14-B	42	D	YES	10,000	U		C	B	X	A	/ /	CLOSED
D1	42	D	YES	586,000	U		MUX	BIJ	BDM	U	07/31/85	UPGRADE
D15	42	Z	YES	37,485	U		X	NONE	X	B	/ /	REMOVED
D16	42	Y	YES	18,742	U		X	NONE	X	B	/ /	REMOVED
D17	42	Y	YES	18,742	U		X	NONE	X	B	/ /	REMOVED
D18	42	Y	YES	18,742	U		X	NONE	X	B	/ /	REMOVED
D2	42	D	YES	586,000	U		MUX	BIJ	BDM	F	07/31/85	UPGRADE
D3	42	D	YES	586,000	U		MUX	BIJ	BDM	U	07/31/85	UPGRADE
D4	42	D	YES	1,155,000	U		MUX	BIJ	BDM	T	07/31/85	UPGRADE
V3005	70	B	YES	4,000	U		E	BI	BDM	U	08/01/96	REPLACE
V4022A	83	B	YES	10,000	U		EM	CI	BDM	U	08/01/96	UPGRADE
V4022B	83	B	YES	10,000	U		EM	CI	BDM	U	08/01/96	UPGRADE
V4022C	83	B	YES	10,000	U		EM	CI	BDM	U	08/01/96	UPGRADE
V4022D	83	D	YES	6,000	U		EM	CI	BDM	U	08/01/96	UPGRADE
A127-A	0	E	YES	5,000	A		CW	B	X	B	/ /	REMOVED
A959	61	F	YES	298,000	A		CSU	ABIJL	X	F	03/31/88	UPGRADE
A902-B	70	Z	YES	800	A		CW		D	U	/ /	UPGRADE
A902-C	90	B	YES	800	A		CKW	ABI	D	U	/ /	UPGRADE
D21	42	D	YES	10,000	U		UX	BIJ	BD	T	/ /	UPGRADE
D6	42	L	YES	1,155,000	U		MUX	BIJ	BDM	T	07/31/85	UPGRADE
L41	42	Y	YES	2,700	U		C	B	X	B	/ /	REMOVED
A126	86	L	YES	4,000	A		CP	B	X	B	/ /	REMOVED
A322-D	61	L	YES	4,000	U		C	B	X	B	/ /	REMOVED
D88-A	0	Y	YES	25,000	U		C	B	X	B	/ /	REMOVED
D88-B	0	Y	YES	25,000	U		C	B	X	B	/ /	REMOVED
D88-C	0	Y	YES	25,000	U		C	B	X	B	/ /	REMOVED
D88-D	0	Y	YES	25,000	U		C	B	X	B	/ /	REMOVED
P8	13	O	YES	740,000	A		XPS	B	X	B	/ /	DEMOLISHED
94	41	O	YES	835,000	A		XPS	B	X	B	/ /	REMOVED
115	41	Y	YES	227,178	A		CPS	B	X	B	/ /	REMOVED

TABLE 3-1
PHSICAL INFORMATION ON STORAGE SYSTEMS
TANK INVENTORY AND MANAGEMENT SYSTEM DATA BASE
U.S. NAVY STORAGE SYSTEMS MANAGEMENT PLAN

TANK NO.	YEAR	CONTENTS	REGULATED	TANK SIZE Gals	ABOVE/ UNDER	PRESS/ SUCT	TANK CONST	PIPE CONST	LEAK DETECT TYPE	STATUS	LAST TEST DATE	PROPOSED INTERIM COMPLIANCE MEASURES
** ACTIVITY ID # : FL44KWTNAS				NAVAL AIR STATION			CONTACT : STEVE COVELL				(305)292-2194	
117	41	Y	YES	25,000	A		CPS	B	X	B	/ /	REMOVED
149-1	89	B	YES	2,000	A		CKW	ABCI	D	U	/ /	UPGRADE
149-2	89	B	YES	1,000	A		CKW	ABCI	D	U	/ /	UPGRADE
248-A	40	B	YES	5,000	U		C	B	DM	B	09/11/89	REMOVED
248-B	40	B	YES	5,000	U		C	B	DM	B	09/11/89	REMOVED
248-C	40	A	YES	8,000	U		C	B	D	B	/ /	REMOVED
1276-D	61	L	YES	550	U		C	B	X	B	/ /	REMOVED
1276-A	61	Y	YES	10,000	U		C	B	X	B	/ /	REMOVED
1276-B	61	Y	YES	10,000	U		C	B	X	B	/ /	REMOVED
1276-C	74	B	YES	10,000	U		E	B	X	B	/ /	REMOVED
1279A	87	L	YES	500	U		C	B	D	U	/ /	REMOVE
A994	85	G	YES	600	A		CKW	ABIJ	D	U	/ /	UPGRADE
C2076	85	M	NO	1,000	A		CKW	ABIJ	D	U	/ /	
D29	85	G	YES	560	A		CKW	AIJ	BD	U	/ /	UPGRADE
B48	69	G	NO	550	A		CW	AIJ	X	U	/ /	UPGRADE
A940-1	53	N	NO	275	A		CWP	A	X	B	/ /	REMOVED
A940-2	0	N	NO	185	A		CW	A	X	B	/ /	REMOVED
A1006	69	G	NO	300	A		CKW	ABIJ	D	U	/ /	
C60	0	N	NO	235	A		CW	A	X	B	/ /	REMOVED
C80	0	N	NO	180	A		CW	A	X	B	/ /	REMOVED
C83	42	H	NO	275	A		CW	AI	D	U	/ /	UPGRADE
L40	42	N	NO	500	A		CW	B	X	B	/ /	REMOVED
A634	64	M	NO	300	A		CW	AI	D	U	/ /	UPGRADE
A638	53	M	NO	1,000	A		CKW	ABI	D	U	/ /	REMOVE
A639	53	M	NO	1,000	A		CW	ABI	D	U	/ /	UPGRADE
A648	0	M	NO	1,000	A		CPW	A	X	B	/ /	REMOVED
A649	0	M	NO	1,000	A		CPW	A	X	B	/ /	REMOVED
A727	53	M	NO	1,500	A		CKW	ABI	D	U	/ /	
A733	65	M	NO	2,000	A		CP	NONE	X	B	/ /	REMOVED
A827	74	G	NO	330	A		CKW	ABIJ	D	U	/ /	
G1	0	N	NO	565	A		CR	A	X	B	/ /	REMOVED
J1563	67	N	NO	10,000	A		CPR	BC	CD	B	/ /	REMOVED
L3	69	N	NO	3,000	U		CG	BC	X	B	/ /	REMOVED
V1274	90	N	NO	110	A		CW	A	X	B	/ /	REMOVED
V1554	90	G	NO	110	A		CKW	ABIJ	D	U	/ /	REPLACE
V984	72	N	NO	330	A		CW	A	X	B	/ /	REMOVED
V988	90	G	NO	110	A		CKW	AIJ	D	U	/ /	
A1004	87	G	YES	2,000	A		CKW	AIJ	D	U	/ /	UPGRADE
A1005	0	N	NO	2,000	A		KW	B	X	B	/ /	REMOVED
A1019	75	N	NO	200	A		CW	A	X	B	/ /	REMOVED
A1020	67	G	NO	300	A		CKW	ABIJ	D	U	/ /	
A1025	60	G	YES	2,000	A		CKW	ABIJ	D	U	/ /	UPGRADE
A1103	65	G	YES	1,000	A		CKW	ABIJ	D	U	/ /	UPGRADE
A1305	0	N	NO	0			C	B	X	B	/ /	REMOVED
A132	61	G	NO	300	A		CKW	ABIJ	D	U	/ /	
A132-1	0	O	NO	550	A		CW	Y	X	B	/ /	REMOVED
A132-2	0	O	NO	300	A		CPW	Y	E	B	/ /	REMOVED
A137-A	75	M	NO	10,000	A		CPW	B	X	B	/ /	REMOVED
A137-B	0	M	NO	15,000	A		CPW	B	X	B	/ /	REMOVED
A225	85	G	NO	60	A		CW	ABIJ	X	U	/ /	
A230	46	G	YES	2,000	A		CWY	ABCIJ	D	U	/ /	REPLACE
A244	54	N	NO	1,000	U		C	BC	X	B	/ /	REMOVED
A314	80	G	NO	300	A		CW	ABIJ	D	U	/ /	UPGRADE
A325-1	63	G	YES	20,000	A		CKW	ABIJ	D	U	/ /	UPGRADE
A325-2	63	N	NO	18,000	A		CPW	BC	X	B	/ /	REMOVED
A325-3	63	G	NO	250	A		C	AIJ	D	U	/ /	
A328	68	G	YES	2,300	A		CKW	AIJY	D	U	/ /	UPGRADE
A332	64	D	NO	550	A		CW	B	X	B	/ /	REMOVED
A4010	0	G	NO	275	A		CKW	ABIJ	X	U	/ /	
A4011	87	G	NO	300	A		CKW	AIJ	D	U	/ /	
A419-A	44	G	YES	4,000	A		CSW	ABCI	DM	U	/ /	REPLACE
A419-B	44	G	YES	4,000	A		CSW	ABCI	DM	U	/ /	REPLACE

TABLE 3-1
PHSICAL INFORMATION ON STORAGE SYSTEMS
TANK INVENTORY AND MANAGEMENT SYSTEM DATA BASE
U.S. NAVY STORAGE SYSTEMS MANAGEMENT PLAN

** ACTIVITY ID # : FL44KWTNAS NAVAL AIR STATION CONTACT : STEVE COVELL (305)292-2194

TANK NO.	YEAR	CONTENTS	REGULATED	TANK SIZE Gals	ABOVE/ UNDER	PRESS/ SUCT	TANK CONST	PIPE CONST	LEAK DETECT TYPE	STATUS	LAST TEST DATE	PROPOSED INTERIM COMPLIANCE MEASURES
A419-C	44	G	YES	4,000	A		CSW	ABCI	DM	U	/ /	REPLACE
A4053	0	N	NO	1,000	U		C	B	X	B	/ /	REMOVED
A515	63	M	NO	2,000	U		C	B	X	B	/ /	REMOVED
A522	82	M	NO	700	A		CW	A	X	B	/ /	REMOVED
A624	61	M	NO	550	A		CKW	AI	D	U	/ /	
A625	61	M	NO	550	A		CRW	ABI	D	U	/ /	UPGRADE
A630	64	M	NO	550	A		CKW	ABI	D	U	/ /	
A632	64	M	NO	550	A		CKW	ABI	D	U	/ /	
38	0	H	NO	300	A		CW	AIJY	X	U	/ /	UPGRADE
109	0	M	NO	2,000	A		CPS	B	X	B	/ /	REMOVED
290	87	G	YES	750	A		CKW	ABIJ	D	U	/ /	UPGRADE
290-A	87	G	YES	700	A		CKW	ABIJ	D	U	/ /	UPGRADE
437	58	M	NO	1,000	U		C	BI	D	U	08/01/96	REPLACE
438	58	M	NO	1,000	U		C	BI	D	T	/ /	REPLACE
439	58	M	NO	1,000	U		C	BI	D	T	/ /	REPLACE
446	64	N	NO	280	A		CPW	B	X	B	/ /	REMOVED
576	54	N	NO	1,000	U	S	C	B	X	B	/ /	REMOVED
1279B	88	G	YES	3,000	A		CKW	ABIJ	D	U	/ /	UPGRADE
1287	75	M	NO	2,500	A		CW	B	X	B	/ /	REMOVED
1350	66	M	NO	1,000	U		C	BI	D	U	08/01/96	
A935R	95	L	NO	250	A		CIM	A	X	U	/ /	
A925A	96	L	YES	10,000	A		CI	AB	X	U	/ /	UPGRADE
A929	60	L	YES	560	U		C	B	D	U	08/01/96	REPLACE
A937	0	Z	NO	300	A		CKW	AB	D	U	/ /	UPGRADE
A940-3	94	H	NO	350	A		CKW	AIJ	D	U	/ /	UPGRADE
A940-4	94	G	NO	280	A		CKW	AIJ	D	U	/ /	UPGRADE
A940-5	94	H	NO	350	A		CKW	AIJ	D	U	/ /	UPGRADE
A986	0	L	NO	0	U		D	Y	Y	U	/ /	
A995	0	G	NO	275	A		CW	ABIJ	X	U	/ /	
A1004A	0	G	NO	50	A		CKW	ABIJ	X	U	/ /	
A1004B	0	G	NO	50	A		CKW	ABIJ	X	U	/ /	
A1019A	94	G	NO	20	A		WY	AIJ	D	U	/ /	
A1125	0	G	NO	300	A		CKW	AB	D	T	/ /	
A4053A	0	G	NO	500	A		CKW	ABIJ	X	U	/ /	
A4054	0	G	NO	500	A		CKW	AIJ	D	U	/ /	
A4082	94	G	NO	500	A		CIMW	AIJ	X	U	/ /	
A4165	0	G	YES	1,000	A		CW	AI	X	U	/ /	UPGRADE
A4165A	0	H	YES	560	A		CW		X	T	/ /	REMOVE
AG103A	79	B	NO	7	A		CW	AI	X	U	/ /	
AG104A	79	B	NO	7	A		CW	AI	X	U	/ /	
AG233A	79	B	NO	7	A		CW	AI	X	U	/ /	
AG234A	79	B	NO	7	A		CW	AI	X	U	/ /	
AG263A	79	B	NO	7	A		CW	AI	X	U	/ /	
AG264A	79	B	NO	7	A		CW	AI	X	U	/ /	
AG509A	79	B	NO	7	A		CW	AI	X	U	/ /	
AG510A	79	B	NO	7	A		CW	AI	X	U	/ /	
AG759A	79	B	NO	7	A		CW	AI	X	U	/ /	
AG760A	79	B	NO	7	A		CW	AI	X	U	/ /	
AG837A	79	B	NO	7	A		CW	AI	X	U	/ /	
AG840A	79	B	NO	7	A		CW	AI	X	U	/ /	
A229A	0	H	NO	220	A		CW	ABIJ	D	U	/ /	UPGRADE
A229B	0	H	NO	220	A		CW	ABIJ	D	U	/ /	UPGRADE
A244A	94	G	NO	500	A		CIW	ABI	X	U	/ /	
A418	0	G	YES	500	U		C	B	X	F	/ /	REMOVE
A419-D	0	G	NO	300	A		CW	ABIJ	X	U	/ /	UPGRADE
A419-E	0	G	NO	300	A		CW	ABIJ	X	U	/ /	UPGRADE
A443	0	L	NO	2,000	U		CUX	AY	X	U	/ /	
A447	0	G	NO	300	A		CRWY	ABIJ	X	U	/ /	
A526A	95	M	NO	500	A		CIM	ABI	F	U	/ /	
A631	53	M	NO	550	A		CKW	ABI	D	U	/ /	
A4115	92	E	YES	2,000	A		CKW	ABIY	D	U	08/01/96	UPGRADE
B27	75	G	NO	150	A		C		X	U	/ /	UPGRADE

UPDATED TANKS

ADDED TANKS

TABLE 3-1
PHSICAL INFORMATION ON STORAGE SYSTEMS
TANK INVENTORY AND MANAGEMENT SYSTEM DATA BASE
U.S. NAVY STORAGE SYSTEMS MANAGEMENT PLAN

TANK NO.	YEAR	CONTENTS	REGULATED	TANK SIZE Gals	ABOVE/ UNDER	PRESS/ SUCT	TANK CONST	PIPE CONST	LEAK DETECT TYPE	STATUS	LAST TEST DATE	PROPOSED INTERIM COMPLIANCE MEASURES
** ACTIVITY ID # : FL44KWTNAS NAVAL AIR STATION							CONTACT : STEVE COVELL				(305)292-2194	
B28	94	B	NO	250	A		Y	AJ	X	U	/ /	
B28A	75	G	NO	150	A		C		X	U	/ /	UPGRADE
PD1A	80	L	NO	4,800	U		UX	BJ	X	U	/ /	
PD1B	85	L	NO	650	U		EI	B	X	U	/ /	
B43	54	A	YES	280	U		C	B	D	F	/ /	REMOVE
B43A	0	Y	NO	60	A		CW	AI	X	F	/ /	
B48A	0	G	NO	150	A		C		X	U	/ /	
C5	76	G	NO	30	A		C		X	T	/ /	
C12-A	76	B	YES	10,000	U		EM	C	X	F	/ /	REMOVE
C12-B	76	B	YES	10,000	U		EM	C	X	F	/ /	REMOVE
C12-C	76	B	YES	6,000	U		E	Y	Y	F	/ /	REMOVE
C12-D	76	B	YES	10,000	U		E	Y	Y	F	/ /	REMOVE
C59	0	B	NO	300	A		RWY	AJ	X	U	/ /	UPGRADE
C59A	83	G	NO	30	A		C		X	U	/ /	UPGRADE
D25	0	L	YES	3,500	U		UX	BIJ	B	U	/ /	UPGRADE
D26A	56	H	YES	500	U		C	BIJ	B	F	/ /	UPGRADE
D1292B	95	B	YES	20,000	A		CRW	AFIJ	BDK	U	/ /	UPGRADE
D4169	92	D	NO	250	A		CIMW	AJ	BD	U	/ /	
F15	88	G	NO	100	A		C		X	U	/ /	UPGRADE
KW400	93	H	NO	250	A		CRW	AGI	K	U	/ /	UPGRADE
KW600	94	L	NO	400	U		E	Y	X	U	/ /	
F01	94	G	YES	2,650	A		CKW	AGI	K	U	/ /	
F01A	93	H	NO	60	A		CY	AIJ	X	U	/ /	
F01B	93	G	NO	60	A		CY	AIJ	X	U	/ /	
F01C	93	G	NO	60	A		CY	AIJ	X	U	/ /	
F01D	94	H	NO	25	A		CY		X	U	/ /	
F01E	94	L	NO	400	U		E	Y	X	U	/ /	
F02	95	B	YES	4,000	A		CIW	ABI	X	U	/ /	
290-C	75	G	NO	150	A		C		X	U	/ /	
290-D	0	G	NO	35	A		C		X	U	/ /	
290-B	0	G	YES	1,500	A		CKW	AIJ		U	/ /	UPGRADE
290-E	0	G	NO	25	A		CW	AIJ	X	U	/ /	
438-A	95	M	NO	500	A		CIW	ABI	D	U	/ /	
439-A	95	M	NO	500	A		CIW	ABI	D	U	/ /	
1279	0	B	NO	100	A		CKW	A	X	U	/ /	
1351	66	M	NO	1,000	U		C	BI	D	U	08/01/96	
1355	95	G	NO	. 250	A		CIMW	AIJ	D	U	/ /	
4163	93	G	YES	5,200	A		CKW	ABIJ	D	U	/ /	UPGRADE
OW-1	90	L	YES	4,000	U		E	AD	D	U	08/01/96	UPGRADE
OW-1A	85	L	NO	650	U		EI	AJ	X	U	/ /	
OW-102	90	L	YES	4,000	U		E	AD	D	U	08/01/96	UPGRADE
OW102A	85	L	NO	650	U		EI	AJ	X	U	/ /	
V1274A	0	G	NO	250	A		C		X	U	/ /	UPGRADE
V1552B	95	H	NO	500	A		CIW	ABI	F	U	/ /	
V1552C	0	H	NO	10	A		C	AJ	X	U	/ /	REMOVE
V1554A	0	L	NO	20	A		E	AB	D	U	/ /	
V4022E	0	Y	YES	1,000	U		D	Y	Y	F	/ /	
V4022F	0	Y	YES	1,000	U		D	Y	Y	F	/ /	
V4022G	0	Y	YES	1,000	U		D	Y	Y	F	/ /	
V4111C	0	G	NO	25	A		C	ABIJ	X	U	/ /	UPGRADE
V4114	90	M	NO	550	A		CRW	ABIJ	X	U	/ /	UPGRADE
J1561	94	G	YES	10,000	A		CKW	IJ	X	U	/ /	UPGRADE
J1561A	79	G	NO	100	A		C		X	U	/ /	
L3A	95	G	YES	3,000	A		CKW	ABIJ	X	U	/ /	
L19	0	G	NO	300	A		CW	ABIJ	X	U	/ /	
L47	0	M	NO	300	A		C	ABIJ	X	U	/ /	UPGRADE
G-01	0	G	YES	2,000	A		CKW	Y	X	A	/ /	CLOSED
G-02	0	G	NO	300	A		CW	Y	X	A	/ /	CLOSED
A924A	96	Z	YES	10,000	A		CI		X		/ /	UPGRADE

TABLE 3-1
PHSICAL INFORMATION ON STORAGE SYSTEMS
TANK INVENTORY AND MANAGEMENT SYSTEM DATA BASE
U.S. NAVY STORAGE SYSTEMS MANAGEMENT PLAN

TANK NO.	YEAR	CONTENTS	REGULATED	TANK SIZE Gals	ABOVE/ UNDER	PRESS/ SUCT	TANK CONST	PIPE CONST	LEAK DETECT TYPE	STATUS	LAST TEST DATE	PROPOSED INTERIM COMPLIANCE MEASURES
** ACTIVITY ID # : FL44KWTNAS NAVAL AIR STATION							CONTACT : STEVE COVELL				(305)292-2194	
B28	94	B	NO	250	A		Y	AJ	X	U	/ /	
B28A	75	G	NO	150	A		C		X	U	/ /	UPGRADE
PD1A	80	L	NO	4,800	U		UX	BJ	X	U	/ /	
PDIB	85	L	NO	650	U		EI	B	X	U	/ /	
B43	54	A	YES	280	U		C	B	D	F	/ /	REMOVE
B43A	0	Y	NO	60	A		CW	AI	X	F	/ /	
B48A	0	G	NO	150	A		C		X	U	/ /	
C5	76	G	NO	30	A		C		X	T	/ /	
C12-A	76	B	YES	10,000	U		EM	C	X	F	/ /	REMOVE
C12-B	76	B	YES	10,000	U		EM	C	X	F	/ /	REMOVE
C12-C	76	B	YES	6,000	U		E	Y	Y	F	/ /	REMOVE
C12-D	76	B	YES	10,000	U		E	Y	Y	F	/ /	REMOVE
C59	0	B	NO	300	A		RWY	AJ	X	U	/ /	UPGRADE
C59A	83	G	NO	30	A		C		X	U	/ /	UPGRADE
D25	0	L	YES	3,500	U		UX	BIJ	B	U	/ /	UPGRADE
D26A	56	H	YES	500	U		C	BIJ	B	F	/ /	UPGRADE
D1292B	95	B	YES	20,000	A		CRW	AFIJ	BDK	U	/ /	UPGRADE
D4169	92	D	NO	250	A		CIMW	AJ	BD	U	/ /	
F15	88	G	NO	100	A		C		X	U	/ /	UPGRADE
KW400	93	H	NO	250	A		CRW	AGI	K	U	/ /	UPGRADE
KW600	94	L	NO	400	U		E	Y	X	U	/ /	
F01	94	G	YES	2,650	A		CKW	AGI	K	U	/ /	
F01A	93	H	NO	60	A		CY	AIJ	X	U	/ /	
F01B	93	G	NO	60	A		CY	AIJ	X	U	/ /	
F01C	93	G	NO	60	A		CY	AIJ	X	U	/ /	
F01D	94	H	NO	25	A		CY		X	U	/ /	
F01E	94	L	NO	400	U		E	Y	X	U	/ /	
F02	95	B	YES	4,000	A		CIW	ABI	X	U	/ /	
290-C	75	G	NO	150	A		C		X	U	/ /	
290-D	0	G	NO	35	A		C		X	U	/ /	
290-B	0	G	YES	1,500	A		CKW	AIJ		U	/ /	UPGRADE
290-E	0	G	NO	25	A		CW	AIJ	X	U	/ /	
438-A	95	M	NO	500	A		CIW	ABI	D	U	/ /	
439-A	95	M	NO	500	A		CIW	ABI	D	U	/ /	
1279	0	B	NO	100	A		CKW	A	X	U	/ /	
1351	66	M	NO	1,000	U		C	BI	D	U	08/01/96	
1355	95	G	NO	250	A		CIMW	AIJ	D	U	/ /	
4163	93	G	YES	5,200	A		CKW	ABIJ	D	U	/ /	UPGRADE
OW-1	90	L	YES	4,000	U		E	AD	D	U	08/01/96	UPGRADE
OW-1A	85	L	NO	650	U		EI	AJ	X	U	/ /	
OW-102	90	L	YES	4,000	U		E	AD	D	U	08/01/96	UPGRADE
OW102A	85	L	NO	650	U		EI	AJ	X	U	/ /	
V1274A	0	G	NO	250	A		C		X	U	/ /	UPGRADE
V1552B	95	H	NO	500	A		CIW	ABI	F	U	/ /	
V1552C	0	H	NO	10	A		C	AJ	X	U	/ /	REMOVE
V1554A	0	L	NO	20	A		E	AB	D	U	/ /	
V4022E	0	Y	YES	1,000	U		D	Y	Y	F	/ /	
V4022F	0	Y	YES	1,000	U		D	Y	Y	F	/ /	
V4022G	0	Y	YES	1,000	U		D	Y	Y	F	/ /	
V4111C	0	G	NO	25	A		C	ABIJ	X	U	/ /	UPGRADE
V4114	90	M	NO	550	A		CRW	ABIJ	X	U	/ /	UPGRADE
J1561	94	G	YES	10,000	A		CKW	IJ	X	U	/ /	UPGRADE
J1561A	79	G	NO	100	A		C		X	U	/ /	
L3A	95	G	YES	3,000	A		CKW	ABIJ	X	U	/ /	
L19	0	G	NO	300	A		CW	ABIJ	X	U	/ /	
L47	0	G	NO	300	A		C	ABIJ	X	U	/ /	UPGRADE
G-01	0	G	YES	2,000	A		CKW	Y	X	A	/ /	CLOSED
G-02	0	G	NO	300	A		CW	Y	X	A	/ /	CLOSED
A924A	96	Z	YES	10,000	A		CI		X		/ /	UPGRADE

TABLE 3-2

MANAGEMENT AND PLANNING INFORMATION

TABLE 3-2
MANAGEMENT AND PLANNING INFORMATION
TANK INVENTORY AND MANAGEMENT SYSTEM DATA BASE
U.S. NAVY STORAGE SYSTEMS MANAGEMENT PLAN

TANK NO.	TARGET DATE	PROPOSED ACTION	ESTIMATD BUDGET	ACTUAL COMPL	INVENTORY RECORDING	SPILL HISTORY	REMARKS
** ACTIVITY ID # : FL44KWTNAS			NAVAL AIR STATION			CONTACT : STEVE COVELL	(305)292-2194
A969	/ /	REMOVED	0	/ /			REMOVED TANK
D27	12/31/00	UPGRADE	10,000	/ /			UPGRADE TANK AND PIPING OR CLOSE; SCHEDULED FOR REMOVAL
L39	/ /	REMOVED	0	/ /			REMOVED TANK
L42A	/ /	REMOVED	0	/ /			REMOVED TANK
L42B	/ /	REMOVED	0	/ /			REMOVED TANK
L44	/ /	REMOVED	0	/ /			REMOVED TANK
V1552	/ /	REMOVED	0	/ /			REMOVED TANK
V4111A	/ /	IN COMPLIA	0	/ /			IN COMPLIANCE
V4111B	/ /		0	/ /			RECOMMEND TANK INTEGRITY BE CHECKED
A127-B	12/31/89	REMOVED	0	02/13/92		NONE	REMOVED TANK
A127-C	12/31/89	REMOVED	0	02/13/92		NONE	REMOVED TANK
A127-D	12/31/89	REMOVED	0	02/13/92		NONE	REMOVED TANK
A317-A	/ /	REMOVED	0	/ /		LEAK SUSPECTED 1974	REMOVED TANK
A317-B	/ /	REMOVED	0	/ /		LEAK SUSPECTED 1974	REMOVED TANK
A317-C	/ /	REMOVED	0	/ /		LEAK SUSPECTED 1974	REMOVED TANK
A317-D	/ /	REMOVED	0	/ /		LEAK SUSPECTED 1974	REMOVED TANK
A317-E	/ /	REMOVED	0	/ /		LEAK SUSPECTED 1974	REMOVED TANK
A317-F	/ /	REMOVED	0	/ /		LEAK SUSPECTED 1974	REMOVED TANK
A317-G	12/31/00	REPLACE	6,000	/ /	GAUGED DAILY	NONE	SCHEDULED FOR REMOVAL AND REPLACEMENT W/ VAULTED
A317-H	12/31/00	REPLACE	6,000	/ /	GAUGED DAILY	NONE	SCHEDULED FOR REMOVAL AND REPLACEMENT W/ VAULTED
A317-I	12/31/00	REPLACE	6,000	/ /	GAUGED DAILY	NONE	SCHEDULED FOR REMOVAL AND REPLACEMENT W/ VAULTED
A322-A	/ /	REMOVED	0	/ /	GAUGED DAILY	NONE	REMOVED TANK
A322-B	/ /	REMOVED	0	/ /	GAUGED DAILY	NONE	REMOVED TANK
A322-C	/ /	REMOVED	0	/ /	GAUGED DAILY	NONE	REMOVED TANK
A902-A	/ /	REMOVED	0	/ /		NONE	REMOVED TANK
A924	12/31/99	UPGRADE	7,500	/ /	GAUGED DAILY	NONE	PIPE: LEAK DETECT & CATH PROT; SCHEDULED FOR REMOVAL
A925	12/31/99	UPGRADE	7,500	/ /	GAUGED DAILY	NONE	PIPE: LEAK DETECT & CATH PROT; SCHEDULED FOR REMOVAL
A938	12/31/99	UPGRADE	123,000	/ /	GAUGED DAILY	NONE	TANK: SEC CONT, CATH PROT, INSP; PIPE: TESTING, CATH PROT
A944	12/31/99	UPGRADE	123,000	/ /	GAUGED DAILY	NONE	TANK: SEC CONT, CATH PROT, INSP; PIPE: TESTING, CATH PROT
A945	12/31/99	UPGRADE	123,000	/ /	GAUGED DAILY	NONE	TANK: SEC CONT, CATH PROT, INSP; PIPE: TESTING, CATH PROT
A958	12/31/99	UPGRADE	123,000	/ /	GAUGED DAILY	NONE	TANK: SEC CONT, CATH PROT, INSP; PIPE: TESTING, CATH PROT
B14-A	/ /	CLOSED	0	/ /			CLOSED IN PLACE
B14-B	/ /	CLOSED	0	/ /			CLOSED IN PLACE
D1	12/31/00	UPGRADE	35,700	/ /	GAUGED DAILY		UPGRADE PIPING; SCHEDULED FOR BRAC CLOSURE
D15	/ /	REMOVED	0	/ /			REMOVED TANK
D16	/ /	REMOVED	0	/ /			REMOVED TANK
D17	/ /	REMOVED	0	/ /			REMOVED TANK
D18	/ /	REMOVED	0	/ /			REMOVED TANK
D2	12/31/00	UPGRADE	35,700	/ /	GAUGED DAILY		UPGRADE PIPING; SCHEDULED FOR BRAC CLOSURE
D3	12/31/00	UPGRADE	35,700	/ /	GAUGED DAILY		UPGRADE PIPING; SCHEDULED FOR BRAC CLOSURE
D4	12/31/00	UPGRADE	35,700	/ /		PIPING LEAK	UPGRADE PIPING; SCHEDULED FOR REMOVAL
V3005	12/31/00	REPLACE	7,500	09/11/89	GAUGED DAILY	NONE	SCHEDULED FOR REMOVAL AND REPLACEMENT W/ VAULTED
V4022A	12/31/98	UPGRADE	1,000	/ /	GAUGED DAILY	NONE	OVERFILL PROT; SCHEDULED FOR REMOVAL AND REPLACEMENT W/ VAUL
V4022B	12/31/98	UPGRADE	1,000	/ /	GAUGED DAILY	NONE	OVERFILL PROT; SCHEDULED FOR REMOVAL AND REPLACEMENT W/ VAUL
V4022C	12/31/98	UPGRADE	1,000	/ /	GAUGED DAILY	NONE	OVERFILL PROT; SCHEDULED FOR REMOVAL AND REPLACEMENT W/ VAUL
V4022D	12/31/98	UPGRADE	1,000	/ /	GAUGED DAILY	NONE	OVERFILL PROT; SCHEDULED FOR REMOVAL AND REPLACEMENT W/ VAUL

TABLE 3-2
MANAGEMENT AND PLANNING INFORMATION
TANK INVENTORY AND MANAGEMENT SYSTEM DATA BASE
U.S. NAVY STORAGE SYSTEMS MANAGEMENT PLAN

** ACTIVITY ID # : FL44KWTNAS NAVAL AIR STATION CONTACT : STEVE COVELL (305)292-2194

TANK NO.	TARGET DATE	PROPOSED ACTION	ESTIMATD BUDGET	ACTUAL COMPL	INVENTORY RECORDING	SPILL HISTORY	REMARKS
A127-A	12/31/89	REMOVED	0	02/13/92		NONE	REMOVED TANK
A959	12/31/99	UPGRADE	7,500	/ /	GAUGED DAILY	NONE	PIPE: LEAK DETECT, CATH PROT; SCHEDULED FOR REMOVAL
A902-B	01/01/98	UPGRADE	1,500	/ /			CLOSURE ASSESS, SEC CONT W/ LOCKING VALVE; REGISTER W/ FDEP
A902-C	12/31/99	UPGRADE	50	/ /			SEC CONT LOCK; REGISTER W/ FDEP
D21	12/31/00	UPGRADE	35,700	/ /	OUT OF SERVICE		UPGRADE PIPING; SCHEDULED FOR REMOVAL
D6	12/31/00	UPGRADE	35,700	/ /			UPGRADE PIPING; SCHEDULED FOR REMOVAL
L41	/ /	REMOVED	0	/ /			REMOVED TANK
A126	/ /	REMOVED	0	/ /			REMOVED TANK
A322-D	/ /	REMOVED	0	/ /	NONE		REMOVED TANK
D88-A	/ /	REMOVED	0	/ /			REMOVED TANK
D88-B	/ /	REMOVED	0	/ /			REMOVED TANK
D88-C	/ /	REMOVED	0	/ /			REMOVED TANK
D88-D	/ /	REMOVED	0	/ /			REMOVED TANK
P8	12/31/88	DEMOLISHED	0	/ /			DEMOLISHED
94	/ /	REMOVED	0	/ /			REMOVED TANK
115	/ /	REMOVED	0	/ /			REMOVED TANK
117	/ /	REMOVED	0	/ /			REMOVED TANK
149-1	01/01/98	UPGRADE	7,000	/ /			PIPE: REL DETECT; SCHEDULED FOR REMOVAL
149-2	01/01/98	UPGRADE	7,000	/ /			PIPE: REL DETECT; SCHEDULED FOR REMOVAL
248-A	/ /	REMOVED	0	/ /	GAUGED DAILY	WATER IN TANK	REMOVED TANK
248-B	/ /	REMOVED	0	/ /	GAUGED DAILY	WATER IN TANK	REMOVED TANK
248-C	/ /	REMOVED	0	/ /		NONE	REMOVED TANK
1276-D	/ /	REMOVED	0	/ /			REMOVED TANK
1276-A	/ /	REMOVED	0	/ /			REMOVED TANK
1276-B	/ /	REMOVED	0	/ /			REMOVED TANK
1276-C	12/31/91	REMOVED	0	12/31/91			REMOVED TANK
1279A	12/31/00	REMOVE	2,000	/ /			SCHEDULED FOR REMOVAL; REGISTER W/ FDEP
A994	12/31/99	UPGRADE	650	/ /			SEC CONT LOCK, MANUAL GAUGING, ANTI-SYPHON VALVE, PAINT PIPE
C2076	/ /		0	/ /			SCHEDULED FOR REMOVAL AND REPLACEMENT W/ VAULTED
D29	12/31/99	UPGRADE	550	/ /			SEC CONT VALVE LOCK, ANTI-SYPHON VALVE
B48	01/01/98	UPGRADE	1,500	/ /			SEC CONT, SPCC
A940-1	/ /	REMOVED	0	/ /			REMOVED TANK
A940-2	/ /	REMOVED	0	/ /			REMOVED TANK
A1006	/ /		0	/ /			RECOMMENDATIONS ONLY
C60	/ /	REMOVED	0	/ /			REMOVED TANK
C80	/ /	REMOVED	0	/ /			REMOVED TANK
C83	01/01/98	UPGRADE	1,500	/ /			SEC CONT
L40	/ /	REMOVED	0	/ /			REMOVED TANK
A634	01/01/98	UPGRADE	2,500	/ /			SEC CONT W/ LOCKING VALVE; SCHEDULED FOR REMOVAL
A638	/ /	REMOVE	0	/ /			SCHEDULED FOR REMOVAL
A639	01/01/98	UPGRADE	2,500	/ /			SEC CONT W/ LOCKING VALVE; SCHEDULED FOR REMOVAL
A648	/ /	REMOVED	0	/ /			REMOVED TANK
A649	/ /	REMOVED	0	/ /			REMOVED TANK
A727	/ /		0	/ /			RECOMMENDATIONS ONLY
A733	/ /	REMOVED	0	/ /			REMOVED TANK
A827	/ /		0	/ /			RECOMMENDATION ONLY
G1	/ /	REMOVED	0	/ /			REMOVED TANK
J1563	/ /	REMOVED	0	/ /			REMOVED TANK
L3	/ /	REMOVED	0	/ /			REMOVED TANK
V1274	/ /	REMOVED	0	/ /			REMOVED TANK
V1554	/ /	REPLACE	0	/ /			SCHEDULED FOR REMOVAL AND REPLACEMENT W/ VAULTED

TABLE 3-2
MANAGEMENT AND PLANNING INFORMATION
TANK INVENTORY AND MANAGEMENT SYSTEM DATA BASE
U.S. NAVY STORAGE SYSTEMS MANAGEMENT PLAN

** ACTIVITY ID # : FL44KWTNAS NAVAL AIR STATION CONTACT : STEVE COVELL (305)292-2194

TANK NO.	TARGET DATE	PROPOSED ACTION	ESTIMATD BUDGET	ACTUAL COMPL	INVENTORY RECORDING	SPILL HISTORY	REMARKS
V984	/ /	REMOVED	0	/ /			REMOVED TANK
V988	/ /		0	/ /			RECOMMENDATION ONLY
A1004	12/31/99	UPGRADE	550	/ /			SEC CONT VALVE LOCK, ANTI-SYPHON VALVE
A1005	/ /	REMOVED	0	/ /			REMOVED TANK
A1019	/ /	REMOVED	0	/ /			REMOVED TANK
A1020	/ /		0	/ /			RECOMMENDATIONS ONLY
A1025	12/31/99	UPGRADE	650	/ /			SEC CONT VALVE LOCK, PAINT PIPING, ANTI-SYPHON VALVE
A1103	12/31/99	UPGRADE	650	/ /			SEC CONT VALVE LOCK, PAINT PIPING, ANTI-SYPHON VALVE
A1305	/ /	REMOVED	0	/ /			REMOVED TANK
A132	/ /		0	/ /			RECOMMENDATIONS ONLY
A132-1	/ /	REMOVED	0	/ /			REMOVED TANK
A132-2	/ /	REMOVED	0	/ /			REMOVED TANK
A137-A	/ /	REMOVED	0	/ /			REMOVED TANK
A137-B	/ /	REMOVED	0	/ /			REMOVED TANK
A225	01/01/98		0	/ /			SPCC
A230	12/31/99	REPLACE	2,500	/ /			SCHEDULED FOR REMOVAL AND REPLACEMENT W/ VAULTED
A244	/ /	REMOVED	0	/ /			REMOVED TANK
A314	01/01/98	UPGRADE	2,000	/ /			SEC CONT W/ LOCKING VALVE; SCHEDULED FOR REMOVAL AND REPLACE
A325-1	12/31/99	UPGRADE	2,600	/ /			LEVEL GAUGE, ANTI-SYPHON VALVE, PAINT PIPING
A325-2	/ /	REMOVED	0	/ /			REMOVED TANK
A325-3	/ /		0	/ /			
A328	01/01/98	UPGRADE	1,200	/ /			REPLACE UG PIPING W/ AG
A332	/ /	REMOVED	0	/ /			REMOVED TANK
A4010	01/01/98		0	/ /			SPCC
A4011	/ /		0	/ /			RECOMMENDATION ONLY
A419-A	01/01/98	REPLACE	5,000	/ /			SCHEDULED FOR REMOVAL AND REPLACEMENT W/ VAULTED
A419-B	01/01/98	REPLACE	5,000	/ /			SCHEDULED FOR REMOVAL AND REPLACEMENT W/ VAULTED
A419-C	01/01/98	REPLACE	5,000	/ /			SCHEDULED FOR REMOVAL AND REPLACEMENT W/ VAULTED
A4053	/ /	REMOVED	0	/ /			REMOVED TANK
A515	/ /	REMOVED	0	/ /			REMOVED TANK
A522	/ /	REMOVED	0	/ /			REMOVED TANK
A624	/ /		0	/ /			RECOMMENDATION ONLY
A625	01/01/98	UPGRADE	500	/ /			ADDITIONAL SEC CONT VOLUME
A630	/ /		0	/ /			RECOMMENDATIONS ONLY
A632	/ /		0	/ /			RECOMMENDATIONS ONLY
38	01/01/98	UPGRADE	1,500	/ /			SEC CONT W/ LOCKING VALVE, SPCC
109	/ /	REMOVED	0	/ /			REMOVED TANK
290	01/01/98	UPGRADE	3,500	/ /			REPLACE UG PIPING W/ AG
290-A	12/31/99	UPGRADE	1,050	/ /			SEC CONT LOCK, PAINT TANK & PIPING, ANTI-SYPHON VALVE
437	/ /	REPLACE	0	/ /			SCHEDULED FOR REMOVAL AND REPLACEMENT W/ VAULTED
438	/ /	REPLACE	0	/ /			SCHEDULED FOR REMOVAL AND REPLACEMENT W/ VAULTED
439	/ /	REPLACE	0	/ /			SCHEDULED FOR REMOVAL AND REPLACEMENT W/ VAULTED
446	/ /	REMOVED	0	/ /			REMOVED TANK
576	/ /	REMOVED	0	/ /			REMOVED TANK
1279B	01/01/98	UPGRADE	1,800	/ /			REPLACE UG PIPING W/ AG, REGISTER W/ FDEP
1287	/ /	REMOVED	0	/ /			REMOVED TANK
1350	/ /		0	/ /			SCHEDULED FOR REMOVAL AND REPLACEMENT W/ VAULTED

TABLE 3-2
MANAGEMENT AND PLANNING INFORMATION
TANK INVENTORY AND MANAGEMENT SYSTEM DATA BASE
U.S. NAVY STORAGE SYSTEMS MANAGEMENT PLAN

** ACTIVITY ID # : FL44KWTNAS NAVAL AIR STATION CONTACT : STEVE COVELL (305)292-2194

TANK NO.	TARGET DATE	PROPOSED ACTION	ESTIMATD BUDGET	ACTUAL COMPL	INVENTORY RECORDING	SPILL HISTORY	REMARKS
A935R	01/01/98		0	/ /			SPCC
A925A	01/01/98	UPGRADE	2,000	/ /			TANK LEVEL GAUGE, SPCC, REGISTER W/ FDEP
A929	12/31/00	REPLACE	15,000	/ /			SCHEDULED FOR REMOVAL AND REPLACEMENT W/ VAULTED
A937	01/01/98	UPGRADE	1,000	/ /			IMPERVIOUS LINER FOR SEC CONT
A940-3	01/01/98	UPGRADE	1,000	/ /			IMPERVIOUS LINER FOR SEC CONT
A940-4	01/01/98	UPGRADE	1,000	/ /			IMPERVIOUS LINER FOR SEC CONT
A940-5	01/01/98	UPGRADE	1,000	/ /			IMPERVIOUS LINER FOR SEC CONT
A986	01/01/98		0	/ /			TANK SYSTEM NEEDS FURTHER EVALUATION
A995	01/01/98		0	/ /			SPCC
A1004A	01/01/98		0	/ /			SPCC
A1004B	01/01/98		0	/ /			SPCC
A1019A	/ /		0	/ /			RECOMMENDATION ONLY
A1125	/ /		1,500	/ /			RECOMMEND CLOSURE
A4053A	01/01/98		0	/ /			SPCC
A4054	/ /		0	/ /			RECOMMENDATION ONLY
A4082	01/01/98		0	/ /			SPCC
A4165	01/01/98	UPGRADE	550	/ /			SEC CONT VALVE & LOCK, SPCC, REGISTER W/ FDEP
A4165A	01/01/98	REMOVE	1,500	/ /			UPGRADES REQUIRED IF NOT REMOVED OR CLOSED
AG103A	01/01/98		0	/ /			SPCC
AG104A	01/01/98		0	/ /			SPCC
AG233A	01/01/98		0	/ /			SPCC
AG234A	01/01/98		0	/ /			SPCC
AG263A	01/01/98		0	/ /			SPCC
AG264A	01/01/98		0	/ /			SPCC
AG509A	01/01/98		0	/ /			SPCC
AG510A	01/01/98		0	/ /			SPCC
AG759A	01/01/98		0	/ /			SPCC
AG760A	01/01/98		0	/ /			SPCC
AG837A	01/01/98		0	/ /			SPCC
AG840A	01/01/98		0	/ /			SPCC
A229A	01/01/98	UPGRADE	1,500	/ /			SEC CONT W/ LOCKING VALVE
A229B	01/01/98	UPGRADE	1,500	/ /			SEC CONT W/ LOCKING VALVE
A244A	01/01/98		0	/ /			SPCC
A418	01/01/98	REMOVE	3,000	/ /			UPGRADES REQUIRED IF NOT REMOVED OR CLOSED
A419-D	01/01/98	UPGRADE	1,500	/ /			SEC CONT W/ LOCKING VALVE, SPCC
A419-E	01/01/98	UPGRADE	1,500	/ /			SEC CONT W/ LOCKING VALVE, SPCC
A443	01/01/98		0	/ /			TANK SYSTEM NEEDS FURTHER EVALUATION
A447	01/01/98		0	/ /			SPCC
A526A	01/01/98		0	/ /			SPCC
A631	/ /		0	/ /			RECOMMENDATIONS ONLY
A4115	01/01/98	UPGRADE	16,000	/ /			RELOCATE TANK, REPLACE UG PIPING W/ AG, IMPERVIOUS LINER
B27	01/01/98	UPGRADE	1,500	/ /			SEC CONT W/ LOCKING VALVE, SPCC
B28	01/01/98		0	/ /			SPCC
B28A	01/01/98	UPGRADE	1,500	/ /			SEC CONT W/ LOCKING VALVE, SPCC
PD1A	/ /		0	/ /			PROCESS TANK
PD1B	/ /		0	/ /			PROCESS TANK
B43	12/31/00	REMOVE	2,000	/ /			SCHEDULED FOR REMOVAL
B43A	/ /		0	/ /			SCHEDULED FOR REMOVAL
B48A	01/01/98		0	/ /			SPCC
C5	01/01/98		0	/ /			SPCC
C12-A	12/31/00	REMOVE	10,000	/ /			SCHEDULED FOR REMOVAL
C12-B	12/31/00	REMOVE	10,000	/ /			SCHEDULED FOR REMOVAL
C12-C	12/31/00	REMOVE	10,000	/ /			SCHEDULED FOR REMOVAL
C12-D	12/31/00	REMOVE	10,000	/ /			SCHEDULED FOR REMOVAL
C59	01/01/98	UPGRADE	1,500	/ /			SEC CONT W/ LOCKING VALVE, SPCC

TABLE 3-2
MANAGEMENT AND PLANNING INFORMATION
TANK INVENTORY AND MANAGEMENT SYSTEM DATA BASE
U.S. NAVY STORAGE SYSTEMS MANAGEMENT PLAN

** ACTIVITY ID # : FL44KWTNAS NAVAL AIR STATION CONTACT : STEVE COVELL (305)292-2194

TANK NO.	TARGET DATE	PROPOSED ACTION	ESTIMATD BUDGET	ACTUAL COMPL	INVENTORY RECORDING	SPILL HISTORY	REMARKS
C59A	01/01/98	UPGRADE	1,500	/ /			SEC CONT W/ LOCKING VALVE, SPCC
D25	12/31/00	UPGRADE	35,700	/ /			UPGRADE PIPING, SCHEDULED FOR REMOVAL
D26A	12/31/00	UPGRADE	4,000	/ /			UPGRADE TANK AND PIPING, SCHEDULED FOR REMOVAL
D1292B	01/01/98	UPGRADE	1,000	/ /			SEC CONT IMPERVIOUS LINER, SPCC
D4169	/ /		0	/ /			NO RECOMMENDATION
F15	01/01/98	UPGRADE	1,500	/ /			SEC CONT W/ LOCKING VALVE
KW400	01/01/98	UPGRADE	500	/ /			ADDITIONAL SEC CONT VOLUME, SPCC
KW600	/ /		0	/ /			PROCESS TANK
F01	01/01/98		0	/ /			SPCC
F01A	01/01/98		0	/ /			SPCC
F01B	01/01/98		0	/ /			SPCC
F01C	01/01/98		0	/ /			SPCC
F01D	01/01/98		0	/ /			SPCC
F01E	/ /		0	/ /			PROCESS TANK
F02	01/01/98		0	/ /			SPCC
290-C	01/01/98		0	/ /			SPCC
290-D	01/01/98		0	/ /			SPCC
290-B	01/01/98	UPGRADE	2,500	/ /			RELOCATE AUTO LEVEL GAUGE, REPLACE UG PIPING W/ AG, REGISTER
290-E	01/01/98		0	/ /			SPCC
438-A	/ /		0	/ /			RECOMMENDATIONS ONLY
439-A	/ /		0	/ /			RECOMMENDATIONS ONLY
1279	01/01/98		0	/ /			SPCC
1351	/ /		0	/ /			SCHEDULED FOR REMOVAL AND REPLACEMENT W/ VAULTED
1355	/ /		0	/ /			RECOMMENDATION ONLY
4163	01/01/98	UPGRADE	3,000	/ /			TANK LEVEL GAUGE, SEC CONT IMPERVIOUS LINER
OW-1	12/31/98	UPGRADE	2,000	/ /			SPILL CONTAINMENT AND OVERFILL PROTECTION
OW-1A	/ /		0	/ /			PROCESS TANK
OW-102	12/31/98	UPGRADE	2,000	/ /			SPILL CONTAINMENT AND OVERFILL PROTECTION
OW102A	/ /		0	/ /			PROCESS TANK
V1274A	01/01/98	UPGRADE	1,500	/ /			SEC CONT W/ LOCKING VALVE, SPCC
V1552B	01/01/98		0	/ /			SPCC
V1552C	01/01/98	REMOVE	2,000	/ /		TANK OVERFLOW 1996	REMOVAL RECOMMENDED IF NOT SEC CONT REQUIRED, SPCC
V1554A	/ /		0	/ /			PROCESS TANK, TANK OUTLET SHOULD BE PIPED TO SANITARY SEWER
V4022E	/ /		0	/ /			SCHEDULED FOR REMOVAL
V4022F	/ /		0	/ /			SCHEDULED FOR REMOVAL
V4022G	/ /		0	/ /			SCHEDULED FOR REMOVAL
V4111C	01/01/98	UPGRADE	1,000	/ /			SEC CONT, SPCC
V4114	01/01/98	UPGRADE	1,500	/ /			ADDITIONAL SEC CONT VOLUME, IMPERVIOUS LINER, SPCC
J1561	01/01/98	UPGRADE	500	/ /			AG PIPE SUPPORT, SPCC, REGISTER TANK W/ FDEP
J1561A	01/01/98		0	/ /			SPCC
L3A	01/01/98		0	/ /			SPCC
L19	/ /		0	/ /			SCHEDULED FOR REMOVAL
L47	01/01/98	UPGRADE	1,500	/ /			SEC CONT W/ LOCKING VALVE, SPCC
G-01	/ /	CLOSED	1,000	/ /	Y		CLOSURE REPORT FOR TANK & PIPING
G-02	/ /	CLOSED	0	/ /			CLOSED IN PLACE
A924A	01/01/98	UPGRADE	2,000	/ /			TANK NOT YET IN SERVICE; TANK LEVEL GAUGE, SPCC, REGISTER W/

TABLE 3-2
MANAGEMENT AND PLANNING INFORMATION
TANK INVENTORY AND MANAGEMENT SYSTEM DATA BASE
U.S. NAVY STORAGE SYSTEMS MANAGEMENT PLAN

TANK NO.	TARGET DATE	PROPOSED ACTION	ESTIMATD BUDGET	ACTUAL COMPL	INVENTORY RECORDING	SPILL HISTORY	REMARKS
** ACTIVITY ID # :						CONTACT :	
*** Total ***			989,200				

TABLE 3-3

PHYSICAL AND PLANNING INFORMATION

TABLE 3-3
PHYSICAL AND PLANNING INFORMATION
TANK INVENTORY AND MANAGEMENT SYSTEM DATA BASE
U.S. NAVY STORAGE SYSTEMS MANAGEMENT PLAN

Öáá PHYSICAL INFORMATION áá¢Öá PLANNING INFORMATION áááááááááááááááááááááááááááááááá¢
Öáá TABLE 2-1 INFO ááááÇ
Öáááááá Status
Öááá Contents
Öá Pres/Suct
ÖLEAK DETECT¢
Öá Proposed Compliance áááááááááááááááááááááááááááááááááÇ

** ACTIVITY ID # : FL44KWTNAS NAVAL AIR STATION CONTACT : STEVE COVELL (305)292-2194

TANK NUMBER	YEAR	CAPACITY	LAST TEST	Status / Contents / Pres/Suct	LEAK DETECT	Action	Planned Date	Actual Date	Construction Budget	PCR
[A969]	[87]	[5,000]GAL	[/ /]	[B][F][ ]	[X]	[REMOVED]	[/ /]	[/ /]	$[0]	[ ]
Inv Method:[ ]				Tank Constr:	[CPW]	Remarks	: [REMOVED TANK]			
Spill Hist:[ ]				Pipe Constr:	[A]		[ ]			
[REGULATED]/[ABOVE_GROUND]				Interim:	[REMOVED]		[ ]			
[D27]	[42]	[10,000]GAL	[/ /]	[T][V][ ]	[BD]	[UPGRADE]	[12/31/00]	[/ /]	$[10,000]	[ ]
Inv Method:[ ]				Tank Constr:	[MUX]	Remarks	: [UPGRADE TANK AND PIPING OR]			
Spill Hist:[ ]				Pipe Constr:	[BIJ]		[CLOSE; SCHEDULED FOR REMOVAL]			
[REGULATED]/[UNDER_GROUND]				Interim:	[UPGRADE]		[ ]			
[L39]	[42]	[2,000]GAL	[/ /]	[B][A][ ]	[X]	[REMOVED]	[/ /]	[/ /]	$[0]	[ ]
Inv Method:[ ]				Tank Constr:	[CW]	Remarks	: [REMOVED TANK]			
Spill Hist:[ ]				Pipe Constr:	[B]		[ ]			
[REGULATED]/[UNDER_GROUND]				Interim:	[REMOVED]		[ ]			
[L42A]	[42]	[250]GAL	[/ /]	[B][A][ ]	[X]	[REMOVED]	[/ /]	[/ /]	$[0]	[ ]
Inv Method:[ ]				Tank Constr:	[C]	Remarks	: [REMOVED TANK]			
Spill Hist:[ ]				Pipe Constr:	[B]		[ ]			
[REGULATED]/[UNDER_GROUND]				Interim:	[REMOVED]		[ ]			
[L42B]	[42]	[250]GAL	[/ /]	[B][A][ ]	[X]	[REMOVED]	[/ /]	[/ /]	$[0]	[ ]
Inv Method:[ ]				Tank Constr:	[C]	Remarks	: [REMOVED TANK]			
Spill Hist:[ ]				Pipe Constr:	[B]		[ ]			
[REGULATED]/[UNDER_GROUND]				Interim:	[REMOVED]		[ ]			
[L44]	[42]	[1,000]GAL	[/ /]	[B][N][ ]	[X]	[REMOVED]	[/ /]	[/ /]	$[0]	[ ]
Inv Method:[ ]				Tank Constr:	[C]	Remarks	: [REMOVED TANK]			
Spill Hist:[ ]				Pipe Constr:	[B]		[ ]			
[REGULATED]/[UNDER_GROUND]				Interim:	[REMOVED]		[ ]			
[V1552]	[65]	[280]GAL	[/ /]	[B][N][ ]	[X]	[REMOVED]	[/ /]	[/ /]	$[0]	[ ]
Inv Method:[ ]				Tank Constr:	[C]	Remarks	: [REMOVED TANK]			
Spill Hist:[ ]				Pipe Constr:	[B]		[ ]			
[REGULATED]/[UNDER_GROUND]				Interim:	[REMOVED]		[ ]			
[V4111A]	[90]	[550]GAL	[/ /]	[U][G][ ]	[DFM]	[IN COMPLIA]	[/ /]	[/ /]	$[0]	[ ]
Inv Method:[ ]				Tank Constr:	[EIMN]	Remarks	: [IN COMPLIANCE]			
Spill Hist:[ ]				Pipe Constr:	[CDGI]		[ ]			
[REGULATED]/[UNDER_GROUND]				Interim:	[IN COMPLIA]		[ ]			
[V4111B]	[90]	[200]GAL	[/ /]	[U][Z][ ]	[X]	[ ]	[/ /]	[/ /]	$[0]	[ ]
Inv Method:[ ]				Tank Constr:	[X]	Remarks	: [RECOMMEND TANK INTEGRITY BE]			
Spill Hist:[ ]				Pipe Constr:	[C]		[CHECKED]			
[UN-REGULATED]/[UNDER_GROUND]				Interim:	[ ]		[ ]			
[A127-B]	[0]	[560]GAL	[/ /]	[B][E][ ]	[X]	[REMOVED]	[12/31/89]	[02/13/92]	$[0]	[ ]
Inv Method:[ ]				Tank Constr:	[CW]	Remarks	: [REMOVED TANK]			
Spill Hist:[NONE]				Pipe Constr:	[B]		[ ]			
[REGULATED]/[ABOVE_GROUND]				Interim:	[REMOVED]		[ ]			
[A127-C]	[0]	[560]GAL	[/ /]	[B][E][ ]	[X]	[REMOVED]	[12/31/89]	[02/13/92]	$[0]	[ ]
Inv Method:[ ]				Tank Constr:	[CW]	Remarks	: [REMOVED TANK]			
Spill Hist:[NONE]				Pipe Constr:	[B]		[ ]			
[REGULATED]/[ABOVE_GROUND]				Interim:	[REMOVED]		[ ]			
[A127-D]	[0]	[1,000]GAL	[/ /]	[B][E][ ]	[X]	[REMOVED]	[12/31/89]	[02/13/92]	$[0]	[ ]
Inv Method:[ ]				Tank Constr:	[CW]	Remarks	: [REMOVED TANK]			
Spill Hist:[NONE]				Pipe Constr:	[B]		[ ]			
[REGULATED]/[ABOVE_GROUND]				Interim:	[REMOVED]		[ ]			
[A317-A]	[54]	[2,000]GAL	[/ /]	[B][A][ ]	[X]	[REMOVED]	[/ /]	[/ /]	$[0]	[ ]
Inv Method:[ ]				Tank Constr:	[C]	Remarks	: [REMOVED TANK]			
Spill Hist:[LEAK SUSPECTED 1974]				Pipe Constr:	[B]		[ ]			
[REGULATED]/[UNDER_GROUND]				Interim:	[REMOVED]		[ ]			

TABLE 3-3
PHYSICAL AND PLANNING INFORMATION
TANK INVENTORY AND MANAGEMENT SYSTEM DATA BASE
U.S. NAVY STORAGE SYSTEMS MANAGEMENT PLAN

Öáá PHYSICAL INFORMATION áá¢Öá PLANNING INFORMATION áááááááááááááááááááááááááááááááá¢
Öáá TABLE 2-1 INFO ááááÇ
Öáááááá Status
Öááá Contents
Öá Pres/Suct
Öá Proposed Compliance áááááááááááááááááááááááááááááááááÇ

TANK NUMBER | YEAR | CAPACITY | LAST TEST | Öê¢Öê¢Öê¢ÖLEAK DETECT¢ | Action | Planned Date | Actual Date | Construction Budget | PCR

** ACTIVITY ID # : FL44KWTNAS NAVAL AIR STATION CONTACT : STEVE COVELL (305)292-2194

[A317-B] [54] [2,000]GAL [/ /] [B][A][ ] [X] [REMOVED] : [/ /][/ /] $[0][ ]
Inv Method:[ ] Tank Constr: [C] Remarks : [REMOVED TANK]
Spill Hist:[LEAK SUSPECTED 1974] Pipe Constr: [B] [ ]
[REGULATED]/[UNDER_GROUND] Interim: [REMOVED] [ ]

[A317-C] [59] [2,000]GAL [/ /] [B][A][ ] [X] [REMOVED] : [/ /][/ /] $[0][ ]
Inv Method:[ ] Tank Constr: [C] Remarks : [REMOVED TANK]
Spill Hist:[LEAK SUSPECTED 1974] Pipe Constr: [B] [ ]
[REGULATED]/[UNDER_GROUND] Interim: [REMOVED] [ ]

[A317-D] [54] [2,000]GAL [/ /] [B][A][ ] [X] [REMOVED] : [/ /][/ /] $[0][ ]
Inv Method:[ ] Tank Constr: [C] Remarks : [REMOVED TANK]
Spill Hist:[LEAK SUSPECTED 1974] Pipe Constr: [B] [ ]
[REGULATED]/[UNDER_GROUND] Interim: [REMOVED] [ ]

[A317-E] [54] [2,000]GAL [/ /] [B][A][ ] [X] [REMOVED] : [/ /][/ /] $[0][ ]
Inv Method:[ ] Tank Constr: [C] Remarks : [REMOVED TANK]
Spill Hist:[LEAK SUSPECTED 1974] Pipe Constr: [B] [ ]
[REGULATED]/[UNDER_GROUND] Interim: [REMOVED] [ ]

[A317-F] [59] [2,000]GAL [/ /] [B][A][ ] [X] [REMOVED] : [/ /][/ /] $[0][ ]
Inv Method:[ ] Tank Constr: [C] Remarks : [REMOVED TANK]
Spill Hist:[LEAK SUSPECTED 1974] Pipe Constr: [B] [ ]
[REGULATED]/[UNDER_GROUND] Interim: [REMOVED] [ ]

[A317-G] [74] [6,000]GAL [02/01/96] [U][D][ ] [BD] [REPLACE] : [12/31/00][/ /] $[6,000][ ]
Inv Method:[GAUGED DAILY] Tank Constr: [EM] Remarks : [SCHEDULED FOR REMOVAL AND]
Spill Hist:[NONE] Pipe Constr: [CI] [REPLACEMENT W/ VAULTED]
[REGULATED]/[UNDER_GROUND] Interim: [REPLACE] [ ]

[A317-H] [74] [6,000]GAL [02/01/96] [U][B][ ] [BD] [REPLACE] : [12/31/00][/ /] $[6,000][ ]
Inv Method:[GAUGED DAILY] Tank Constr: [EM] Remarks : [SCHEDULED FOR REMOVAL AND]
Spill Hist:[NONE] Pipe Constr: [C] [REPLACEMENT W/ VAULTED]
[REGULATED]/[UNDER_GROUND] Interim: [REPLACE] [ ]

[A317-I] [74] [6,000]GAL [02/01/96] [U][B][ ] [BD] [REPLACE] : [12/31/00][/ /] $[6,000][ ]
Inv Method:[GAUGED DAILY] Tank Constr: [EM] Remarks : [SCHEDULED FOR REMOVAL AND]
Spill Hist:[NONE] Pipe Constr: [C] [REPLACEMENT W/ VAULTED]
[REGULATED]/[UNDER_GROUND] Interim: [REPLACE] [ ]

[A322-A] [74] [10,000]GAL [09/11/89] [B][B][ ] [M] [REMOVED] : [/ /][/ /] $[0][ ]
Inv Method:[GAUGED DAILY] Tank Constr: [E] Remarks : [REMOVED TANK]
Spill Hist:[NONE] Pipe Constr: [B] [ ]
[REGULATED]/[UNDER_GROUND] Interim: [REMOVED] [ ]

[A322-B] [61] [6,000]GAL [09/11/89] [B][A][ ] [M] [REMOVED] : [/ /][/ /] $[0][ ]
Inv Method:[GAUGED DAILY] Tank Constr: [C] Remarks : [REMOVED TANK]
Spill Hist:[NONE] Pipe Constr: [B] [ ]
[REGULATED]/[UNDER_GROUND] Interim: [REMOVED] [ ]

[A322-C] [61] [6,000]GAL [09/11/89] [B][B][ ] [M] [REMOVED] : [/ /][/ /] $[0][ ]
Inv Method:[GAUGED DAILY] Tank Constr: [C] Remarks : [REMOVED TANK]
Spill Hist:[NONE] Pipe Constr: [B] [ ]
[REGULATED]/[UNDER_GROUND] Interim: [REMOVED] [ ]

[A902-A] [0] [1,500]GAL [/ /] [B][B][ ] [X] [REMOVED] : [/ /][/ /] $[0][ ]
Inv Method:[ ] Tank Constr: [CRP] Remarks : [REMOVED TANK]
Spill Hist:[NONE] Pipe Constr: [A] [ ]
[REGULATED]/[ABOVE_GROUND] Interim: [REMOVED] [ ]

[A924] [51] [24,600]GAL [12/31/81] [F][L][ ] [X] [UPGRADE] : [12/31/99][/ /] $[7,500][ ]
Inv Method:[GAUGED DAILY] Tank Constr: [CKUW] Remarks : [PIPE: LEAK DETECT & CATH PROT;]
Spill Hist:[NONE] Pipe Constr: [ABL] [SCHEDULED FOR REMOVAL]
[REGULATED]/[ABOVE_GROUND] Interim: [UPGRADE] [ ]

TABLE 3-3
PHYSICAL AND PLANNING INFORMATION
TANK INVENTORY AND MANAGEMENT SYSTEM DATA BASE
U.S. NAVY STORAGE SYSTEMS MANAGEMENT PLAN

PHYSICAL INFORMATION						TABLE 2-1 INFO			PLANNING INFORMATION				
TANK NUMBER	YEAR	CAPACITY	LAST TEST			Status	Contents	Pres/Suct	LEAK DETECT	Action	Planned Date	Actual Date	Construction Budget	PCR
** ACTIVITY ID # : FL44KWTNAS NAVAL AIR STATION							CONTACT : STEVE COVELL						(305)292-2194	
A925	51	24,600 GAL	12/31/81	Inv Method: GAUGED DAILY Spill Hist: NONE REGULATED / ABOVE_GROUND	F L	X	CKUW ABL UPGRADE		UPGRADE Remarks	12/31/99	/ /	$ 7,500	
											PIPE: LEAK DETECT & CATH PROT; SCHEDULED FOR REMOVAL			
A938	53	0 GAL	03/31/88	Inv Method: GAUGED DAILY Spill Hist: NONE REGULATED / ABOVE_GROUND	U F	BD	CQSU ABIJL UPGRADE		UPGRADE Remarks	12/31/99	/ /	$ 123,000	
											TANK: SEC CONT, CATH PROT, INSP; PIPE: TESTING, CATH PROT			
A944	53	239,000 GAL	01/31/88	Inv Method: GAUGED DAILY Spill Hist: NONE REGULATED / ABOVE_GROUND	U F	BD	CQSU ABIJL UPGRADE		UPGRADE Remarks	12/31/99	/ /	$ 123,000	
											TANK: SEC CONT, CATH PROT, INSP; PIPE: TESTING, CATH PROT			
A945	57	213,000 GAL	03/31/88	Inv Method: GAUGED DAILY Spill Hist: NONE REGULATED / ABOVE_GROUND	U F U	BD	CQSU ABIJL UPGRADE		UPGRADE Remarks	12/31/99	/ /	$ 123,000	
											TANK: SEC CONT, CATH PROT, INSP; PIPE: TESTING, CATH PROT			
A958	61	298,000 GAL	03/31/88	Inv Method: GAUGED DAILY Spill Hist: NONE REGULATED / ABOVE_GROUND	U F	BD	CQSU ABIJL UPGRADE		UPGRADE Remarks	12/31/99	/ /	$ 123,000	
											TANK: SEC CONT, CATH PROT, INSP; PIPE: TESTING, CATH PROT			
B14-A	42	25,000 GAL	/ /	Inv Method: Spill Hist: REGULATED / UNDER_GROUND	A B	X	C B CLOSED		CLOSED Remarks	/ /	/ /	$ 0	
											CLOSED IN PLACE			
B14-B	42	10,000 GAL	/ /	Inv Method: Spill Hist: REGULATED / UNDER_GROUND	A D	X	C B CLOSED		CLOSED Remarks	/ /	/ /	$ 0	
											CLOSED IN PLACE			
D1	42	586,000 GAL	07/31/85	Inv Method: GAUGED DAILY Spill Hist: REGULATED / UNDER_GROUND	U D	BDM	MUX BIJ UPGRADE		UPGRADE Remarks	12/31/00	/ /	$ 35,700	
											UPGRADE PIPING; SCHEDULED FOR BRAC CLOSURE			
D15	42	37,485 GAL	/ /	Inv Method: Spill Hist: REGULATED / UNDER_GROUND	B Z	X	X NONE REMOVED		REMOVED Remarks	/ /	/ /	$ 0	
											REMOVED TANK			
D16	42	18,742 GAL	/ /	Inv Method: Spill Hist: REGULATED / UNDER_GROUND	B Y	X	X NONE REMOVED		REMOVED Remarks	/ /	/ /	$ 0	
											REMOVED TANK			
D17	42	18,742 GAL	/ /	Inv Method: Spill Hist: REGULATED / UNDER_GROUND	B Y	X	X NONE REMOVED		REMOVED Remarks	/ /	/ /	$ 0	
											REMOVED TANK			
D18	42	18,742 GAL	/ /	Inv Method: Spill Hist: REGULATED / UNDER_GROUND	B Y	X	X NONE REMOVED		REMOVED Remarks	/ /	/ /	$ 0	
											REMOVED TANK			
D2	42	586,000 GAL	07/31/85	Inv Method: GAUGED DAILY Spill Hist: REGULATED / UNDER_GROUND	F D	BDM	MUX BIJ UPGRADE		UPGRADE Remarks	12/31/00	/ /	$ 35,700	
											UPGRADE PIPING; SCHEDULED FOR BRAC CLOSURE			

TABLE 3-3
PHYSICAL AND PLANNING INFORMATION
TANK INVENTORY AND MANAGEMENT SYSTEM DATA BASE
U.S. NAVY STORAGE SYSTEMS MANAGEMENT PLAN

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Öáá PHYSICAL INFORMATION áááááááááááááááááááááááááááááááááááááááá¢Öá PLANNING INFORMATION áááááááááááááááááááááááááááááááá¢
                                              Öáá TABLE 2-1 INFO áááaÇ
                                              Öáááááá Status
                                                Öááá Contents     ûá Proposed Compliance áááááááááááááááááááááááááááááááÇ
TANK                              LAST            Öá Pres/Suct                     Planned   Actual   Construction
NUMBER  YEAR   CAPACITY           TEST       Öê¢Öê¢Öê¢ÖLEAK DETECT¢  Action          Date      Date     Budget        PCR

** ACTIVITY ID # : FL44KWTNAS  NAVAL AIR STATION         CONTACT : STEVE COVELL               (305)292-2194
[D3    ] [42]  [  586,000]GAL [07/31/85]   [U][D][ ]    [BDM  ]   [UPGRADE   ] : [12/31/00][  /  /  ] $[   35,700][      ]
   Inv Method:[GAUGED DAILY         ]      Tank Constr:  [MUX  ]   Remarks      : [UPGRADE PIPING; SCHEDULED FOR  ]
   Spill Hist:[                     ]      Pipe Constr:  [BIJ  ]                  [BRAC CLOSURE                   ]
   [REGULATED]/[UNDER_GROUND]              Interim: [UPGRADE   ]                  [                               ]

[D4    ] [42]  [1,155,000]GAL [07/31/85]   [T][D][ ]    [BDM  ]   [UPGRADE   ] : [12/31/00][  /  /  ] $[   35,700][      ]
   Inv Method:[                     ]      Tank Constr:  [MUX  ]   Remarks      : [UPGRADE PIPING; SCHEDULED FOR  ]
   Spill Hist:[PIPING LEAK          ]      Pipe Constr:  [BIJ  ]                  [REMOVAL                        ]
   [REGULATED]/[UNDER_GROUND]              Interim: [UPGRADE   ]                  [                               ]

[V3005 ] [70]  [    4,000]GAL [08/01/96]   [U][B][ ]    [BDM  ]   [REPLACE   ] : [12/31/00][09/11/89] $[    7,500][      ]
   Inv Method:[GAUGED DAILY         ]      Tank Constr:  [E    ]   Remarks      : [SCHEDULED FOR REMOVAL AND      ]
   Spill Hist:[NONE                 ]      Pipe Constr:  [BI   ]                  [REPLACEMENT W/ VAULTED         ]
   [REGULATED]/[UNDER_GROUND]              Interim: [REPLACE   ]                  [                               ]

[V4022A] [83]  [   10,000]GAL [08/01/96]   [U][B][ ]    [BDM  ]   [UPGRADE   ] : [12/31/98][  /  /  ] $[    1,000][      ]
   Inv Method:[GAUGED DAILY         ]      Tank Constr:  [EM   ]   Remarks      : [OVERFILL PROT; SCHEDULED FOR   ]
   Spill Hist:[NONE                 ]      Pipe Constr:  [CI   ]                  [REMOVAL AND REPLACEMENT W/ VAUL]
   [REGULATED]/[UNDER_GROUND]              Interim: [UPGRADE   ]                  [                               ]

[V4022B] [83]  [   10,000]GAL [08/01/96]   [U][B][ ]    [BDM  ]   [UPGRADE   ] : [12/31/98][  /  /  ] $[    1,000][      ]
   Inv Method:[GAUGED DAILY         ]      Tank Constr:  [EM   ]   Remarks      : [OVERFILL PROT; SCHEDULED FOR   ]
   Spill Hist:[NONE                 ]      Pipe Constr:  [CI   ]                  [REMOVAL AND REPLACEMENT W/ VAUL]
   [REGULATED]/[UNDER_GROUND]              Interim: [UPGRADE   ]                  [                               ]

[V4022C] [83]  [   10,000]GAL [08/01/96]   [U][B][ ]    [BDM  ]   [UPGRADE   ] : [12/31/98][  /  /  ] $[    1,000][      ]
   Inv Method:[GAUGED DAILY         ]      Tank Constr:  [EM   ]   Remarks      : [OVERFILL PROT; SCHEDULED FOR   ]
   Spill Hist:[NONE                 ]      Pipe Constr:  [CI   ]                  [REMOVAL AND REPLACEMENT W/ VAUL]
   [REGULATED]/[UNDER_GROUND]              Interim: [UPGRADE   ]                  [                               ]

[V4022D] [83]  [    6,000]GAL [08/01/96]   [U][D][ ]    [BDM  ]   [UPGRADE   ] : [12/31/98][  /  /  ] $[    1,000][      ]
   Inv Method:[GAUGED DAILY         ]      Tank Constr:  [EM   ]   Remarks      : [OVERFILL PROT; SCHEDULED FOR   ]
   Spill Hist:[NONE                 ]      Pipe Constr:  [CI   ]                  [REMOVAL AND REPLACEMENT W/ VAUL]
   [REGULATED]/[UNDER_GROUND]              Interim: [UPGRADE   ]                  [                               ]

[A127-A] [ 0]  [    5,000]GAL [  /  /  ]   [B][E][ ]    [X    ]   [REMOVED   ] : [12/31/89][02/13/92] $[        0][      ]
   Inv Method:[                     ]      Tank Constr:  [CW   ]   Remarks      : [REMOVED TANK                   ]
   Spill Hist:[NONE                 ]      Pipe Constr:  [B    ]                  [                               ]
   [REGULATED]/[ABOVE_GROUND]              Interim: [REMOVED   ]                  [                               ]

[A959  ] [61]  [  298,000]GAL [03/31/88]   [F][F][ ]    [X    ]   [UPGRADE   ] : [12/31/99][  /  /  ] $[    7,500][      ]
   Inv Method:[GAUGED DAILY         ]      Tank Constr:  [CSU  ]   Remarks      : [PIPE: LEAK DETECT, CATH PROT;  ]
   Spill Hist:[NONE                 ]      Pipe Constr:  [ABIJL]                  [SCHEDULED FOR REMOVAL          ]
   [REGULATED]/[ABOVE_GROUND]              Interim: [UPGRADE   ]                  [                               ]

[A902-B] [70]  [      800]GAL [  /  /  ]   [U][Z][ ]    [D    ]   [UPGRADE   ] : [01/01/98][  /  /  ] $[    1,500][      ]
   Inv Method:[                     ]      Tank Constr:  [CW   ]   Remarks      : [CLOSURE ASSESS, SEC CONT W/    ]
   Spill Hist:[                     ]      Pipe Constr:  [     ]                  [LOCKING VALVE; REGISTER W/ FDEP]
   [REGULATED]/[ABOVE_GROUND]              Interim: [UPGRADE   ]                  [                               ]

[A902-C] [90]  [      800]GAL [  /  /  ]   [U][B][ ]    [D    ]   [UPGRADE   ] : [12/31/99][  /  /  ] $[       50][      ]
   Inv Method:[                     ]      Tank Constr:  [CKW  ]   Remarks      : [SEC CONT LOCK; REGISTER W/ FDEP]
   Spill Hist:[                     ]      Pipe Constr:  [ABI  ]                  [                               ]
   [REGULATED]/[ABOVE_GROUND]              Interim: [UPGRADE   ]                  [                               ]

[D21   ] [42]  [   10,000]GAL [  /  /  ]   [T][D][ ]    [BD   ]   [UPGRADE   ] : [12/31/00][  /  /  ] $[   35,700][      ]
   Inv Method:[OUT OF SERVICE       ]      Tank Constr:  [UX   ]   Remarks      : [UPGRADE PIPING; SCHEDULED FOR  ]
   Spill Hist:[                     ]      Pipe Constr:  [BIJ  ]                  [REMOVAL                        ]
   [REGULATED]/[UNDER_GROUND]              Interim: [UPGRADE   ]                  [                               ]

[D6    ] [42]  [1,155,000]GAL [07/31/85]   [T][L][ ]    [BDM  ]   [UPGRADE   ] : [12/31/00][  /  /  ] $[   35,700][      ]
   Inv Method:[                     ]      Tank Constr:  [MUX  ]   Remarks      : [UPGRADE PIPING; SCHEDULED FOR  ]
   Spill Hist:[                     ]      Pipe Constr:  [BIJ  ]                  [REMOVAL                        ]
   [REGULATED]/[UNDER_GROUND]              Interim: [UPGRADE   ]                  [                               ]
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TABLE 3-3
PHYSICAL AND PLANNING INFORMATION
TANK INVENTORY AND MANAGEMENT SYSTEM DATA BASE
U.S. NAVY STORAGE SYSTEMS MANAGEMENT PLAN

Öáá PHYSICAL INFORMATION áá¢Öá PLANNING INFORMATION áááááááááááááááááááááááááááááááá¢
Öáá TABLE 2-1 INFO ááááÇ
Öáááááá Status
Öááá Contents
Öá Pres/Suct
Öá Proposed Compliance ááááááááááááááááááááááááááááááááÇ

TANK NUMBER | YEAR | CAPACITY | LAST TEST | Öê¢Öê¢Öê¢ÖLEAK DETECT¢ | Action | Planned Date | Actual Date | Construction Budget | PCR

** ACTIVITY ID # : FL44KWTNAS NAVAL AIR STATION CONTACT : STEVE COVELL (305)292-2194

[L41] [42] [2,700]GAL [/ /] [B][Y][ ] [X] [REMOVED] : [/ /][/ /] $[0][ ]
Inv Method:[ ] Tank Constr: [C] Remarks : [REMOVED TANK]
Spill Hist:[ ] Pipe Constr: [B] [ ]
[REGULATED]/[UNDER_GROUND] Interim: [REMOVED] [ ]

[A126] [86] [4,000]GAL [/ /] [B][L][ ] [X] [REMOVED] : [/ /][/ /] $[0][ ]
Inv Method:[ ] Tank Constr: [CP] Remarks : [REMOVED TANK]
Spill Hist:[ ] Pipe Constr: [B] [ ]
[REGULATED]/[ABOVE_GROUND] Interim: [REMOVED] [ ]

[A322-D] [61] [4,000]GAL [/ /] [B][L][ ] [X] [REMOVED] : [/ /][/ /] $[0][ ]
Inv Method:[NONE] Tank Constr: [C] Remarks : [REMOVED TANK]
Spill Hist:[ ] Pipe Constr: [B] [ ]
[REGULATED]/[UNDER_GROUND] Interim: [REMOVED] [ ]

[D88-A] [0] [25,000]GAL [/ /] [B][Y][ ] [X] [REMOVED] : [/ /][/ /] $[0][ ]
Inv Method:[ ] Tank Constr: [C] Remarks : [REMOVED TANK]
Spill Hist:[ ] Pipe Constr: [B] [ ]
[REGULATED]/[UNDER_GROUND] Interim: [REMOVED] [ ]

[D88-B] [0] [25,000]GAL [/ /] [B][Y][ ] [X] [REMOVED] : [/ /][/ /] $[0][ ]
Inv Method:[ ] Tank Constr: [C] Remarks : [REMOVED TANK]
Spill Hist:[ ] Pipe Constr: [B] [ ]
[REGULATED]/[UNDER_GROUND] Interim: [REMOVED] [ ]

[D88-C] [0] [25,000]GAL [/ /] [B][Y][ ] [X] [REMOVED] : [/ /][/ /] $[0][ ]
Inv Method:[ ] Tank Constr: [C] Remarks : [REMOVED TANK]
Spill Hist:[ ] Pipe Constr: [B] [ ]
[REGULATED]/[UNDER_GROUND] Interim: [REMOVED] [ ]

[D88-D] [0] [25,000]GAL [/ /] [B][Y][ ] [X] [REMOVED] : [/ /][/ /] $[0][ ]
Inv Method:[ ] Tank Constr: [C] Remarks : [REMOVED TANK]
Spill Hist:[ ] Pipe Constr: [B] [ ]
[REGULATED]/[UNDER_GROUND] Interim: [REMOVED] [ ]

[P8] [13] [740,000]GAL [/ /] [B][O][ ] [X] [DEMOLISHED] : [12/31/88][/ /] $[0][ ]
Inv Method:[ ] Tank Constr: [XPS] Remarks : [DEMOLISHED]
Spill Hist:[ ] Pipe Constr: [B] [ ]
[REGULATED]/[ABOVE_GROUND] Interim: [DEMOLISHED] [ ]

[94] [41] [835,000]GAL [/ /] [B][O][ ] [X] [REMOVED] : [/ /][/ /] $[0][ ]
Inv Method:[ ] Tank Constr: [XPS] Remarks : [REMOVED TANK]
Spill Hist:[ ] Pipe Constr: [B] [ ]
[REGULATED]/[ABOVE_GROUND] Interim: [REMOVED] [ ]

[115] [41] [227,178]GAL [/ /] [B][Y][ ] [X] [REMOVED] : [/ /][/ /] $[0][ ]
Inv Method:[ ] Tank Constr: [CPS] Remarks : [REMOVED TANK]
Spill Hist:[ ] Pipe Constr: [B] [ ]
[REGULATED]/[ABOVE_GROUND] Interim: [REMOVED] [ ]

[117] [41] [25,000]GAL [/ /] [B][Y][ ] [X] [REMOVED] : [/ /][/ /] $[0][ ]
Inv Method:[ ] Tank Constr: [CPS] Remarks : [REMOVED TANK]
Spill Hist:[ ] Pipe Constr: [B] [ ]
[REGULATED]/[ABOVE_GROUND] Interim: [REMOVED] [ ]

[149-1] [89] [2,000]GAL [/ /] [U][B][ ] [D] [UPGRADE] : [01/01/98][/ /] $[7,000][ ]
Inv Method:[ ] Tank Constr: [CKW] Remarks : [PIPE: REL DETECT; SCHEDULED FOR]
Spill Hist:[ ] Pipe Constr: [ABCI] [REMOVAL]
[REGULATED]/[ABOVE_GROUND] Interim: [UPGRADE] [ ]

[149-2] [89] [1,000]GAL [/ /] [U][B][ ] [D] [UPGRADE] : [01/01/98][/ /] $[7,000][ ]
Inv Method:[ ] Tank Constr: [CKW] Remarks : [PIPE: REL DETECT; SCHEDULED FOR]
Spill Hist:[ ] Pipe Constr: [ABCI] [REMOVAL]
[REGULATED]/[ABOVE_GROUND] Interim: [UPGRADE] [ ]

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                                                  TABLE 3-3
                                      PHYSICAL AND PLANNING INFORMATION
                                   TANK INVENTORY AND MANAGEMENT SYSTEM DATA BASE
                                      U.S. NAVY STORAGE SYSTEMS MANAGEMENT PLAN
Öáá PHYSICAL INFORMATION áááááááááááááááááááááááááááááááááááááááá¢Öá PLANNING INFORMATION áááááááááááááááááááááááááááááááá¢
.                                         Öáá TABLE 2-1 INFO ááááÇ.                                                    .
.                                         . Öáááááá Status       ..                                                    .
.                                         .  . Öááá Contents      .ûá Proposed Compliance áááááááááááááááááááááááááááááááÇ
.TANK                           LAST      .  .  . Öá Pres/Suct   ..                                                    .
.NUMBER  YEAR   CAPACITY        TEST      .Öê¢Öê¢Öê¢ÖLEAK DETECT¢.. Action        Planned   Actual    Construction       .
                                                                                Date      Date      Budget        PCR  .

** ACTIVITY ID # : FL44KWTNAS  NAVAL AIR STATION              CONTACT : STEVE COVELL                (305)292-2194
[248-A ] [40]  [    5,000]GAL [09/11/89]  [B][B][ ]    [DM   ]   [REMOVED   ] : [ /  /  ][ /  /  ] $[         0][     ]
   Inv Method:[GAUGED DAILY        ]      Tank Constr:  [C    ]   Remarks      : [REMOVED TANK                ]
   Spill Hist:[WATER IN TANK       ]      Pipe Constr:  [B    ]                  [                            ]
   [REGULATED]/[UNDER_GROUND]             Interim: [REMOVED   ]                  [                            ]

[248-B ] [40]  [    5,000]GAL [09/11/89]  [B][B][ ]    [DM   ]   [REMOVED   ] : [ /  /  ][ /  /  ] $[         0][     ]
   Inv Method:[GAUGED DAILY        ]      Tank Constr:  [C    ]   Remarks      : [REMOVED TANK                ]
   Spill Hist:[WATER IN TANK       ]      Pipe Constr:  [B    ]                  [                            ]
   [REGULATED]/[UNDER_GROUND]             Interim: [REMOVED   ]                  [                            ]

[248-C ] [40]  [    8,000]GAL [ /  /  ]   [B][A][ ]    [D    ]   [REMOVED   ] : [ /  /  ][ /  /  ] $[         0][     ]
   Inv Method:[                    ]      Tank Constr:  [C    ]   Remarks      : [REMOVED TANK                ]
   Spill Hist:[NONE                ]      Pipe Constr:  [B    ]                  [                            ]
   [REGULATED]/[UNDER_GROUND]             Interim: [REMOVED   ]                  [                            ]

[1276-D] [61]  [      550]GAL [ /  /  ]   [B][L][ ]    [X    ]   [REMOVED   ] : [ /  /  ][ /  /  ] $[         0][     ]
   Inv Method:[                    ]      Tank Constr:  [C    ]   Remarks      : [REMOVED TANK                ]
   Spill Hist:[                    ]      Pipe Constr:  [B    ]                  [                            ]
   [REGULATED]/[UNDER_GROUND]             Interim: [REMOVED   ]                  [                            ]

[1276-A] [61]  [   10,000]GAL [ /  /  ]   [B][Y][ ]    [X    ]   [REMOVED   ] : [ /  /  ][ /  /  ] $[         0][     ]
   Inv Method:[                    ]      Tank Constr:  [C    ]   Remarks      : [REMOVED TANK                ]
   Spill Hist:[                    ]      Pipe Constr:  [B    ]                  [                            ]
   [REGULATED]/[UNDER_GROUND]             Interim: [REMOVED   ]                  [                            ]

[1276-B] [61]  [   10,000]GAL [ /  /  ]   [B][Y][ ]    [X    ]   [REMOVED   ] : [ /  /  ][ /  /  ] $[         0][     ]
   Inv Method:[                    ]      Tank Constr:  [C    ]   Remarks      : [REMOVED TANK                ]
   Spill Hist:[                    ]      Pipe Constr:  [B    ]                  [                            ]
   [REGULATED]/[UNDER_GROUND]             Interim: [REMOVED   ]                  [                            ]

[1276-C] [74]  [   10,000]GAL [ /  /  ]   [B][B][ ]    [X    ]   [REMOVED   ] : [12/31/91][12/31/91] $[         0][     ]
   Inv Method:[                    ]      Tank Constr:  [E    ]   Remarks      : [REMOVED TANK                ]
   Spill Hist:[                    ]      Pipe Constr:  [B    ]                  [                            ]
   [REGULATED]/[UNDER_GROUND]             Interim: [REMOVED   ]                  [                            ]

[1279A ] [87]  [      500]GAL [ /  /  ]   [U][L][ ]    [D    ]   [REMOVE    ] : [12/31/00][ /  /  ] $[     2,000][     ]
   Inv Method:[                    ]      Tank Constr:  [C    ]   Remarks      : [SCHEDULED FOR REMOVAL; REGISTER]
   Spill Hist:[                    ]      Pipe Constr:  [B    ]                  [W/ FDEP                     ]
   [REGULATED]/[UNDER_GROUND]             Interim: [REMOVE    ]                  [                            ]

[A994  ] [85]  [      600]GAL [ /  /  ]   [U][G][ ]    [D    ]   [UPGRADE   ] : [12/31/99][ /  /  ] $[       650][     ]
   Inv Method:[                    ]      Tank Constr:  [CKW  ]   Remarks      : [SEC CONT LOCK, MANUAL GAUGING, ]
   Spill Hist:[                    ]      Pipe Constr:  [ABIJ ]                  [ANTI-SYPHON VALVE, PAINT PIPE ]
   [REGULATED]/[ABOVE_GROUND]             Interim: [UPGRADE   ]                  [                            ]

[C2076 ] [85]  [    1,000]GAL [ /  /  ]   [U][M][ ]    [D    ]   [          ] : [ /  /  ][ /  /  ] $[         0][     ]
   Inv Method:[                    ]      Tank Constr:  [CKW  ]   Remarks      : [SCHEDULED FOR REMOVAL AND   ]
   Spill Hist:[                    ]      Pipe Constr:  [ABIJ ]                  [REPLACEMENT W/ VAULTED      ]
   [UN-REGULATED]/[ABOVE_GROUND]          Interim: [          ]                  [                            ]

[D29   ] [85]  [      560]GAL [ /  /  ]   [U][G][ ]    [BD   ]   [UPGRADE   ] : [12/31/99][ /  /  ] $[       550][     ]
   Inv Method:[                    ]      Tank Constr:  [CKW  ]   Remarks      : [SEC CONT VALVE LOCK,        ]
   Spill Hist:[                    ]      Pipe Constr:  [AIJ  ]                  [ANTI-SYPHON VALVE           ]
   [REGULATED]/[ABOVE_GROUND]             Interim: [UPGRADE   ]                  [                            ]

[B48   ] [69]  [      550]GAL [ /  /  ]   [U][G][ ]    [X    ]   [UPGRADE   ] : [01/01/98][ /  /  ] $[     1,500][     ]
   Inv Method:[                    ]      Tank Constr:  [CW   ]   Remarks      : [SEC CONT, SPCC              ]
   Spill Hist:[                    ]      Pipe Constr:  [AIJ  ]                  [                            ]
   [UN-REGULATED]/[ABOVE_GROUND]          Interim: [UPGRADE   ]                  [                            ]

[A940-1] [53]  [      275]GAL [ /  /  ]   [B][N][ ]    [X    ]   [REMOVED   ] : [ /  /  ][ /  /  ] $[         0][     ]
   Inv Method:[                    ]      Tank Constr:  [CWP  ]   Remarks      : [REMOVED TANK                ]
   Spill Hist:[                    ]      Pipe Constr:  [A    ]                  [                            ]
   [UN-REGULATED]/[ABOVE_GROUND]          Interim: [REMOVED   ]                  [                            ]
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TABLE 3-3
PHYSICAL AND PLANNING INFORMATION
TANK INVENTORY AND MANAGEMENT SYSTEM DATA BASE
U.S. NAVY STORAGE SYSTEMS MANAGEMENT PLAN

PHYSICAL INFORMATION — PLANNING INFORMATION

TABLE 2-1 INFO
Status
Contents
Pres/Suct
LEAK DETECT

TANK NUMBER	YEAR	CAPACITY	LAST TEST	Status	Contents	Pres/Suct	LEAK DETECT	Action	Planned Date	Actual Date	Construction Budget	PCR
** ACTIVITY ID # : FL44KWTNAS NAVAL AIR STATION								CONTACT : STEVE COVELL			(305)292-2194	
[A940-2] [0]		185]GAL	[/ /]	[B]	[N]	[ ]	[X]	[REMOVED]	[/ /]	[/ /]	$[0]	[ ]
Inv Method:				Tank Constr:			[CW]	Remarks	[REMOVED TANK			
Spill Hist:				Pipe Constr:			[A]					
[UN-REGULATED]/[ABOVE_GROUND]				Interim:			[REMOVED]					
[A1006] [69]		300]GAL	[/ /]	[U]	[G]	[ ]	[D]	[ ]	[/ /]	[/ /]	$[0]	[ ]
Inv Method:				Tank Constr:			[CKW]	Remarks	[RECOMMENDATIONS ONLY			
Spill Hist:				Pipe Constr:			[ABIJ]					
[UN-REGULATED]/[ABOVE_GROUND]				Interim:			[ ]					
[C60] [0]		235]GAL	[/ /]	[B]	[N]	[ ]	[X]	[REMOVED]	[/ /]	[/ /]	$[0]	[ ]
Inv Method:				Tank Constr:			[CW]	Remarks	[REMOVED TANK			
Spill Hist:				Pipe Constr:			[A]					
[UN-REGULATED]/[ABOVE_GROUND]				Interim:			[REMOVED]					
[C80] [0]		180]GAL	[/ /]	[B]	[N]	[ ]	[X]	[REMOVED]	[/ /]	[/ /]	$[0]	[ ]
Inv Method:				Tank Constr:			[CW]	Remarks	[REMOVED TANK			
Spill Hist:				Pipe Constr:			[A]					
[UN-REGULATED]/[ABOVE_GROUND]				Interim:			[REMOVED]					
[C83] [42]		275]GAL	[/ /]	[U]	[H]	[ ]	[D]	[UPGRADE]	[01/01/98]	[/ /]	$[1,500]	[ ]
Inv Method:				Tank Constr:			[CW]	Remarks	[SEC CONT			
Spill Hist:				Pipe Constr:			[AI]					
[UN-REGULATED]/[ABOVE_GROUND]				Interim:			[UPGRADE]					
[L40] [42]		500]GAL	[/ /]	[B]	[N]	[ ]	[X]	[REMOVED]	[/ /]	[/ /]	$[0]	[ ]
Inv Method:				Tank Constr:			[CW]	Remarks	[REMOVED TANK			
Spill Hist:				Pipe Constr:			[B]					
[UN-REGULATED]/[ABOVE_GROUND]				Interim:			[REMOVED]					
[A634] [64]		300]GAL	[/ /]	[U]	[M]	[ ]	[D]	[UPGRADE]	[01/01/98]	[/ /]	$[2,500]	[ ]
Inv Method:				Tank Constr:			[CW]	Remarks	[SEC CONT W/ LOCKING VALVE;			
Spill Hist:				Pipe Constr:			[AI]		[SCHEDULED FOR REMOVAL			
[UN-REGULATED]/[ABOVE_GROUND]				Interim:			[UPGRADE]					
[A638] [53]		1,000]GAL	[/ /]	[U]	[M]	[ ]	[D]	[REMOVE]	[/ /]	[/ /]	$[0]	[ ]
Inv Method:				Tank Constr:			[CKW]	Remarks	[SCHEDULED FOR REMOVAL			
Spill Hist:				Pipe Constr:			[ABI]					
[UN-REGULATED]/[ABOVE_GROUND]				Interim:			[REMOVE]					
[A639] [53]		1,000]GAL	[/ /]	[U]	[M]	[ ]	[D]	[UPGRADE]	[01/01/98]	[/ /]	$[2,500]	[ ]
Inv Method:				Tank Constr:			[CW]	Remarks	[SEC CONT W/ LOCKING VALVE;			
Spill Hist:				Pipe Constr:			[ABI]		[SCHEDULED FOR REMOVAL			
[UN-REGULATED]/[ABOVE_GROUND]				Interim:			[UPGRADE]					
[A648] [0]		1,000]GAL	[/ /]	[B]	[M]	[ ]	[X]	[REMOVED]	[/ /]	[/ /]	$[0]	[ ]
Inv Method:				Tank Constr:			[CPW]	Remarks	[REMOVED TANK			
Spill Hist:				Pipe Constr:			[A]					
[UN-REGULATED]/[ABOVE_GROUND]				Interim:			[REMOVED]					
[A649] [0]		1,000]GAL	[/ /]	[B]	[M]	[ ]	[X]	[REMOVED]	[/ /]	[/ /]	$[0]	[ ]
Inv Method:				Tank Constr:			[CPW]	Remarks	[REMOVED TANK			
Spill Hist:				Pipe Constr:			[A]					
[UN-REGULATED]/[ABOVE_GROUND]				Interim:			[REMOVED]					
[A727] [53]		1,500]GAL	[/ /]	[U]	[M]	[ ]	[D]	[ ]	[/ /]	[/ /]	$[0]	[ ]
Inv Method:				Tank Constr:			[CKW]	Remarks	[RECOMMENDATIONS ONLY			
Spill Hist:				Pipe Constr:			[ABI]					
[UN-REGULATED]/[ABOVE_GROUND]				Interim:			[ ]					
[A733] [65]		2,000]GAL	[/ /]	[B]	[M]	[ ]	[X]	[REMOVED]	[/ /]	[/ /]	$[0]	[ ]
Inv Method:				Tank Constr:			[CP]	Remarks	[REMOVED TANK			
Spill Hist:				Pipe Constr:			[NONE]					
[UN-REGULATED]/[ABOVE_GROUND]				Interim:			[REMOVED]					

TABLE 3-3
PHYSICAL AND PLANNING INFORMATION
TANK INVENTORY AND MANAGEMENT SYSTEM DATA BASE
U.S. NAVY STORAGE SYSTEMS MANAGEMENT PLAN

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Öáá PHYSICAL INFORMATION áááááááááááááááááááááááááááááááááááááááá¢Öá PLANNING INFORMATION áááááááááááááááááááááááááááááááá¢
                                         Öáá TABLE 2-1 INFO ááááÇ
                                          Öáááááá Status
                                            Öááá Contents       ûá Proposed Compliance áááááááááááááááááááááááááááááááÇ
TANK                             LAST           Öá Pres/Suct                       Planned   Actual    Construction
NUMBER  YEAR   CAPACITY          TEST      Öê¢Öê¢Öê¢ÖLEAK DETECT¢  Action          Date      Date      Budget        PCR

** ACTIVITY ID # : FL44KWTNAS  NAVAL AIR STATION           CONTACT : STEVE COVELL                (305)292-2194
[A827  ] [74]  [        330]GAL [ / / ]  [U][G][ ]     [D    ]   [          ] : [ / / ][ / / ] $[          0][      ]
    Inv Method:[                    ]    Tank Constr:  [CKW  ]   Remarks      : [RECOMMENDATION ONLY              ]
    Spill Hist:[                    ]    Pipe Constr:  [ABIJ ]                  [                                 ]
    [UN-REGULATED]/[ABOVE_GROUND]        Interim: [          ]                  [                                 ]

[G1    ] [ 0]  [        565]GAL [ / / ]  [B][N][ ]     [X    ]   [REMOVED   ] : [ / / ][ / / ] $[          0][      ]
    Inv Method:[                    ]    Tank Constr:  [CR   ]   Remarks      : [REMOVED TANK                     ]
    Spill Hist:[                    ]    Pipe Constr:  [A    ]                  [                                 ]
    [UN-REGULATED]/[ABOVE_GROUND]        Interim: [REMOVED   ]                  [                                 ]

[J1563 ] [67]  [     10,000]GAL [ / / ]  [B][N][ ]     [CD   ]   [REMOVED   ] : [ / / ][ / / ] $[          0][      ]
    Inv Method:[                    ]    Tank Constr:  [CPR  ]   Remarks      : [REMOVED TANK                     ]
    Spill Hist:[                    ]    Pipe Constr:  [BC   ]                  [                                 ]
    [UN-REGULATED]/[ABOVE_GROUND]        Interim: [REMOVED   ]                  [                                 ]

[L3    ] [69]  [      3,000]GAL [ / / ]  [B][N][ ]     [X    ]   [REMOVED   ] : [ / / ][ / / ] $[          0][      ]
    Inv Method:[                    ]    Tank Constr:  [CG   ]   Remarks      : [REMOVED TANK                     ]
    Spill Hist:[                    ]    Pipe Constr:  [BC   ]                  [                                 ]
    [UN-REGULATED]/[UNDER_GROUND]        Interim: [REMOVED   ]                  [                                 ]

[V1274 ] [90]  [        110]GAL [ / / ]  [B][N][ ]     [X    ]   [REMOVED   ] : [ / / ][ / / ] $[          0][      ]
    Inv Method:[                    ]    Tank Constr:  [CW   ]   Remarks      : [REMOVED TANK                     ]
    Spill Hist:[                    ]    Pipe Constr:  [A    ]                  [                                 ]
    [UN-REGULATED]/[ABOVE_GROUND]        Interim: [REMOVED   ]                  [                                 ]

[V1554 ] [90]  [        110]GAL [ / / ]  [U][G][ ]     [D    ]   [REPLACE   ] : [ / / ][ / / ] $[          0][      ]
    Inv Method:[                    ]    Tank Constr:  [CKW  ]   Remarks      : [SCHEDULED FOR REMOVAL AND        ]
    Spill Hist:[                    ]    Pipe Constr:  [ABIJ ]                  [REPLACEMENT W/ VAULTED           ]
    [UN-REGULATED]/[ABOVE_GROUND]        Interim: [REPLACE   ]                  [                                 ]

[V984  ] [72]  [        330]GAL [ / / ]  [B][N][ ]     [X    ]   [REMOVED   ] : [ / / ][ / / ] $[          0][      ]
    Inv Method:[                    ]    Tank Constr:  [CW   ]   Remarks      : [REMOVED TANK                     ]
    Spill Hist:[                    ]    Pipe Constr:  [A    ]                  [                                 ]
    [UN-REGULATED]/[ABOVE_GROUND]        Interim: [REMOVED   ]                  [                                 ]

[V988  ] [90]  [        110]GAL [ / / ]  [U][G][ ]     [D    ]   [          ] : [ / / ][ / / ] $[          0][      ]
    Inv Method:[                    ]    Tank Constr:  [CKW  ]   Remarks      : [RECOMMENDATION ONLY              ]
    Spill Hist:[                    ]    Pipe Constr:  [AIJ  ]                  [                                 ]
    [UN-REGULATED]/[ABOVE_GROUND]        Interim: [          ]                  [                                 ]

[A1004 ] [87]  [      2,000]GAL [ / / ]  [U][G][ ]     [D    ]   [UPGRADE   ] : [12/31/99][ / / ] $[      550][      ]
    Inv Method:[                    ]    Tank Constr:  [CKW  ]   Remarks      : [SEC CONT VALVE LOCK,             ]
    Spill Hist:[                    ]    Pipe Constr:  [AIJ  ]                  [ANTI-SYPHON VALVE                ]
    [REGULATED]/[ABOVE_GROUND]           Interim: [UPGRADE   ]                  [                                 ]

[A1005 ] [ 0]  [      2,000]GAL [ / / ]  [B][N][ ]     [X    ]   [REMOVED   ] : [ / / ][ / / ] $[          0][      ]
    Inv Method:[                    ]    Tank Constr:  [KW   ]   Remarks      : [REMOVED TANK                     ]
    Spill Hist:[                    ]    Pipe Constr:  [B    ]                  [                                 ]
    [UN-REGULATED]/[ABOVE_GROUND]        Interim: [REMOVED   ]                  [                                 ]

[A1019 ] [75]  [        200]GAL [ / / ]  [B][N][ ]     [X    ]   [REMOVED   ] : [ / / ][ / / ] $[          0][      ]
    Inv Method:[                    ]    Tank Constr:  [CW   ]   Remarks      : [REMOVED TANK                     ]
    Spill Hist:[                    ]    Pipe Constr:  [A    ]                  [                                 ]
    [UN-REGULATED]/[ABOVE_GROUND]        Interim: [REMOVED   ]                  [                                 ]

[A1020 ] [67]  [        300]GAL [ / / ]  [U][G][ ]     [D    ]   [          ] : [ / / ][ / / ] $[          0][      ]
    Inv Method:[                    ]    Tank Constr:  [CKW  ]   Remarks      : [RECOMMENDATIONS ONLY             ]
    Spill Hist:[                    ]    Pipe Constr:  [ABIJ ]                  [                                 ]
    [UN-REGULATED]/[ABOVE_GROUND]        Interim: [          ]                  [                                 ]

[A1025 ] [60]  [      2,000]GAL [ / / ]  [U][G][ ]     [D    ]   [UPGRADE   ] : [12/31/99][ / / ] $[      650][      ]
    Inv Method:[                    ]    Tank Constr:  [CKW  ]   Remarks      : [SEC CONT VALVE LOCK, PAINT       ]
    Spill Hist:[                    ]    Pipe Constr:  [ABIJ ]                  [PIPING, ANTI-SYPHON VALVE        ]
    [REGULATED]/[ABOVE_GROUND]           Interim: [UPGRADE   ]                  [                                 ]
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TABLE 3-3
PHYSICAL AND PLANNING INFORMATION
TANK INVENTORY AND MANAGEMENT SYSTEM DATA BASE
U.S. NAVY STORAGE SYSTEMS MANAGEMENT PLAN

PHYSICAL INFORMATION								PLANNING INFORMATION				
				TABLE 2-1 INFO								
				Status								
				Contents				Proposed Compliance				
TANK NUMBER	YEAR	CAPACITY	LAST TEST	Pres/Suct	LEAK DETECT			Action	Planned Date	Actual Date	Construction Budget	PCR
** ACTIVITY ID # : FL44KWTNAS NAVAL AIR STATION						CONTACT : STEVE COVELL					(305)292-2194	
A1103	65	1,000 GAL	/ /	U	G	D	CKW	UPGRADE	12/31/99	/ /	$650	
Inv Method:				Tank Constr:				Remarks	SEC CONT VALVE LOCK, PAINT			
Spill Hist:				Pipe Constr:		ABIJ			PIPING, ANTI-SYPHON VALVE			
REGULATED / ABOVE_GROUND				Interim:		UPGRADE						
A1305	0	0 GAL	/ /	B	N	X	C	REMOVED	/ /	/ /	$0	
Inv Method:				Tank Constr:				Remarks	REMOVED TANK			
Spill Hist:				Pipe Constr:		B						
UN-REGULATED /				Interim:		REMOVED						
A132	61	300 GAL	/ /	U	G	D	CKW		/ /	/ /	$0	
Inv Method:				Tank Constr:				Remarks	RECOMMENDATIONS ONLY			
Spill Hist:				Pipe Constr:		ABIJ						
UN-REGULATED / ABOVE_GROUND				Interim:								
A132-1	0	550 GAL	/ /	B	O	X	CW	REMOVED	/ /	/ /	$0	
Inv Method:				Tank Constr:				Remarks	REMOVED TANK			
Spill Hist:				Pipe Constr:		Y						
UN-REGULATED / ABOVE_GROUND				Interim:		REMOVED						
A132-2	0	300 GAL	/ /	B	O	E	CPW	REMOVED	/ /	/ /	$0	
Inv Method:				Tank Constr:				Remarks	REMOVED TANK			
Spill Hist:				Pipe Constr:		Y						
UN-REGULATED / ABOVE_GROUND				Interim:		REMOVED						
A137-A	75	10,000 GAL	/ /	B	M	X	CPW	REMOVED	/ /	/ /	$0	
Inv Method:				Tank Constr:				Remarks	REMOVED TANK			
Spill Hist:				Pipe Constr:		B						
UN-REGULATED / ABOVE_GROUND				Interim:		REMOVED						
A137-B	0	15,000 GAL	/ /	B	M	X	CPW	REMOVED	/ /	/ /	$0	
Inv Method:				Tank Constr:				Remarks	REMOVED TANK			
Spill Hist:				Pipe Constr:		B						
UN-REGULATED / ABOVE_GROUND				Interim:		REMOVED						
A225	85	60 GAL	/ /	U	G	X			01/01/98	/ /	$0	
Inv Method:				Tank Constr:		CW		Remarks	SPCC			
Spill Hist:				Pipe Constr:		ABIJ						
UN-REGULATED / ABOVE_GROUND				Interim:								
A230	46	2,000 GAL	/ /	U	G	D		REPLACE	12/31/99	/ /	$2,500	
Inv Method:				Tank Constr:		CWY		Remarks	SCHEDULED FOR REMOVAL AND			
Spill Hist:				Pipe Constr:		ABCIJ			REPLACEMENT W/ VAULTED			
REGULATED / ABOVE_GROUND				Interim:		REPLACE						
A244	54	1,000 GAL	/ /	B	N	X		REMOVED	/ /	/ /	$0	
Inv Method:				Tank Constr:		C		Remarks	REMOVED TANK			
Spill Hist:				Pipe Constr:		BC						
UN-REGULATED / UNDER_GROUND				Interim:		REMOVED						
A314	80	300 GAL	/ /	U	G	D		UPGRADE	01/01/98	/ /	$2,000	
Inv Method:				Tank Constr:		CW		Remarks	SEC CONT W/ LOCKING VALVE;			
Spill Hist:				Pipe Constr:		ABIJ			SCHEDULED FOR REMOVAL AND			
UN-REGULATED / ABOVE_GROUND				Interim:		UPGRADE			REPLACE			
A325-1	63	20,000 GAL	/ /	U	G	D		UPGRADE	12/31/99	/ /	$2,600	
Inv Method:				Tank Constr:		CKW		Remarks	LEVEL GAUGE, ANTI-SYPHON VALVE,			
Spill Hist:				Pipe Constr:		ABIJ			PAINT PIPING			
REGULATED / ABOVE_GROUND				Interim:		UPGRADE						
A325-2	63	18,000 GAL	/ /	B	N	X		REMOVED	/ /	/ /	$0	
Inv Method:				Tank Constr:		CPW		Remarks	REMOVED TANK			
Spill Hist:				Pipe Constr:		BC						
UN-REGULATED / ABOVE_GROUND				Interim:		REMOVED						

TABLE 3-3
PHYSICAL AND PLANNING INFORMATION
TANK INVENTORY AND MANAGEMENT SYSTEM DATA BASE
U.S. NAVY STORAGE SYSTEMS MANAGEMENT PLAN

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Öáá PHYSICAL INFORMATION áááááááááááááááááááááááááááááááááááááááá¢Öá PLANNING INFORMATION ááááááááááááááááááááááááááááááá¢
                                                Öáá TABLE 2-1 INFO ááááÇ
                                                 Öáááááá Status
                                                    Öááá Contents     Öá Proposed Compliance áááááááááááááááááááááááááááááááááÇ
TANK                               LAST                Öá Pres/Suct                  Planned    Actual     Construction
NUMBER  YEAR   CAPACITY            TEST         Öê¢Öê¢Öê¢ÖLEAK DETECT¢  Action            Date       Date       Budget        PCR

** ACTIVITY ID # : FL44KWTNAS  NAVAL AIR STATION              CONTACT : STEVE COVELL                  (305)292-2194
[A325-3] [63]  [        250]GAL [  /  /  ]  [U][G][ ]     [D      ]   [              ] : [  /  /  ][  /  /  ] $[          0][        ]
    Inv Method:[                      ]     Tank Constr:  [C      ]   Remarks          : [                              ]
    Spill Hist:[                      ]     Pipe Constr:  [AIJ    ]                      [                              ]
    [UN-REGULATED]/[ABOVE_GROUND]           Interim: [            ]                      [                              ]

[A328  ] [68]  [      2,300]GAL [  /  /  ]  [U][G][ ]     [D      ]   [UPGRADE       ] : [01/01/98][  /  /  ] $[      1,200][        ]
    Inv Method:[                      ]     Tank Constr:  [CKW    ]   Remarks          : [REPLACE UG PIPING W/ AG       ]
    Spill Hist:[                      ]     Pipe Constr:  [AIJY   ]                      [                              ]
    [REGULATED]/[ABOVE_GROUND]              Interim: [UPGRADE     ]                      [                              ]

[A332  ] [64]  [        550]GAL [  /  /  ]  [B][D][ ]     [X      ]   [REMOVED       ] : [  /  /  ][  /  /  ] $[          0][        ]
    Inv Method:[                      ]     Tank Constr:  [CW     ]   Remarks          : [REMOVED TANK                  ]
    Spill Hist:[                      ]     Pipe Constr:  [B      ]                      [                              ]
    [UN-REGULATED]/[ABOVE_GROUND]           Interim: [REMOVED     ]                      [                              ]

[A4010 ] [ 0]  [        275]GAL [  /  /  ]  [U][G][ ]     [X      ]   [              ] : [01/01/98][  /  /  ] $[          0][        ]
    Inv Method:[                      ]     Tank Constr:  [CKW    ]   Remarks          : [SPCC                          ]
    Spill Hist:[                      ]     Pipe Constr:  [ABIJ   ]                      [                              ]
    [UN-REGULATED]/[ABOVE_GROUND]           Interim: [            ]                      [                              ]

[A4011 ] [87]  [        300]GAL [  /  /  ]  [U][G][ ]     [D      ]   [              ] : [  /  /  ][  /  /  ] $[          0][        ]
    Inv Method:[                      ]     Tank Constr:  [CKW    ]   Remarks          : [RECOMMENDATION ONLY           ]
    Spill Hist:[                      ]     Pipe Constr:  [AIJ    ]                      [                              ]
    [UN-REGULATED]/[ABOVE_GROUND]           Interim: [            ]                      [                              ]

[A419-A] [44]  [      4,000]GAL [  /  /  ]  [U][G][ ]     [DM     ]   [REPLACE       ] : [01/01/98][  /  /  ] $[      5,000][        ]
    Inv Method:[                      ]     Tank Constr:  [CSW    ]   Remarks          : [SCHEDULED FOR REMOVAL AND     ]
    Spill Hist:[                      ]     Pipe Constr:  [ABCI   ]                      [REPLACEMENT W/ VAULTED        ]
    [REGULATED]/[ABOVE_GROUND]              Interim: [REPLACE     ]                      [                              ]

[A419-B] [44]  [      4,000]GAL [  /  /  ]  [U][G][ ]     [DM     ]   [REPLACE       ] : [01/01/98][  /  /  ] $[      5,000][        ]
    Inv Method:[                      ]     Tank Constr:  [CSW    ]   Remarks          : [SCHEDULED FOR REMOVAL AND     ]
    Spill Hist:[                      ]     Pipe Constr:  [ABCI   ]                      [REPLACEMENT W/ VAULTED        ]
    [REGULATED]/[ABOVE_GROUND]              Interim: [REPLACE     ]                      [                              ]

[A419-C] [44]  [      4,000]GAL [  /  /  ]  [U][G][ ]     [DM     ]   [REPLACE       ] : [01/01/98][  /  /  ] $[      5,000][        ]
    Inv Method:[                      ]     Tank Constr:  [CSW    ]   Remarks          : [SCHEDULED FOR REMOVAL AND     ]
    Spill Hist:[                      ]     Pipe Constr:  [ABCI   ]                      [REPLACEMENT W/ VAULTED        ]
    [REGULATED]/[ABOVE_GROUND]              Interim: [REPLACE     ]                      [                              ]

[A4053 ] [ 0]  [      1,000]GAL [  /  /  ]  [B][N][ ]     [X      ]   [REMOVED       ] : [  /  /  ][  /  /  ] $[          0][        ]
    Inv Method:[                      ]     Tank Constr:  [C      ]   Remarks          : [REMOVED TANK                  ]
    Spill Hist:[                      ]     Pipe Constr:  [B      ]                      [                              ]
    [UN-REGULATED]/[UNDER_GROUND]           Interim: [REMOVED     ]                      [                              ]

[A515  ] [63]  [      2,000]GAL [  /  /  ]  [B][M][ ]     [X      ]   [REMOVED       ] : [  /  /  ][  /  /  ] $[          0][        ]
    Inv Method:[                      ]     Tank Constr:  [C      ]   Remarks          : [REMOVED TANK                  ]
    Spill Hist:[                      ]     Pipe Constr:  [B      ]                      [                              ]
    [UN-REGULATED]/[UNDER_GROUND]           Interim: [REMOVED     ]                      [                              ]

[A522  ] [82]  [        700]GAL [  /  /  ]  [B][M][ ]     [X      ]   [REMOVED       ] : [  /  /  ][  /  /  ] $[          0][        ]
    Inv Method:[                      ]     Tank Constr:  [CW     ]   Remarks          : [REMOVED TANK                  ]
    Spill Hist:[                      ]     Pipe Constr:  [A      ]                      [                              ]
    [UN-REGULATED]/[ABOVE_GROUND]           Interim: [REMOVED     ]                      [                              ]

[A624  ] [61]  [        550]GAL [  /  /  ]  [U][M][ ]     [D      ]   [              ] : [  /  /  ][  /  /  ] $[          0][        ]
    Inv Method:[                      ]     Tank Constr:  [CKW    ]   Remarks          : [RECOMMENDATION ONLY           ]
    Spill Hist:[                      ]     Pipe Constr:  [AI     ]                      [                              ]
    [UN-REGULATED]/[ABOVE_GROUND]           Interim: [            ]                      [                              ]

[A625  ] [61]  [        550]GAL [  /  /  ]  [U][M][ ]     [D      ]   [UPGRADE       ] : [01/01/98][  /  /  ] $[        500][        ]
    Inv Method:[                      ]     Tank Constr:  [CRW    ]   Remarks          : [ADDITIONAL SEC CONT VOLUME    ]
    Spill Hist:[                      ]     Pipe Constr:  [ABI    ]                      [                              ]
    [UN-REGULATED]/[ABOVE_GROUND]           Interim: [UPGRADE     ]                      [                              ]
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TABLE 3-3
PHYSICAL AND PLANNING INFORMATION
TANK INVENTORY AND MANAGEMENT SYSTEM DATA BASE
U.S. NAVY STORAGE SYSTEMS MANAGEMENT PLAN

PHYSICAL INFORMATION							PLANNING INFORMATION				
				TABLE 2-1 INFO							
				Status							
				Contents			Proposed Compliance				
TANK NUMBER	YEAR	CAPACITY	LAST TEST	Pres/Suct	LEAK DETECT		Action	Planned Date	Actual Date	Construction Budget	PCR
** ACTIVITY ID # : FL44KWTNAS NAVAL AIR STATION						CONTACT : STEVE COVELL				(305)292-2194	
[A630]	[64]	[550]GAL	[/ /]	[U][M][ ]	[D]	[ ]	:	[/ /]	[/ /]	$[0]	[ ]
Inv Method:				Tank Constr:	[CKW]	Remarks	:	[RECOMMENDATIONS ONLY			
Spill Hist:				Pipe Constr:	[ABI]			[			
[UN-REGULATED]/[ABOVE_GROUND]				Interim:	[ ]			[			
[A632]	[64]	[550]GAL	[/ /]	[U][M][ ]	[D]	[ ]	:	[/ /]	[/ /]	$[0]	[ ]
Inv Method:				Tank Constr:	[CKW]	Remarks	:	[RECOMMENDATIONS ONLY			
Spill Hist:				Pipe Constr:	[ABI]			[			
[UN-REGULATED]/[ABOVE_GROUND]				Interim:	[ ]			[			
[38]	[0]	[300]GAL	[/ /]	[U][H][ ]	[X]	[UPGRADE]	:	[01/01/98]	[/ /]	$[1,500]	[ ]
Inv Method:				Tank Constr:	[CW]	Remarks	:	[SEC CONT W/ LOCKING VALVE, SPCC]			
Spill Hist:				Pipe Constr:	[AIJY]			[			
[UN-REGULATED]/[ABOVE_GROUND]				Interim:	[UPGRADE]			[			
[109]	[0]	[2,000]GAL	[/ /]	[B][M][ ]	[X]	[REMOVED]	:	[/ /]	[/ /]	$[0]	[ ]
Inv Method:				Tank Constr:	[CPS]	Remarks	:	[REMOVED TANK			
Spill Hist:				Pipe Constr:	[B]			[			
[UN-REGULATED]/[ABOVE_GROUND]				Interim:	[REMOVED]			[			
[290]	[87]	[750]GAL	[/ /]	[U][G][ ]	[D]	[UPGRADE]	:	[01/01/98]	[/ /]	$[3,500]	[ ]
Inv Method:				Tank Constr:	[CKW]	Remarks	:	[REPLACE UG PIPING W/ AG			
Spill Hist:				Pipe Constr:	[ABIJ]			[			
[REGULATED]/[ABOVE_GROUND]				Interim:	[UPGRADE]			[			
[290-A]	[87]	[700]GAL	[/ /]	[U][G][ ]	[D]	[UPGRADE]	:	[12/31/99]	[/ /]	$[1,050]	[ ]
Inv Method:				Tank Constr:	[CKW]	Remarks	:	[SEC CONT LOCK, PAINT TANK &			
Spill Hist:				Pipe Constr:	[ABIJ]			[PIPING, ANTI-SYPHON VALVE			
[REGULATED]/[ABOVE_GROUND]				Interim:	[UPGRADE]			[			
[437]	[58]	[1,000]GAL	[08/01/96]	[U][M][ ]	[D]	[REPLACE]	:	[/ /]	[/ /]	$[0]	[ ]
Inv Method:				Tank Constr:	[C]	Remarks	:	[SCHEDULED FOR REMOVAL AND			
Spill Hist:				Pipe Constr:	[BI]			[REPLACEMENT W/ VAULTED			
[UN-REGULATED]/[UNDER_GROUND]				Interim:	[REPLACE]			[			
[438]	[58]	[1,000]GAL	[/ /]	[T][M][ ]	[D]	[REPLACE]	:	[/ /]	[/ /]	$[0]	[ ]
Inv Method:				Tank Constr:	[C]	Remarks	:	[SCHEDULED FOR REMOVAL AND			
Spill Hist:				Pipe Constr:	[BI]			[REPLACEMENT W/ VAULTED			
[UN-REGULATED]/[UNDER_GROUND]				Interim:	[REPLACE]			[			
[439]	[58]	[1,000]GAL	[/ /]	[T][M][ ]	[D]	[REPLACE]	:	[/ /]	[/ /]	$[0]	[ ]
Inv Method:				Tank Constr:	[C]	Remarks	:	[SCHEDULED FOR REMOVAL AND			
Spill Hist:				Pipe Constr:	[BI]			[REPLACEMENT W/ VAULTED			
[UN-REGULATED]/[UNDER_GROUND]				Interim:	[REPLACE]			[			
[446]	[64]	[280]GAL	[/ /]	[B][N][ ]	[X]	[REMOVED]	:	[/ /]	[/ /]	$[0]	[ ]
Inv Method:				Tank Constr:	[CPW]	Remarks	:	[REMOVED TANK			
Spill Hist:				Pipe Constr:	[B]			[			
[UN-REGULATED]/[ABOVE_GROUND]				Interim:	[REMOVED]			[			
[576]	[54]	[1,000]GAL	[/ /]	[B][N][S]	[X]	[REMOVED]	:	[/ /]	[/ /]	$[0]	[ ]
Inv Method:				Tank Constr:	[C]	Remarks	:	[REMOVED TANK			
Spill Hist:				Pipe Constr:	[B]			[			
[UN-REGULATED]/[UNDER_GROUND]				Interim:	[REMOVED]			[			
[12798]	[88]	[3,000]GAL	[/ /]	[U][G][ ]	[D]	[UPGRADE]	:	[01/01/98]	[/ /]	$[1,800]	[ ]
Inv Method:				Tank Constr:	[CKW]	Remarks	:	[REPLACE UG PIPING W/ AG,			
Spill Hist:				Pipe Constr:	[ABIJ]			[REGISTER W/ FDEP			
[REGULATED]/[ABOVE_GROUND]				Interim:	[UPGRADE]			[			
[1287]	[75]	[2,500]GAL	[/ /]	[B][M][ ]	[X]	[REMOVED]	:	[/ /]	[/ /]	$[0]	[ ]
Inv Method:				Tank Constr:	[CW]	Remarks	:	[REMOVED TANK			
Spill Hist:				Pipe Constr:	[B]			[			
[UN-REGULATED]/[ABOVE_GROUND]				Interim:	[REMOVED]			[			

TABLE 3-3
PHYSICAL AND PLANNING INFORMATION
TANK INVENTORY AND MANAGEMENT SYSTEM DATA BASE
U.S. NAVY STORAGE SYSTEMS MANAGEMENT PLAN

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Öáá PHYSICAL INFORMATION áááááááááááááááááááááááááááááááááááááááá¢Öá PLANNING INFORMATION ááááááááááááááááááááááááááááááááá¢
                                                     Öáá TABLE 2-1 INFO ááááÇ
                                                     Öááááááá Status
                                                       Öááá Contents        Öá Proposed Compliance áááááááááááááááááááááááááááááááááÇ
 TANK                                    LAST              Öá Pres/Suct                     Planned     Actual     Construction
 NUMBER  YEAR    CAPACITY                TEST          Öê¢Öê¢Öê¢ÖLEAK DETECT¢   Action        Date        Date       Budget        PCR

** ACTIVITY ID # : FL44KWTNAS  NAVAL AIR STATION                 CONTACT : STEVE COVELL                    (305)292-2194
[1350  ] [66]  [     1,000]GAL [08/01/96]  [U][M][ ]      [D      ]   [              ] : [  /  /  ][  /  /  ] $[          0][      ]
    Inv Method:[                        ]  Tank Constr:   [C      ]   Remarks          : [SCHEDULED FOR REMOVAL AND          ]
    Spill Hist:[                        ]  Pipe Constr:   [BI     ]                      [REPLACEMENT W/ VAULTED             ]
    [UN-REGULATED]/[UNDER_GROUND]          Interim: [             ]                      [                                   ]

[A935R ] [95]  [       250]GAL [  /  /  ]  [U][L][ ]      [X      ]   [              ] : [01/01/98][  /  /  ] $[          0][      ]
    Inv Method:[                        ]. Tank Constr:   [CIM    ]   Remarks          : [SPCC                               ]
    Spill Hist:[                        ]  Pipe Constr:   [A      ]                      [                                   ]
    [UN-REGULATED]/[ABOVE_GROUND]          Interim: [             ]                      [                                   ]

[A925A ] [96]  [    10,000]GAL [  /  /  ]  [U][L][ ]      [X      ]   [UPGRADE       ] : [01/01/98][  /  /  ] $[      2,000][      ]
    Inv Method:[                        ]  Tank Constr:   [CI     ]   Remarks          : [TANK LEVEL GAUGE, SPCC,            ]
    Spill Hist:[                        ]  Pipe Constr:   [AB     ]                      [REGISTER W/ FDEP                   ]
    [REGULATED]/[ABOVE_GROUND]             Interim: [UPGRADE      ]                      [                                   ]

[A929  ] [60]  [       560]GAL [08/01/96]  [U][L][ ]      [D      ]   [REPLACE       ] : [12/31/00][  /  /  ] $[     15,000][      ]
    Inv Method:[                        ]  Tank Constr:   [C      ]   Remarks          : [SCHEDULED FOR REMOVAL AND          ]
    Spill Hist:[                        ]  Pipe Constr:   [B      ]                      [REPLACEMENT W/ VAULTED             ]
    [REGULATED]/[UNDER_GROUND]             Interim: [REPLACE      ]                      [                                   ]

[A937  ] [ 0]  [       300]GAL [  /  /  ]  [U][Z][ ]      [D      ]   [UPGRADE       ] : [01/01/98][  /  /  ] $[      1,000][      ]
    Inv Method:[                        ]  Tank Constr:   [CKW    ]   Remarks          : [IMPERVIOUS LINER FOR SEC CONT      ]
    Spill Hist:[                        ]  Pipe Constr:   [AB     ]                      [                                   ]
    [UN-REGULATED]/[ABOVE_GROUND]          Interim: [UPGRADE      ]                      [                                   ]

[A940-3] [94]  [       350]GAL [  /  /  ]  [U][H][ ]      [D      ]   [UPGRADE       ] : [01/01/98][  /  /  ] $[      1,000][      ]
    Inv Method:[                        ]  Tank Constr:   [CKW    ]   Remarks          : [IMPERVIOUS LINER FOR SEC CONT      ]
    Spill Hist:[                        ]  Pipe Constr:   [AIJ    ]                      [                                   ]
    [UN-REGULATED]/[ABOVE_GROUND]          Interim: [UPGRADE      ]                      [                                   ]

[A940-4] [94]  [       280]GAL [  /  /  ]  [U][G][ ]      [D      ]   [UPGRADE       ] : [01/01/98][  /  /  ] $[      1,000][      ]
    Inv Method:[                        ]  Tank Constr:   [CKW    ]   Remarks          : [IMPERVIOUS LINER FOR SEC CONT      ]
    Spill Hist:[                        ]  Pipe Constr:   [AIJ    ]                      [                                   ]
    [UN-REGULATED]/[ABOVE_GROUND]          Interim: [UPGRADE      ]                      [                                   ]

[A940-5] [94]  [       350]GAL [  /  /  ]  [U][H][ ]      [D      ]   [UPGRADE       ] : [01/01/98][  /  /  ] $[      1,000][      ]
    Inv Method:[                        ]  Tank Constr:   [CKW    ]   Remarks          : [IMPERVIOUS LINER FOR SEC CONT      ]
    Spill Hist:[                        ]  Pipe Constr:   [AIJ    ]                      [                                   ]
    [UN-REGULATED]/[ABOVE_GROUND]          Interim: [UPGRADE      ]                      [                                   ]

[A986  ] [ 0]  [         0]GAL [  /  /  ]  [U][L][ ]      [Y      ]   [              ] : [01/01/98][  /  /  ] $[          0][      ]
    Inv Method:[                        ]  Tank Constr:   [D      ]   Remarks          : [TANK SYSTEM NEEDS FURTHER          ]
    Spill Hist:[                        ]  Pipe Constr:   [Y      ]                      [EVALUATION                         ]
    [UN-REGULATED]/[UNDER_GROUND]          Interim: [             ]                      [                                   ]

[A995  ] [ 0]  [       275]GAL [  /  /  ]  [U][G][ ]      [X      ]   [              ] : [01/01/98][  /  /  ] $[          0][      ]
    Inv Method:[                        ]  Tank Constr:   [CW     ]   Remarks          : [SPCC                               ]
    Spill Hist:[                        ]  Pipe Constr:   [ABIJ   ]                      [                                   ]
    [UN-REGULATED]/[ABOVE_GROUND]          Interim: [             ]                      [                                   ]

[A1004A] [ 0]  [        50]GAL [  /  /  ]  [U][G][ ]      [X      ]   [              ] : [01/01/98][  /  /  ] $[          0][      ]
    Inv Method:[                        ]  Tank Constr:   [CKW    ]   Remarks          : [SPCC                               ]
    Spill Hist:[                        ]  Pipe Constr:   [ABIJ   ]                      [                                   ]
    [UN-REGULATED]/[ABOVE_GROUND]          Interim: [             ]                      [                                   ]

[A1004B] [ 0]  [        50]GAL [  /  /  ]  [U][G][ ]      [X      ]   [              ] : [01/01/98][  /  /  ] $[          0][      ]
    Inv Method:[                        ]  Tank Constr:   [CKW    ]   Remarks          : [SPCC                               ]
    Spill Hist:[                        ]  Pipe Constr:   [ABIJ   ]                      [                                   ]
    [UN-REGULATED]/[ABOVE_GROUND]          Interim: [             ]                      [                                   ]

[A1019A] [94]  [        20]GAL [  /  /  ]  [U][G][ ]      [D      ]   [              ] : [  /  /  ][  /  /  ] $[          0][      ]
    Inv Method:[                        ]  Tank Constr:   [WY     ]   Remarks          : [RECOMMENDATION ONLY                ]
    Spill Hist:[                        ]  Pipe Constr:   [AIJ    ]                      [                                   ]
    [UN-REGULATED]/[ABOVE_GROUND]          Interim: [             ]                      [                                   ]
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TABLE 3-3
PHYSICAL AND PLANNING INFORMATION
TANK INVENTORY AND MANAGEMENT SYSTEM DATA BASE
U.S. NAVY STORAGE SYSTEMS MANAGEMENT PLAN

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Öáá PHYSICAL INFORMATION áááááááááááááááááááááááááááááááááááááááá¢Öá PLANNING INFORMATION ááááááááááááááááááááááááááááááá¢
                                                Öáá TABLE 2-1 INFO ááááÇ
                                                 Öááááááá Status
                                                   Öááá Contents       Öá Proposed Compliance ááááááááááááááááááááááááááááááÇ
TANK                             LAST                 Öá Pres/Suct                     Planned   Actual   Construction
NUMBER  YEAR   CAPACITY          TEST            Öê¢Öê¢Öê¢ÖLEAK DETECT¢   Action          Date      Date     Budget        PCR

** ACTIVITY ID # : FL44KWTNAS  NAVAL AIR STATION          CONTACT : STEVE COVELL              (305)292-2194
[A1125 ] [ 0]  [        300]GAL [  /  /  ]   [T][G][ ]     [D     ]   [           ] : [  /  /  ][  /  /  ] $[    1,500][      ]
    Inv Method:[                     ]       Tank Constr:  [CKW   ]   Remarks       : [RECOMMEND CLOSURE                ]
    Spill Hist:[                     ]       Pipe Constr:  [AB    ]                   [                                 ]
    [UN-REGULATED]/[ABOVE_GROUND]            Interim: [           ]                   [                                 ]

[A4053A] [ 0]  [        500]GAL [  /  /  ]   [U][G][ ]     [X     ]   [           ] : [01/01/98][  /  /  ] $[        0][      ]
    Inv Method:[                     ]       Tank Constr:  [CKW   ]   Remarks       : [SPCC                             ]
    Spill Hist:[                     ]       Pipe Constr:  [ABIJ  ]                   [                                 ]
    [UN-REGULATED]/[ABOVE_GROUND]            Interim: [           ]                   [                                 ]

[A4054 ] [ 0]  [        500]GAL [  /  /  ]   [U][G][ ]     [D     ]   [           ] : [  /  /  ][  /  /  ] $[        0][      ]
    Inv Method:[                     ]       Tank Constr:  [CKW   ]   Remarks       : [RECOMMENDATION ONLY              ]
    Spill Hist:[                     ]       Pipe Constr:  [AIJ   ]                   [                                 ]
    [UN-REGULATED]/[ABOVE_GROUND]            Interim: [           ]                   [                                 ]

[A4082 ] [94]  [        500]GAL [  /  /  ]   [U][G][ ]     [X     ]   [           ] : [01/01/98][  /  /  ] $[        0][      ]
    Inv Method:[                     ]       Tank Constr:  [CIMW  ]   Remarks       : [SPCC                             ]
    Spill Hist:[                     ]       Pipe Constr:  [AIJ   ]                   [                                 ]
    [UN-REGULATED]/[ABOVE_GROUND]            Interim: [           ]                   [                                 ]

[A4165 ] [ 0]  [      1,000]GAL [  /  /  ]   [U][G][ ]     [X     ]   [UPGRADE    ] : [01/01/98][  /  /  ] $[      550][      ]
    Inv Method:[                     ]       Tank Constr:  [CW    ]   Remarks       : [SEC CONT VALVE & LOCK, SPCC,     ]
    Spill Hist:[                     ]       Pipe Constr:  [AI    ]                   [REGISTER W/ FDEP                 ]
    [REGULATED]/[ABOVE_GROUND]               Interim: [UPGRADE    ]                   [                                 ]

[A4165A] [ 0]  [        560]GAL [  /  /  ]   [T][H][ ]     [X     ]   [REMOVE     ] : [01/01/98][  /  /  ] $[    1,500][      ]
    Inv Method:[                     ]       Tank Constr:  [CW    ]   Remarks       : [UPGRADES REQUIRED IF NOT         ]
    Spill Hist:[                     ]       Pipe Constr:  [      ]                   [REMOVED OR CLOSED                ]
    [REGULATED]/[ABOVE_GROUND]               Interim: [REMOVE     ]                   [                                 ]

[AG103A] [79]  [          7]GAL [  /  /  ]   [U][B][ ]     [X     ]   [           ] : [01/01/98][  /  /  ] $[        0][      ]
    Inv Method:[                     ]       Tank Constr:  [CW    ]   Remarks       : [SPCC                             ]
    Spill Hist:[                     ]       Pipe Constr:  [AI    ]                   [                                 ]
    [UN-REGULATED]/[ABOVE_GROUND]            Interim: [           ]                   [                                 ]

[AG104A] [79]  [          7]GAL [  /  /  ]   [U][B][ ]     [X     ]   [           ] : [01/01/98][  /  /  ] $[        0][      ]
    Inv Method:[                     ]       Tank Constr:  [CW    ]   Remarks       : [SPCC                             ]
    Spill Hist:[                     ]       Pipe Constr:  [AI    ]                   [                                 ]
    [UN-REGULATED]/[ABOVE_GROUND]            Interim: [           ]                   [                                 ]

[AG233A] [79]  [          7]GAL [  /  /  ]   [U][B][ ]     [X     ]   [           ] : [01/01/98][  /  /  ] $[        0][      ]
    Inv Method:[                     ]       Tank Constr:  [CW    ]   Remarks       : [SPCC                             ]
    Spill Hist:[                     ]       Pipe Constr:  [AI    ]                   [                                 ]
    [UN-REGULATED]/[ABOVE_GROUND]            Interim: [           ]                   [                                 ]

[AG234A] [79]  [          7]GAL [  /  /  ]   [U][B][ ]     [X     ]   [           ] : [01/01/98][  /  /  ] $[        0][      ]
    Inv Method:[                     ]       Tank Constr:  [CW    ]   Remarks       : [SPCC                             ]
    Spill Hist:[                     ]       Pipe Constr:  [AI    ]                   [                                 ]
    [UN-REGULATED]/[ABOVE_GROUND]            Interim: [           ]                   [                                 ]

[AG263A] [79]  [          7]GAL [  /  /  ]   [U][B][ ]     [X     ]   [           ] : [01/01/98][  /  /  ] $[        0][      ]
    Inv Method:[                     ]       Tank Constr:  [CW    ]   Remarks       : [SPCC                             ]
    Spill Hist:[                     ]       Pipe Constr:  [AI    ]                   [                                 ]
    [UN-REGULATED]/[ABOVE_GROUND]            Interim: [           ]                   [                                 ]

[AG264A] [79]  [          7]GAL [  /  /  ]   [U][B][ ]     [X     ]   [           ] : [01/01/98][  /  /  ] $[        0][      ]
    Inv Method:[                     ]       Tank Constr:  [CW    ]   Remarks       : [SPCC                             ]
    Spill Hist:[                     ]       Pipe Constr:  [AI    ]                   [                                 ]
    [UN-REGULATED]/[ABOVE_GROUND]            Interim: [           ]                   [                                 ]

[AG509A] [79]  [          7]GAL [  /  /  ]   [U][B][ ]     [X     ]   [           ] : [01/01/98][  /  /  ] $[        0][      ]
    Inv Method:[                     ]       Tank Constr:  [CW    ]   Remarks       : [SPCC                             ]
    Spill Hist:[                     ]       Pipe Constr:  [AI    ]                   [                                 ]
    [UN-REGULATED]/[ABOVE_GROUND]            Interim: [           ]                   [                                 ]
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TABLE 3-3
PHYSICAL AND PLANNING INFORMATION
TANK INVENTORY AND MANAGEMENT SYSTEM DATA BASE
U.S. NAVY STORAGE SYSTEMS MANAGEMENT PLAN

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Öáá PHYSICAL INFORMATION áááááááááááááááááááááááááááááááááááááááá¢Öá PLANNING INFORMATION ááááááááááááááááááááááááááááááá¢
                                       Öáá TABLE 2-1 INFO ááááÇ
                                         Öáááááá Status
                                           Öááá Contents     Öá Proposed Compliance ááááááááááááááááááááááááááááááÇ
TANK                          LAST               Öá Pres/Suct               Planned   Actual    Construction
NUMBER  YEAR  CAPACITY        TEST        Öê¢Öê¢Öê¢ÖLEAK DETECT¢  Action       Date      Date      Budget        PCR

** ACTIVITY ID # : FL44KWTNAS  NAVAL AIR STATION           CONTACT : STEVE COVELL              (305)292-2194
[AG510A] [79]  [        7]GAL [ /  /  ]  [U][B][ ]   [X    ]  [           ] : [01/01/98][ /  /  ] $[        0][    ]
   Inv Method:[                  ]       Tank Constr:  [CW   ]  Remarks         : [SPCC                              ]
   Spill Hist:[                  ]       Pipe Constr:  [AI   ]                    [                                  ]
   [UN-REGULATED]/[ABOVE_GROUND]         Interim: [          ]                    [                                  ]

[AG759A] [79]  [        7]GAL [ /  /  ]  [U][B][ ]   [X    ]  [           ] : [01/01/98][ /  /  ] $[        0][    ]
   Inv Method:[                  ]       Tank Constr:  [CW   ]  Remarks         : [SPCC                              ]
   Spill Hist:[                  ]       Pipe Constr:  [AI   ]                    [                                  ]
   [UN-REGULATED]/[ABOVE_GROUND]         Interim: [          ]                    [                                  ]

[AG760A] [79]  [        7]GAL [ /  /  ]  [U][B][ ]   [X    ]  [           ] : [01/01/98][ /  /  ] $[        0][    ]
   Inv Method:[                  ]       Tank Constr:  [CW   ]  Remarks         : [SPCC                              ]
   Spill Hist:[                  ]       Pipe Constr:  [AI   ]                    [                                  ]
   [UN-REGULATED]/[ABOVE_GROUND]         Interim: [          ]                    [                                  ]

[AG837A] [79]  [        7]GAL [ /  /  ]  [U][B][ ]   [X    ]  [           ] : [01/01/98][ /  /  ] $[        0][    ]
   Inv Method:[                  ]       Tank Constr:  [CW   ]  Remarks         : [SPCC                              ]
   Spill Hist:[                  ]       Pipe Constr:  [AI   ]                    [                                  ]
   [UN-REGULATED]/[ABOVE_GROUND]         Interim: [          ]                    [                                  ]

[AG840A] [79]  [        7]GAL [ /  /  ]  [U][B][ ]   [X    ]  [           ] : [01/01/98][ /  /  ] $[        0][    ]
   Inv Method:[                  ]       Tank Constr:  [CW   ]  Remarks         : [SPCC                              ]
   Spill Hist:[                  ]       Pipe Constr:  [AI   ]                    [                                  ]
   [UN-REGULATED]/[ABOVE_GROUND]         Interim: [          ]                    [                                  ]

[A229A ] [ 0]  [      220]GAL [ /  /  ]  [U][H][ ]   [D    ]  [UPGRADE    ] : [01/01/98][ /  /  ] $[    1,500][    ]
   Inv Method:[                  ]       Tank Constr:  [CW   ]  Remarks         : [SEC CONT W/ LOCKING VALVE         ]
   Spill Hist:[                  ]       Pipe Constr:  [ABIJ ]                    [                                  ]
   [UN-REGULATED]/[ABOVE_GROUND]         Interim: [UPGRADE   ]                    [                                  ]

[A229B ] [ 0]  [      220]GAL [ /  /  ]  [U][H][ ]   [D    ]  [UPGRADE    ] : [01/01/98][ /  /  ] $[    1,500][    ]
   Inv Method:[                  ]       Tank Constr:  [CW   ]  Remarks         : [SEC CONT W/ LOCKING VALVE         ]
   Spill Hist:[                  ]       Pipe Constr:  [ABIJ ]                    [                                  ]
   [UN-REGULATED]/[ABOVE_GROUND]         Interim: [UPGRADE   ]                    [                                  ]

[A244A ] [94]  [      500]GAL [ /  /  ]  [U][G][ ]   [X    ]  [           ] : [01/01/98][ /  /  ] $[        0][    ]
   Inv Method:[                  ]       Tank Constr:  [CIW  ]  Remarks         : [SPCC                              ]
   Spill Hist:[                  ]       Pipe Constr:  [ABI  ]                    [                                  ]
   [UN-REGULATED]/[ABOVE_GROUND]         Interim: [          ]                    [                                  ]

[A418  ] [ 0]  [      500]GAL [ /  /  ]  [F][G][ ]   [X    ]  [REMOVE     ] : [01/01/98][ /  /  ] $[    3,000][    ]
   Inv Method:[                  ]       Tank Constr:  [C    ]  Remarks         : [UPGRADES REQUIRED IF NOT          ]
   Spill Hist:[                  ]       Pipe Constr:  [B    ]                    [REMOVED OR CLOSED                 ]
   [REGULATED]/[UNDER_GROUND]            Interim: [REMOVE    ]                    [                                  ]

[A419-D] [ 0]  [      300]GAL [ /  /  ]  [U][G][ ]   [X    ]  [UPGRADE    ] : [01/01/98][ /  /  ] $[    1,500][    ]
   Inv Method:[                  ]       Tank Constr:  [CW   ]  Remarks         : [SEC CONT W/ LOCKING VALVE, SPCC]
   Spill Hist:[                  ]       Pipe Constr:  [ABIJ ]                    [                                  ]
   [UN-REGULATED]/[ABOVE_GROUND]         Interim: [UPGRADE   ]                    [                                  ]

[A419-E] [ 0]  [      300]GAL [ /  /  ]  [U][G][ ]   [X    ]  [UPGRADE    ] : [01/01/98][ /  /  ] $[    1,500][    ]
   Inv Method:[                  ]       Tank Constr:  [CW   ]  Remarks         : [SEC CONT W/ LOCKING VALVE, SPCC]
   Spill Hist:[                  ]       Pipe Constr:  [ABIJ ]                    [                                  ]
   [UN-REGULATED]/[ABOVE_GROUND]         Interim: [UPGRADE   ]                    [                                  ]

[A443  ] [ 0]  [    2,000]GAL [ /  /  ]  [U][L][ ]   [X    ]  [           ] : [01/01/98][ /  /  ] $[        0][    ]
   Inv Method:[                  ]       Tank Constr:  [CUX  ]  Remarks         : [TANK SYSTEM NEEDS FURTHER         ]
   Spill Hist:[                  ]       Pipe Constr:  [AY   ]                    [EVALUATION                        ]
   [UN-REGULATED]/[UNDER_GROUND]         Interim: [          ]                    [                                  ]

[A447  ] [ 0]  [      300]GAL [ /  /  ]  [U][G][ ]   [X    ]  [           ] : [01/01/98][ /  /  ] $[        0][    ]
   Inv Method:[                  ]       Tank Constr:  [CRWY ]  Remarks         : [SPCC                              ]
   Spill Hist:[                  ]       Pipe Constr:  [ABIJ ]                    [                                  ]
   [UN-REGULATED]/[ABOVE_GROUND]         Interim: [          ]                    [                                  ]
```

TABLE 3-3
PHYSICAL AND PLANNING INFORMATION
TANK INVENTORY AND MANAGEMENT SYSTEM DATA BASE
U.S. NAVY STORAGE SYSTEMS MANAGEMENT PLAN

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Öáá PHYSICAL INFORMATION áááááááááááááááááááááááááááááááááááááááá¢Öá PLANNING INFORMATION ááááááááááááááááááááááááááááááá¢
                                             Öáá TABLE 2-1 INFO ááááÇ
                                             Öáááááá Status
                                               Öááá Contents        Öá Proposed Compliance ááááááááááááááááááááááááááááááááÇ
TANK                               LAST             Öá Pres/Suct                       Planned   Actual    Construction
NUMBER  YEAR   CAPACITY           TEST       Öê¢Öê¢Öê¢ÖLEAK DETECT¢  Action              Date      Date      Budget        PCR

** ACTIVITY ID # : FL44KWTNAS  NAVAL AIR STATION          CONTACT : STEVE COVELL           (305)292-2194
[A526A ] [95]  [        500]GAL [ /  /  ]  [U][M][ ]   [F    ]   [          ] : [01/01/98][ /  /  ] $[          0][      ]
     Inv Method:[                     ]    Tank Constr:  [CIM  ]   Remarks      : [SPCC                             ]
     Spill Hist:[                     ]    Pipe Constr:  [ABI  ]                  [                                 ]
     [UN-REGULATED]/[ABOVE_GROUND]         Interim: [         ]                   [                                 ]

[A631  ] [53]  [        550]GAL [ /  /  ]  [U][M][ ]   [D    ]   [          ] : [ /  /  ][ /  /  ] $[          0][      ]
     Inv Method:[                     ]    Tank Constr:  [CKW  ]   Remarks      : [RECOMMENDATIONS ONLY             ]
     Spill Hist:[                     ]    Pipe Constr:  [ABI  ]                  [                                 ]
     [UN-REGULATED]/[ABOVE_GROUND]         Interim: [         ]                   [                                 ]

[A4115 ] [92]  [      2,000]GAL [08/01/96] [U][E][ ]   [D    ]   [UPGRADE   ] : [01/01/98][ /  /  ] $[     16,000][      ]
     Inv Method:[                     ]    Tank Constr:  [CKW  ]   Remarks      : [RELOCATE TANK, REPLACE UG        ]
     Spill Hist:[                     ]    Pipe Constr:  [ABIY ]                  [PIPING W/ AG, IMPERVIOUS LINER   ]
     [REGULATED]/[ABOVE_GROUND]            Interim: [UPGRADE  ]                   [                                 ]

[B27   ] [75]  [        150]GAL [ /  /  ]  [U][G][ ]   [X    ]   [UPGRADE   ] : [01/01/98][ /  /  ] $[      1,500][      ]
     Inv Method:[                     ]    Tank Constr:  [C    ]   Remarks      : [SEC CONT W/ LOCKING VALVE, SPCC]
     Spill Hist:[                     ]    Pipe Constr:  [     ]                  [                                 ]
     [UN-REGULATED]/[ABOVE_GROUND]         Interim: [UPGRADE  ]                   [                                 ]

[B28   ] [94]  [        250]GAL [ /  /  ]  [U][B][ ]   [X    ]   [          ] : [01/01/98][ /  /  ] $[          0][      ]
     Inv Method:[                     ]    Tank Constr:  [Y    ]   Remarks      : [SPCC                             ]
     Spill Hist:[                     ]    Pipe Constr:  [AJ   ]                  [                                 ]
     [UN-REGULATED]/[ABOVE_GROUND]         Interim: [         ]                   [                                 ]

[B28A  ] [75]  [        150]GAL [ /  /  ]  [U][G][ ]   [X    ]   [UPGRADE   ] : [01/01/98][ /  /  ] $[      1,500][      ]
     Inv Method:[                     ]    Tank Constr:  [C    ]   Remarks      : [SEC CONT W/ LOCKING VALVE, SPCC]
     Spill Hist:[                     ]    Pipe Constr:  [     ]                  [                                 ]
     [UN-REGULATED]/[ABOVE_GROUND]         Interim: [UPGRADE  ]                   [                                 ]

[PD1A  ] [80]  [      4,800]GAL [ /  /  ]  [U][L][ ]   [X    ]   [          ] : [ /  /  ][ /  /  ] $[          0][      ]
     Inv Method:[                     ]    Tank Constr:  [UX   ]   Remarks      : [PROCESS TANK                     ]
     Spill Hist:[                     ]    Pipe Constr:  [BJ   ]                  [                                 ]
     [UN-REGULATED]/[UNDER_GROUND]         Interim: [         ]                   [                                 ]

[PDIB  ] [85]  [        650]GAL [ /  /  ]  [U][L][ ]   [X    ]   [          ] : [ /  /  ][ /  /  ] $[          0][      ]
     Inv Method:[                     ]    Tank Constr:  [EI   ]   Remarks      : [PROCESS TANK                     ]
     Spill Hist:[                     ]    Pipe Constr:  [B    ]                  [                                 ]
     [UN-REGULATED]/[UNDER_GROUND]         Interim: [         ]                   [                                 ]

[B43   ] [54]  [        280]GAL [ /  /  ]  [F][A][ ]   [D    ]   [REMOVE    ] : [12/31/00][ /  /  ] $[      2,000][      ]
     Inv Method:[                     ]    Tank Constr:  [C    ]   Remarks      : [SCHEDULED FOR REMOVAL            ]
     Spill Hist:[                     ]    Pipe Constr:  [B    ]                  [                                 ]
     [REGULATED]/[UNDER_GROUND]            Interim: [REMOVE   ]                   [                                 ]

[B43A  ] [ 0]  [         60]GAL [ /  /  ]  [F][Y][ ]   [X    ]   [          ] : [ /  /  ][ /  /  ] $[          0][      ]
     Inv Method:[                     ]    Tank Constr:  [CW   ]   Remarks      : [SCHEDULED FOR REMOVAL            ]
     Spill Hist:[                     ]    Pipe Constr:  [AI   ]                  [                                 ]
     [UN-REGULATED]/[ABOVE_GROUND]         Interim: [         ]                   [                                 ]

[B48A  ] [ 0]  [        150]GAL [ /  /  ]  [U][G][ ]   [X    ]   [          ] : [01/01/98][ /  /  ] $[          0][      ]
     Inv Method:[                     ]    Tank Constr:  [C    ]   Remarks      : [SPCC                             ]
     Spill Hist:[                     ]    Pipe Constr:  [     ]                  [                                 ]
     [UN-REGULATED]/[ABOVE_GROUND]         Interim: [         ]                   [                                 ]

[C5    ] [76]  [         30]GAL [ /  /  ]  [T][G][ ]   [X    ]   [          ] : [01/01/98][ /  /  ] $[          0][      ]
     Inv Method:[                     ]    Tank Constr:  [C    ]   Remarks      : [SPCC                             ]
     Spill Hist:[                     ]    Pipe Constr:  [     ]                  [                                 ]
     [UN-REGULATED]/[ABOVE_GROUND]         Interim: [         ]                   [                                 ]

[C12-A ] [76]  [     10,000]GAL [ /  /  ]  [F][B][ ]   [X    ]   [REMOVE    ] : [12/31/00][ /  /  ] $[     10,000][      ]
     Inv Method:[                     ]    Tank Constr:  [EM   ]   Remarks      : [SCHEDULED FOR REMOVAL            ]
     Spill Hist:[                     ]    Pipe Constr:  [C    ]                  [                                 ]
     [REGULATED]/[UNDER_GROUND]            Interim: [REMOVE   ]                   [                                 ]
```

TABLE 3-3
PHYSICAL AND PLANNING INFORMATION
TANK INVENTORY AND MANAGEMENT SYSTEM DATA BASE
U.S. NAVY STORAGE SYSTEMS MANAGEMENT PLAN

```
Öáá PHYSICAL INFORMATION áááááááááááááááááááááááááááááááááááááááá¢Öá PLANNING INFORMATION áááááááááááááááááááááááááááááááá¢
                                                   Öáá TABLE 2-1 INFO ááááÇ
                                                    Öáááááá Status
                                                      Öááá Contents      Öá Proposed Compliance ááááááááááááááááááááááááááááááááÇ
TANK                                    LAST             Öá Pres/Suct
NUMBER  YEAR    CAPACITY                TEST      ÖêÖêÖêÖLEAK DETECT¢   Action           Planned   Actual    Construction
                                                                                          Date      Date      Budget          PCR

** ACTIVITY ID # : FL44KWTNAS  NAVAL AIR STATION              CONTACT : STEVE COVELL                (305)292-2194
[C12-B ] [76]  [    10,000]GAL [ /  /  ]   [F][B][ ]    [X    ]   [REMOVE     ] : [12/31/00][ /  /  ] $[    10,000][      ]
   Inv Method:[                      ]     Tank Constr:  [EM   ]   Remarks       : [SCHEDULED FOR REMOVAL              ]
   Spill Hist:[                      ]     Pipe Constr:  [C    ]                   [                                   ]
   [REGULATED]/[UNDER_GROUND]              Interim: [REMOVE    ]                   [                                   ]

[C12-C ] [76]  [     6,000]GAL [ /  /  ]   [F][B][ ]    [Y    ]   [REMOVE     ] : [12/31/00][ /  /  ] $[    10,000][      ]
   Inv Method:[                      ]     Tank Constr:  [E    ]   Remarks       : [SCHEDULED FOR REMOVAL              ]
   Spill Hist:[                      ]     Pipe Constr:  [Y    ]                   [                                   ]
   [REGULATED]/[UNDER_GROUND]              Interim: [REMOVE    ]                   [                                   ]

[C12-D ] [76]  [    10,000]GAL [ /  /  ]   [F][B][ ]    [Y    ]   [REMOVE     ] : [12/31/00][ /  /  ] $[    10,000][      ]
   Inv Method:[                      ]     Tank Constr:  [E    ]   Remarks       : [SCHEDULED FOR REMOVAL              ]
   Spill Hist:[                      ]     Pipe Constr:  [Y    ]                   [                                   ]
   [REGULATED]/[UNDER_GROUND]              Interim: [REMOVE    ]                   [                                   ]

[C59   ] [ 0]  [       300]GAL [ /  /  ]   [U][B][ ]    [X    ]   [UPGRADE    ] : [01/01/98][ /  /  ] $[     1,500][      ]
   Inv Method:[                      ]     Tank Constr:  [RWY  ]   Remarks       : [SEC CONT W/ LOCKING VALVE, SPCC]
   Spill Hist:[                      ]     Pipe Constr:  [AJ   ]                   [                                   ]
   [UN-REGULATED]/[ABOVE_GROUND]           Interim: [UPGRADE   ]                   [                                   ]

[C59A  ] [83]  [        30]GAL [ /  /  ]   [U][G][ ]    [X    ]   [UPGRADE    ] : [01/01/98][ /  /  ] $[     1,500][      ]
   Inv Method:[                      ]     Tank Constr:  [C    ]   Remarks       : [SEC CONT W/ LOCKING VALVE, SPCC]
   Spill Hist:[                      ]     Pipe Constr:  [     ]                   [                                   ]
   [UN-REGULATED]/[ABOVE_GROUND]           Interim: [UPGRADE   ]                   [                                   ]

[D25   ] [ 0]  [     3,500]GAL [ /  /  ]   [U][L][ ]    [B    ]   [UPGRADE    ] : [12/31/00][ /  /  ] $[    35,700][      ]
   Inv Method:[                      ]     Tank Constr:  [UX   ]   Remarks       : [UPGRADE PIPING, SCHEDULED FOR      ]
   Spill Hist:[                      ]     Pipe Constr:  [BIJ  ]                   [REMOVAL                            ]
   [REGULATED]/[UNDER_GROUND]              Interim: [UPGRADE   ]                   [                                   ]

[D26A  ] [56]  [       500]GAL [ /  /  ]   [F][H][ ]    [B    ]   [UPGRADE    ] : [12/31/00][ /  /  ] $[     4,000][      ]
   Inv Method:[                      ]     Tank Constr:  [C    ]   Remarks       : [UPGRADE TANK AND PIPING,           ]
   Spill Hist:[                      ]     Pipe Constr:  [BIJ  ]                   [SCHEDULED FOR REMOVAL              ]
   [REGULATED]/[UNDER_GROUND]              Interim: [UPGRADE   ]                   [                                   ]

[D1292B] [95]  [    20,000]GAL [ /  /  ]   [U][B][ ]    [BDK  ]   [UPGRADE    ] : [01/01/98][ /  /  ] $[     1,000][      ]
   Inv Method:[                      ]     Tank Constr:  [CRW  ]   Remarks       : [SEC CONT IMPERVIOUS LINER, SPCC]
   Spill Hist:[                      ]     Pipe Constr:  [AFIJ ]                   [                                   ]
   [REGULATED]/[ABOVE_GROUND]              Interim: [UPGRADE   ]                   [                                   ]

[D4169 ] [92]  [       250]GAL [ /  /  ]   [U][D][ ]    [BD   ]   [           ] : [ /  /  ][ /  /  ] $[            0][      ]
   Inv Method:[                      ]     Tank Constr:  [CIMW ]   Remarks       : [NO RECOMMENDATION                  ]
   Spill Hist:[                      ]     Pipe Constr:  [AJ   ]                   [                                   ]
   [UN-REGULATED]/[ABOVE_GROUND]           Interim: [          ]                   [                                   ]

[F15   ] [88]  [       100]GAL [ /  /  ]   [U][G][ ]    [X    ]   [UPGRADE    ] : [01/01/98][ /  /  ] $[     1,500][      ]
   Inv Method:[                      ]     Tank Constr:  [C    ]   Remarks       : [SEC CONT W/ LOCKING VALVE          ]
   Spill Hist:[                      ]     Pipe Constr:  [     ]                   [                                   ]
   [UN-REGULATED]/[ABOVE_GROUND]           Interim: [UPGRADE   ]                   [                                   ]

[KW400 ] [93]  [       250]GAL [ /  /  ]   [U][H][ ]    [K    ]   [UPGRADE    ] : [01/01/98][ /  /  ] $[       500][      ]
   Inv Method:[                      ]     Tank Constr:  [CRW  ]   Remarks       : [ADDITIONAL SEC CONT VOLUME,        ]
   Spill Hist:[                      ]     Pipe Constr:  [AGI  ]                   [SPCC                               ]
   [UN-REGULATED]/[ABOVE_GROUND]           Interim: [UPGRADE   ]                   [                                   ]

[KW600 ] [94]  [       400]GAL [ /  /  ]   [U][L][ ]    [X    ]   [           ] : [ /  /  ][ /  /  ] $[            0][      ]
   Inv Method:[                      ]     Tank Constr:  [E    ]   Remarks       : [PROCESS TANK                       ]
   Spill Hist:[                      ]     Pipe Constr:  [Y    ]                   [                                   ]
   [UN-REGULATED]/[UNDER_GROUND]           Interim: [          ]                   [                                   ]

[F01   ] [94]  [     2,650]GAL [ /  /  ]   [U][G][ ]    [K    ]   [           ] : [01/01/98][ /  /  ] $[            0][      ]
   Inv Method:[                      ]     Tank Constr:  [CKW  ]   Remarks       : [SPCC                               ]
   Spill Hist:[                      ]     Pipe Constr:  [AGI  ]                   [                                   ]
   [REGULATED]/[ABOVE_GROUND]              Interim: [          ]                   [                                   ]
```

TABLE 3-3
PHYSICAL AND PLANNING INFORMATION
TANK INVENTORY AND MANAGEMENT SYSTEM DATA BASE
U.S. NAVY STORAGE SYSTEMS MANAGEMENT PLAN

Öáá PHYSICAL INFORMATION áá¢Öá PLANNING INFORMATION áááááááááááááááááááááááááááááááá¢
Öáá TABLE 2-1 INFO ááááÇ
Öáááááá Status
Öááá Contents
Öá Pres/Suct
Öá Proposed Compliance ááááááááááááááááááááááááááááááááÇ
TANK NUMBER | YEAR | CAPACITY | LAST TEST | Öê¢Öê¢Öê¢ÖLEAK DETECT¢ | Action | Planned Date | Actual Date | Construction Budget | PCR

** ACTIVITY ID # : FL44KWTNAS NAVAL AIR STATION CONTACT : STEVE COVELL (305)292-2194

[F01A] [93] [60]GAL [/ /] [U][H][ ] [X] [ ] : [01/01/98][/ /] $[0][ ]
Inv Method:[ ] Tank Constr: [CY] Remarks : [SPCC]
Spill Hist:[ ] Pipe Constr: [AIJ] [ ]
[UN-REGULATED]/[ABOVE_GROUND] Interim: [ ] [ ]

[F01B] [93] [60]GAL [/ /] [U][G][ ] [X] [ ] : [01/01/98][/ /] $[0][ ]
Inv Method:[ ] Tank Constr: [CY] Remarks : [SPCC]
Spill Hist:[ ] Pipe Constr: [AIJ] [ ]
[UN-REGULATED]/[ABOVE_GROUND] Interim: [ ] [ ]

[F01C] [93] [60]GAL [/ /] [U][G][ ] [X] [ ] : [01/01/98][/ /] $[0][ ]
Inv Method:[ ] Tank Constr: [CY] Remarks : [SPCC]
Spill Hist:[ ] Pipe Constr: [AIJ] [ ]
[UN-REGULATED]/[ABOVE_GROUND] Interim: [ ] [ ]

[F01D] [94] [25]GAL [/ /] [U][H][ ] [X] [ ] : [01/01/98][/ /] $[0][ ]
Inv Method:[ ] Tank Constr: [CY] Remarks : [SPCC]
Spill Hist:[ ] Pipe Constr: [ ] [ ]
[UN-REGULATED]/[ABOVE_GROUND] Interim: [ ] [ ]

[F01E] [94] [400]GAL [/ /] [U][L][ ] [X] [ ] : [/ /][/ /] $[0][ ]
Inv Method:[ ] Tank Constr: [E] Remarks : [PROCESS TANK]
Spill Hist:[ ] Pipe Constr: [Y] [ ]
[UN-REGULATED]/[UNDER_GROUND] Interim: [ ] [ ]

[F02] [95] [4,000]GAL [/ /] [U][B][ ] [X] [ ] : [01/01/98][/ /] $[0][ ]
Inv Method:[ ] Tank Constr: [CIW] Remarks : [SPCC]
Spill Hist:[ ] Pipe Constr: [ABI] [ ]
[REGULATED]/[ABOVE_GROUND] Interim: [ ] [ ]

[290-C] [75] [150]GAL [/ /] [U][G][ ] [X] [ ] : [01/01/98][/ /] $[0][ ]
Inv Method:[ ] Tank Constr: [C] Remarks : [SPCC]
Spill Hist:[ ] Pipe Constr: [ ] [ ]
[UN-REGULATED]/[ABOVE_GROUND] Interim: [ ] [ ]

[290-D] [0] [35]GAL [/ /] [U][G][ ] [X] [ ] : [01/01/98][/ /] $[0][ ]
Inv Method:[ ] Tank Constr: [C] Remarks : [SPCC]
Spill Hist:[ ] Pipe Constr: [ ] [ ]
[UN-REGULATED]/[ABOVE_GROUND] Interim: [ ] [ ]

[290-B] [0] [1,500]GAL [/ /] [U][G][ ] [ ] [UPGRADE] : [01/01/98][/ /] $[2,500][ ]
Inv Method:[ ] Tank Constr: [CKW] Remarks : [RELOCATE AUTO LEVEL GAUGE,]
Spill Hist:[ ] Pipe Constr: [AIJ] [REPLACE UG PIPING W/ AG,]
[REGULATED]/[ABOVE_GROUND] Interim: [UPGRADE] [REGISTER]

[290-E] [0] [25]GAL [/ /] [U][G][ ] [X] [ ] : [01/01/98][/ /] $[0][ ]
Inv Method:[ ] Tank Constr: [CW] Remarks : [SPCC]
Spill Hist:[ ] Pipe Constr: [AIJ] [ ]
[UN-REGULATED]/[ABOVE_GROUND] Interim: [ ] [ ]

[438-A] [95] [500]GAL [/ /] [U][M][ ] [D] [ ] : [/ /][/ /] $[0][ ]
Inv Method:[ ] Tank Constr: [CIW] Remarks : [RECOMMENDATIONS ONLY]
Spill Hist:[ ] Pipe Constr: [ABI] [ ]
[UN-REGULATED]/[ABOVE_GROUND] Interim: [ ] [ ]

[439-A] [95] [500]GAL [/ /] [U][M][ ] [D] [ ] : [/ /][/ /] $[0][ ]
Inv Method:[ ] Tank Constr: [CIW] Remarks : [RECOMMENDATIONS ONLY]
Spill Hist:[ ] Pipe Constr: [ABI] [ ]
[UN-REGULATED]/[ABOVE_GROUND] Interim: [ ] [ ]

[1279] [0] [100]GAL [/ /] [U][B][ ] [X] [ ] : [01/01/98][/ /] $[0][ ]
Inv Method:[ ] Tank Constr: [CKW] Remarks : [SPCC]
Spill Hist:[ ] Pipe Constr: [A] [ ]
[UN-REGULATED]/[ABOVE_GROUND] Interim: [ ] [ ]

TABLE 3-3
PHYSICAL AND PLANNING INFORMATION
TANK INVENTORY AND MANAGEMENT SYSTEM DATA BASE
U.S. NAVY STORAGE SYSTEMS MANAGEMENT PLAN

Öáá PHYSICAL INFORMATION ááá¢Öá PLANNING INFORMATION áááááááááááááááááááááááááááááááá¢
Öáá TABLE 2-1 INFO ááááÇ
Öáááááá Status
Öááá Contents
Öá Pres/Suct
Öâ¢Öâ¢Öâ¢ÖLEAK DETECT¢
ûá Proposed Compliance ááááááááááááááááááááááááááááááááÇ
TANK NUMBER | YEAR | CAPACITY | LAST TEST | Action | Planned Date | Actual Date | Construction Budget | PCR

** ACTIVITY ID # : FL44KWTNAS NAVAL AIR STATION CONTACT : STEVE COVELL (305)292-2194

[1351] [66] [1,000]GAL [08/01/96] [U][M][ ] [D] [ ] : [/ /][/ /] $[0][ ]
Inv Method:[ ] Tank Constr: [C] Remarks : [SCHEDULED FOR REMOVAL AND]
Spill Hist:[ ] Pipe Constr: [BI] [REPLACEMENT W/ VAULTED]
[UN-REGULATED]/[UNDER_GROUND] Interim: [ ] [ ]

[1355] [95] [250]GAL [/ /] [U][G][ ] [D] [ ] : [/ /][/ /] $[0][ ]
Inv Method:[ ] Tank Constr: [CIMW] Remarks : [RECOMMENDATION ONLY]
Spill Hist:[ ] Pipe Constr: [AIJ] [ ]
[UN-REGULATED]/[ABOVE_GROUND] Interim: [ ] [ ]

[4163] [93] [5,200]GAL [/ /] [U][G][ ] [D] [UPGRADE] : [01/01/98][/ /] $[3,000][ ]
Inv Method:[ ] Tank Constr: [CKW] Remarks : [TANK LEVEL GAUGE, SEC CONT]
Spill Hist:[ ] Pipe Constr: [ABIJ] [IMPERVIOUS LINER]
[REGULATED]/[ABOVE_GROUND] Interim: [UPGRADE] [ ]

[OW-1] [90] [4,000]GAL [08/01/96] [U][L][ ] [D] [UPGRADE] : [12/31/98][/ /] $[2,000][ ]
Inv Method:[ ] Tank Constr: [E] Remarks : [SPILL CONTAINMENT AND OVERFILL]
Spill Hist:[ ] Pipe Constr: [AD] [PROTECTION]
[REGULATED]/[UNDER_GROUND] Interim: [UPGRADE] [ ]

[OW-1A] [85] [650]GAL [/ /] [U][L][ ] [X] [ ] : [/ /][/ /] $[0][ ]
Inv Method:[ ] Tank Constr: [EI] Remarks : [PROCESS TANK]
Spill Hist:[ ] Pipe Constr: [AJ] [ ]
[UN-REGULATED]/[UNDER_GROUND] Interim: [ ] [ ]

[OW-102] [90] [4,000]GAL [08/01/96] [U][L][ ] [D] [UPGRADE] : [12/31/98][/ /] $[2,000][ ]
Inv Method:[ ] Tank Constr: [E] Remarks : [SPILL CONTAINMENT AND OVERFILL]
Spill Hist:[ ] Pipe Constr: [AD] [PROTECTION]
[REGULATED]/[UNDER_GROUND] Interim: [UPGRADE] [ ]

[OW102A] [85] [650]GAL [/ /] [U][L][ ] [X] [ ] : [/ /][/ /] $[0][ ]
Inv Method:[ ] Tank Constr: [EI] Remarks : [PROCESS TANK]
Spill Hist:[ ] Pipe Constr: [AJ] [ ]
[UN-REGULATED]/[UNDER_GROUND] Interim: [ ] [ ]

[V1274A] [0] [250]GAL [/ /] [U][G][ ] [X] [UPGRADE] : [01/01/98][/ /] $[1,500][ ]
Inv Method:[ ] Tank Constr: [C] Remarks : [SEC CONT W/ LOCKING VALVE, SPCC]
Spill Hist:[ ] Pipe Constr: [ ] [ ]
[UN-REGULATED]/[ABOVE_GROUND] Interim: [UPGRADE] [ ]

[V1552B] [95] [500]GAL [/ /] [U][H][ ] [F] [ ] : [01/01/98][/ /] $[0][ ]
Inv Method:[ ] Tank Constr: [CIW] Remarks : [SPCC]
Spill Hist:[ ] Pipe Constr: [ABI] [ ]
[UN-REGULATED]/[ABOVE_GROUND] Interim: [ ] [ ]

[V1552C] [0] [10]GAL [/ /] [U][H][ ] [X] [REMOVE] : [01/01/98][/ /] $[2,000][ ]
Inv Method:[ ] Tank Constr: [C] Remarks : [REMOVAL RECOMMENDED IF NOT SEC]
Spill Hist:[TANK OVERFLOW 1996] Pipe Constr: [AJ] [CONT REQUIRED, SPCC]
[UN-REGULATED]/[ABOVE_GROUND] Interim: [REMOVE] [ ]

[V1554A] [0] [20]GAL [/ /] [U][L][ ] [D] [ ] : [/ /][/ /] $[0][ ]
Inv Method:[ ] Tank Constr: [E] Remarks : [PROCESS TANK, TANK OUTLET]
Spill Hist:[ ] Pipe Constr: [AB] [SHOULD BE PIPED TO SANITARY]
[UN-REGULATED]/[ABOVE_GROUND] Interim: [ ] [SEWER]

[V4022E] [0] [1,000]GAL [/ /] [F][Y][ ] [Y] [ ] : [/ /][/ /] $[0][ ]
Inv Method:[ ] Tank Constr: [D] Remarks : [SCHEDULED FOR REMOVAL]
Spill Hist:[ ] Pipe Constr: [Y] [ ]
[REGULATED]/[UNDER_GROUND] Interim: [ ] [ ]

[V4022F] [0] [1,000]GAL [/ /] [F][Y][ ] [Y] [ ] : [/ /][/ /] $[0][ ]
Inv Method:[ ] Tank Constr: [D] Remarks : [SCHEDULED FOR REMOVAL]
Spill Hist:[ ] Pipe Constr: [Y] [ ]
[REGULATED]/[UNDER_GROUND] Interim: [ ] [ ]

TABLE 3-3
PHYSICAL AND PLANNING INFORMATION
TANK INVENTORY AND MANAGEMENT SYSTEM DATA BASE
U.S. NAVY STORAGE SYSTEMS MANAGEMENT PLAN

```
Öáá PHYSICAL INFORMATION áááááááááááááááááááááááááááááááááááááááá¢Öá PLANNING INFORMATION áááááááááááááááááááááááááááááááá¢
                                        Öáá TABLE 2-1 INFO ááááÇ
                                         Öáááááá Status
                                           Öááá Contents       Öá Proposed Compliance ááááááááááááááááááááááááááááááááÇ
TANK                           LAST            Öá Pres/Suct                          Planned   Actual    Construction
NUMBER  YEAR   CAPACITY        TEST     Öê¢Öê¢Öê¢ÖLEAK DETECT¢   Action          Date      Date      Budget        PCR

** ACTIVITY ID # : FL44KWTNAS  NAVAL AIR STATION          CONTACT : STEVE COVELL              (305)292-2194
[V4022G] [ 0]  [     1,000]GAL [ / / ]   [F][Y][ ]     [Y    ]   [           ] : [ / / ][ / / ] $[          0][     ]
    Inv Method:[                 ]       Tank Constr:  [D    ]   Remarks       : [SCHEDULED FOR REMOVAL          ]
    Spill Hist:[                 ]       Pipe Constr:  [Y    ]                   [                               ]
    [REGULATED]/[UNDER_GROUND]           Interim: [          ]                   [                               ]

[V4111C] [ 0]  [        25]GAL [ / / ]   [U][G][ ]     [X    ]   [UPGRADE    ] : [01/01/98][ / / ] $[   1,000][     ]
    Inv Method:[                 ]       Tank Constr:  [C    ]   Remarks       : [SEC CONT, SPCC                 ]
    Spill Hist:[                 ]       Pipe Constr:  [ABIJ ]                   [                               ]
    [UN-REGULATED]/[ABOVE_GROUND]        Interim: [UPGRADE   ]                   [                               ]

[V4114 ] [90]  [       550]GAL [ / / ]   [U][M][ ]     [X    ]   [UPGRADE    ] : [01/01/98][ / / ] $[   1,500][     ]
    Inv Method:[                 ]       Tank Constr:  [CRW  ]   Remarks       : [ADDITIONAL SEC CONT VOLUME,    ]
    Spill Hist:[                 ]       Pipe Constr:  [ABIJ ]                   [IMPERVIOUS LINER, SPCC         ]
    [UN-REGULATED]/[ABOVE_GROUND]        Interim: [UPGRADE   ]                   [                               ]

[J1561 ] [94]  [    10,000]GAL [ / / ]   [U][G][ ]     [X    ]   [UPGRADE    ] : [01/01/98][ / / ] $[     500][     ]
    Inv Method:[                 ]       Tank Constr:  [CKW  ]   Remarks       : [AG PIPE SUPPORT, SPCC, REGISTER]
    Spill Hist:[                 ]       Pipe Constr:  [IJ   ]                   [TANK W/ FDEP                   ]
    [REGULATED]/[ABOVE_GROUND]           Interim: [UPGRADE   ]                   [                               ]

[J1561A] [79]  [       100]GAL [ / / ]   [U][G][ ]     [X    ]   [           ] : [01/01/98][ / / ] $[          0][     ]
    Inv Method:[                 ]       Tank Constr:  [C    ]   Remarks       : [SPCC                           ]
    Spill Hist:[                 ]       Pipe Constr:  [     ]                   [                               ]
    [UN-REGULATED]/[ABOVE_GROUND]        Interim: [          ]                   [                               ]

[L3A   ] [95]  [     3,000]GAL [ / / ]   [U][G][ ]     [X    ]   [           ] : [01/01/98][ / / ] $[          0][     ]
    Inv Method:[                 ]       Tank Constr:  [CKW  ]   Remarks       : [SPCC                           ]
    Spill Hist:[                 ]       Pipe Constr:  [ABIJ ]                   [                               ]
    [REGULATED]/[ABOVE_GROUND]           Interim: [          ]                   [                               ]

[L19   ] [ 0]  [       300]GAL [ / / ]   [U][G][ ]     [X    ]   [           ] : [ / / ][ / / ] $[          0][     ]
    Inv Method:[                 ]       Tank Constr:  [CW   ]   Remarks       : [SCHEDULED FOR REMOVAL          ]
    Spill Hist:[                 ]       Pipe Constr:  [ABIJ ]                   [                               ]
    [UN-REGULATED]/[ABOVE_GROUND]        Interim: [          ]                   [                               ]

[L47   ] [ 0]  [       300]GAL [ / / ]   [U][M][ ]     [X    ]   [UPGRADE    ] : [01/01/98][ / / ] $[   1,500][     ]
    Inv Method:[                 ]       Tank Constr:  [C    ]   Remarks       : [SEC CONT W/ LOCKING VALVE, SPCC]
    Spill Hist:[                 ]       Pipe Constr:  [ABIJ ]                   [                               ]
    [UN-REGULATED]/[ABOVE_GROUND]        Interim: [UPGRADE   ]                   [                               ]

[G-01  ] [ 0]  [     2,000]GAL [ / / ]   [A][G][ ]     [X    ]   [CLOSED     ] : [ / / ][ / / ] $[   1,000][     ]
    Inv Method:[Y                ]       Tank Constr:  [CKW  ]   Remarks       : [CLOSURE REPORT FOR TANK &      ]
    Spill Hist:[                 ]       Pipe Constr:  [Y    ]                   [PIPING                         ]
    [REGULATED]/[ABOVE_GROUND]           Interim: [CLOSED    ]                   [                               ]

[G-02  ] [ 0]  [       300]GAL [ / / ]   [A][G][ ]     [X    ]   [CLOSED     ] : [ / / ][ / / ] $[          0][     ]
    Inv Method:[                 ]       Tank Constr:  [CW   ]   Remarks       : [CLOSED IN PLACE                ]
    Spill Hist:[                 ]       Pipe Constr:  [Y    ]                   [                               ]
    [UN-REGULATED]/[ABOVE_GROUND]        Interim: [CLOSED    ]                   [                               ]

[A924A ] [96]  [    10,000]GAL [ / / ]   [·][Z][ ]     [X    ]   [UPGRADE    ] : [01/01/98][ / / ] $[   2,000][     ]
    Inv Method:[                 ]       Tank Constr:  [CI   ]   Remarks       : [TANK NOT YET IN SERVICE; TANK  ]
    Spill Hist:[                 ]       Pipe Constr:  [     ]                   [LEVEL GAUGE, SPCC, REGISTER W/ ]
    [REGULATED]/[ABOVE_GROUND]           Interim: [UPGRADE   ]                   [                               ]

** Subtotal ** ...........................................................................$[        989,200]

*** Total  *** ...........................................................................$[        989,200]
```

4.0 REGULATORY REQUIREMENTS

4.1 Introduction

This section provides a summary of federal and state oil storage tank regulations applicable to NAS Key West. These regulations are:

Federal Regulation	Florida Regulation
• 40 CFR 112 SPCC	• FAC 62-762 AST
• 40 CFR 280 UST	• FAC 62-761 UST

Site specific recommendations necessary to meet these regulations are included in Section 6.0 of this plan.

4.1.1 UST Compliance Requirements

The actions and dates established in this Tank Management Plan for Underground Storage Tanks are primarily based on the requirements set forth in Florida Regulation 62-761. The State of Florida has been granted delegated authority by EPA to administer the UST program in Florida. In almost all cases the Florida regulations are more stringent than the EPA regulations. The noted exception is the EPA compliance date of December 22, 1998. This conflicts with the corresponding Florida compliance date of December 31, 1998 and also conflicts with the Consent Agreement between the Navy and FDEP which extends the construction date for USTs to December 31, 2000. At the time this TMP was completed, no resolution had been reached concerning the above conflicts. The Plan should be revised by NAS Key West as appropriate should the Navy issue guidance to comply with EPA dates rather than the previously agreed to Florida compliance dates.

4.2 Federal Aboveground Oil Storage Tank Requirements: 40 CFR 112

4.2.1 40 CFR 112.7(c): SECONDARY CONTAINMENT

Appropriate secondary containment and/or diversionary structures or equipment shall be provided to prevent the discharge of oil from reaching a navigable water course.

The regulation provides the following options for containment:

- Dikes, berms, or retaining walls
- Curbing
- Culverting, gutters, or other drainage systems
- Weirs, booms or barriers

- Spill diversion ponds
- Retention ponds
- Sorbent materials
- Sumps/collection systems

4.2.2 40 CFR 112.7 (e)(1): FACILITY DRAINAGE

(i) & (ii): Drainage from containment facilities should be restrained by valves or other positive means. Diked areas may be emptied by manually activated pumps or ejectors. Flapper-type drain valves should not be used.

(iii): Plant drainage systems from undiked areas should, if possible, flow into ponds, lagoons or catch basins, designed to retain oil. The ponds should not be located in areas subject to periodic flooding.

(iv): Where pumps are used to "lift" drainage water to a treatment system, two pumps should be provided.

4.2.3 40 CFR 112.7 (e)(2): Aboveground Bulk Oil Storage Tanks

(i): Tank material, construction, storage conditions (temperature, pressure, etc.) must be compatible with the stored product. In most cases, Navy fuel is stored in the original tank designed to contain the product. However, in a few cases concrete tanks or steel tanks with concrete bottoms, which were designed to store heavy No. 5 or 6 fuel oil, have been converted to diesel fuel or other lighter fuels. The lighter fuels may gradually leach through the walls or floors and migrate downward to the water table.

(ii): Secondary containment is required for the entire contents of the largest single bulk tank plus sufficient freeboard for precipitation. The diked area must be sufficiently impervious to contain spilled oil. The regulation permits an alternate system consisting of a drainage ditch encircling the tank(s) and terminating in a spill containment pond or basin.

(iii): Drainage of rainwater from diked areas into storm drains, open water course, lake, or pond (bypassing treatment plant) may be permitted if the drainage valve is normally closed, the drainage valve is opened to discharge clean water and resealed under responsible supervision, and adequate records of drainage events are kept.

(iv): Buried metallic tanks should be regularly pressure tested.

(v): Partially buried tanks should be avoided unless the part of the tank underground is adequately coated.

(vi): Aboveground tanks should be subject to periodic integrity testing using such techniques as hydrostatic testing, visual inspection, non-destructive shell thickness testing. Foundations should be included in the inspections as well as periodic visual inspections of the exterior of the tank for signs of deterioration and leaks. Comparison records should be maintained where appropriate. The regulation does not establish an inspection frequency since each facility's spill risk, environmental sensitivity, and tank conditions may be different.

(vii): Steam return or exhaust lines from internal heating coils that discharge into an open water course should be monitored for contamination, or passed through a skimmer or other separation or retention system. The feasibility of installing an external heating system should be considered.

(viii): New and old tank installations should be fail-safe engineered or updated to avoid spills. Consideration should be given to providing one or more of the following devices:

- High liquid level alarms
- High liquid level pump cutoff devices
- Direct communication between the gauger and pumping station
- Fast response system for determining liquid level in tanks
- Liquid level sensing devices should be regularly tested to insure proper operation

The intent of the regulation is to permit the use of engineering judgment to tailor the degree of fail-safe engineering to each facility based on spill risk, volume, spill impact zones, etc. However, state-of-the-art prevention measures will normally be recommended since the cost of spill cleanup and/or groundwater remediation exceeds the cost of prevention measures.

(ix): Plant effluents that are discharged into navigable waters should be frequently inspected to detect system upsets.

(x): Visible oil leaks from tank seams, gaskets, rivets and bolts should be repaired promptly.

(xi): Mobile or portable oil storage tanks shall be provided with secondary containment, located in areas not subject to flooding, and located where any spilled oil will not reach navigable waters.

4.2.4 40 CFR 112.7 (e)(3): Facility Transfer Operations

(i): Buried metallic piping should have a protective wrapping and coating and be cathodically protected if soil conditions warrant. Poorly installed or corroded piping causes far more environmental contamination than leaks from tanks. Piping leaks are generally much smaller than tank leaks and may go undetected for many years, causing substantial ground water contamination, whereas aboveground tank leaks are usually noticed and repaired promptly.

(ii): Out of service pipelines or lines in standby service should be capped or blind-flanged, and marked as to their origin.

(iii): Pipe supports should be properly designed to minimize abrasion and corrosion and allow for expansion and contraction.

(iv): All aboveground pipelines and valves should be examined regularly by operating personnel. Periodic pressure testing may be required for piping in areas where a leak may have substantial environmental impact.

(v): Warn oversize vehicles, either verbally or by appropriate signs, of the potential to collide with aboveground piping.

4.2.5 40 CFR 112.7 (e)(4): Facility Loading/Unloading Racks

(i): Loading/unloading racks should meet the minimum requirements established by DOT.

(ii): Where rack drainage does not flow into a catchment basin or treatment facility, a drainage system designed to handle the largest compartment of the tank car or tank truck shall be provided.

(iii): Provide warning signs, interlocked warning lights, or a physical barrier system to prevent early departure of vehicles prior to complete disconnect of transfer hoses or lines.

(iv): Prior to both filling and departure, check vehicle drains and valves for leaks.

4.2.6 40 CFR 112.7 (e)(8): Inspections and Records

Inspections required should be in accordance with written procedures developed by the facility owner/operator. The written procedures and a record of the inspections should be signed by the appropriate supervisor or inspector, and should be maintained for 3 years as a part of the Spill Prevention Control and Countermeasures (SPCC) Plan.

4.2.7 40 CFR 112.7 (e)(9): Security

(i): All handling, processing, and oil storage areas should be fully fenced, and entrance gates locked and/or guarded when not in operation.

(ii) & (iii): The starter control on all oil pumps should be locked in the "off" position when in non-operating or non-standby status, or located at a site accessible only to authorized personnel. Any valve that will permit the direct outward flow of a tank's contents should also be securely locked in the closed position when in non-operating or non-standby status.

(iv): Loading/unloading connections of oil pipelines should be capped or blind-flanged when not in service.

(v): Facility lighting should be commensurate with the type and location of the facility.

4.2.8 40 CFR 112.7 (e)(10): Personnel Training and SPCC Procedures

(i): Owners or operators are responsible for instructing personnel in the proper operation and maintenance of equipment to prevent spills and inform them of applicable pollution control laws, rules and regulations.

(ii): Each applicable facility should have a designated person who is accountable for oil spill prevention and reports to line management.

(iii): Owners or operators should schedule and conduct spill prevention briefings covering spill events or other failures, malfunctioning components, and recently developed or proposed precautionary measures.

A copy of Federal regulation 40 CFR 112 is included in Appendix A.

4.3 Federal Underground Tank Requirements: 40 CFR 280

In September 1988, EPA issued underground storage tank (UST) regulations, which require underground tanks and piping to have leak detection, corrosion protection, and spill/overfill prevention.

The underground tank regulation, 40 CFR 280, exempts the following petroleum tanks and facilities:

- Tanks $\leq$ 110 gallons

- Tanks used for emergency spill containment or overflow
- Emergency power generator tanks
- Field-constructed tanks
- Heating oil tanks for consumptive use
- Farm or residential motor fuel tanks ≤1100 gallons
- Flow-through process tanks
- Storm-water or wastewater collection systems
- Tanks located in basements or vaults
- Surface impoundments, pits, ponds, or lagoons
- Pipelines

The regulation establishes new tank standards and a retrofit schedule for existing tanks based on age. All non-exempt USTs must either meet new tanks standards or be closed by 22 December 1998.

Tables 4.1 and 4.2 depict a summary developed by EPA of the requirements and mandatory schedules of the UST regulation. Table 4.3 is a SOUTHNAVFACENGCOM summary of the Federal UST regulation. A discussion of the regulation requirements follows the tables.

TABLE 4.1
UST REQUIREMENTS - 40 CFR 280

LEAK DETECTION	
NEW TANKS 2 Options	• Monthly Monitoring* • Monthly Inventory Control and Tank Tightness Testing Every 5 Years (You can only use this choice for 10 years after installation)
EXISTING TANKS 3 Options - See The chart at the bottom of Table 4-2	• Monthly Monitoring* • Monthly Inventory Control and Annual Tank Tightness Testing (This choice can only be used until December 1998) • Monthly Inventory Control and Tank Tightness Testing Every 5 Years (This choice can only be used for 10 years after adding corrosion protection and spill/overfill protection or until December 1998, whichever comes first)**
NEW & EXISTING PRES- SURIZED PIPING Choice of one from each set	• Automatic Flow Restrictor • Annual Line Testing • Automatic Shutoff Device And • Monthly Monitoring* • Continuous Alarm System (except automatic tank gauging)
NEW & EXISTING SUCTION PIPING 3 options	• Monthly Monitoring* (except automatic tank gauging) • Line Testing Every 3 Years • No Requirements (if the system has the characteristics described in 40 CFR 280.41 (b) (2))
CORROSION PROTECTION	
NEW TANKS 3 options	• Coated and Cathodically Protected Steel • Fiberglass • Steel Tank Clad with Fiberglass
EXISTING TANKS 4 options	• Same Options as for New Tanks • Add Cathodic Protection System • Interior Lining • Interior Lining and Cathodic Protection
NEW PIPING 2 options	• Coated and Cathodically Protected Steel • Fiberglass
EXISTING PIPING 2 options	• Same Options as for New Piping • Cathodically Protected Steel
SPILL/OVERFILL PREVENTION	
ALL TANKS	Catchment Basins and •Automatic Shutoff Devices or •Overfill Alarms or •Ball Float Valves

* Very small tanks may be able to use manual tank gauging.

** Monthly Monitoring includes: Automatic Tank Gauging, Interstitial Monitoring, Other Approved Methods, Vapor Monitoring, Ground-Water Monitoring

TABLE 4.2
UST DEADLINES - 40 CFR 280

TYPE OF TANK & PIPING	LEAK DETECTION	CORROSION PROTECTION	SPILL/OVERFILL PREVENTION
New Tanks and Piping*	At installation	At installation	At installation
Existing Tanks** Installed: Before 1965 or unknown 1965-1969 1970-1974 1975-1979 1980-December 1988	By No Later Than: December 1989 December 1990 December 1991 December 1992 December 1993	December 1998 (All)	December 1998 (All)
Existing Piping** Pressurized Suction	December 1990 Same as existing tank	December 1998 (Both)	Does not apply

*New tanks and piping are those installed after December 1988

**Existing tanks and piping are those installed before December 1988

IF YOU CHOOSE TANK TIGHTNESS TESTING AT EXISTING USTs...

If you don't use monthly monitoring at existing UST's, you must use a combination of periodic tank tightness tests and monthly inventory control. This combined method can only be used for a few years, as the chart below displays.

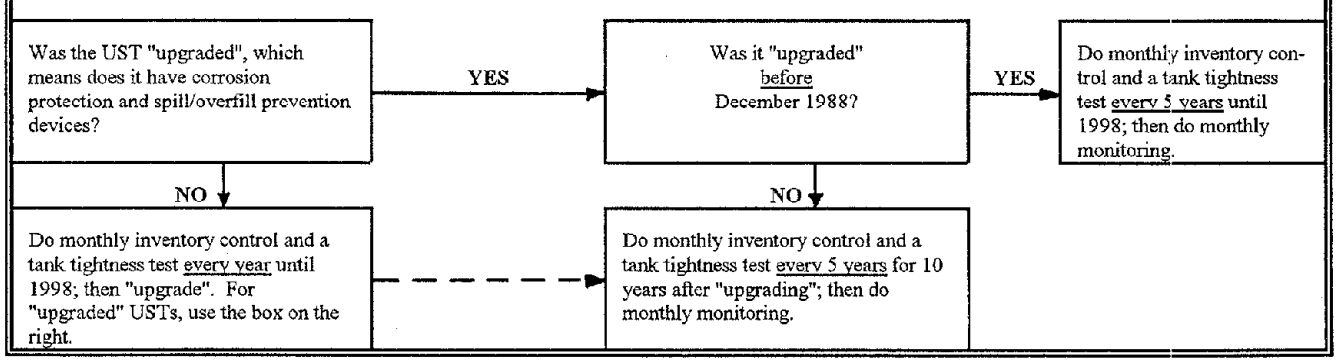


TABLE 4.3
REQUIREMENTS - 40 CFR 280

LEAK DETECTION COMPLIANCE SCHEDULE				
TANK YEAR OF INSTALLATION	TANKS & SUCTION PIPE	PRESSURE PIPE	UPGRADE TANKS/PIPING	SPILL/OVERFILL PREVENTION
<1965	1989	1990	1998	1998
65-69	1990	1990	1998	1998
70-74	1991	1990	1998	1998
75-79	1992	1990	1998	1998
80-88	1993	1990	1998	1998

TANK LEAK DETECTION: (After 1998 must use monthly monitoring; tanks <550 gallons may use weekly tank gauging)

1- Monthly monitoring options: Auto tank gauging, vapor monitoring, interstitial monitoring, ground-water monitoring, other, or
2- Monthly inventory control and annual tank tightness testing (used until December 1998), or
3- Monthly inventory and tank tightness testing every 5 years (used after adding corrosion and spill/overfill protection for 10 years or 1998, whichever is later).

PRESSURIZED PIPING LEAK DETECTION:

1- Automatic line leak detector and annual line tightness test, or
2- Monthly monitoring

SUCTION PIPING LEAK DETECTION:

1- Line tightness testing every 3 years, or
2- Monthly monitoring, or
3- If piping sloped to drain to tank and only one check valve at pump, no requirement for leak detection.

SPILL/OVERFILL PREVENTION: (By Dec 1998 except for 25 gal fills)

1- Catchment basins **and** automatic shutoff at 95%, or
2- Alarm at 90%, or
3- Flow restrictor (ball float valve)

TANK UPGRADE: All tanks must be upgraded by Dec 1998, by:

1- Interior lining, or
2- Cathodic protection, or
3- Interior lining and cathodic protection, or
4- Closure

4.3.1 40 CFR 280.20(a): Corrosion Protection

USTs and piping must be protected from corrosion or constructed of noncorroding materials. Cathodic protection systems must be operated and maintained in accordance with established guidelines.

Corrosion protection requirements must be installed for all non-exempt USTs and piping by December 1998. The following options may be used to meet the regulatory requirement:

- New tanks may be coated and cathodically protected steel, fiberglass, or steel-clad fiberglass.
- Existing tanks must meet new tank cathodic protection requirements by December 1998 or be upgraded by interior lining or interior lining and cathodic protection. Upgrading requires internal inspection and assessment to ensure the integrity of the tank.
- New piping may be coated and cathodically protected steel or fiberglass. Existing piping may either meet new piping standards or be upgraded by the addition of a cathodic protection system.

4.3.2 40 CFR 280.40: Release Detection

40 CFR 280 Subpart D outlines release detection requirements for USTs and provides a mandatory action schedule based on the age of the tank. All non-exempt tanks and piping must have had appropriate release detection installed by December 1993. Tanks with pressurized piping are more stringently regulated than those with suction piping due to the potential for larger spills.

There are two leak detection options for new tanks: Monthly monitoring or monthly inventory control and tank tightness testing every 5 years (good only for 10 years after installation). Monthly monitoring includes:

- Automatic tank gauging
- Vapor monitoring
- Interstitial monitoring
- Groundwater monitoring
- Other approved methods that can meet detection requirements

Existing tanks may use either:

- Monthly monitoring
- Monthly inventory control and annual tank tightness testing (good only until

December 1998)

- Monthly inventory control and tank tightness testing every 5 years (good 10 years after adding corrosion protection and spill/overfill prevention or until December 1998)

New and existing pressurized piping must have either an automatic flow restrictor, automatic shutoff device, or continuous high-level alarm and one of the following: annual line testing or monthly monitoring (except automatic tank gauging).

If suction piping is sloped back to the tank and only one check valve is installed directly below the suction pump, release detection is not required. Otherwise, monthly monitoring (except auto tank gauging) or line testing every 5 years are the options for leak detection for suction piping.

Tanks must be monitored at least every 30 days for releases using one of the following methods:

- Automatic tank gauging
- Vapor monitoring
- Groundwater monitoring
- Interstitial monitoring
- Or any other method that can detect a 0.2 gph leak rate or a release of 150 gallons within one month.

4.3.3 40 CFR 280.30: Overfill Protection

By December 1998, all tank systems must have catchment basins around the fill pipe and one of the following:

- Automatic shutoff at 95% capacity, or
- Overfill alarm at 90% capacity, or
- Flow restrictor (ball float valves)

4.3.4 40 CFR 280.71: Tank Closure

Permanent Closure is required for underground tank systems that have been out of service for more than 12 months. In service tanks that cannot be upgraded to new tank standards must also be closed by December 1998 in accordance with 40 CFR 280 Subpart G.

In some cases it may be more economical to replace a tank system rather than retrofit to the new underground storage tank standards. By December 1998, all UST systems must comply with the

new tank standards.

A copy of Federal regulation 40 CFR 280 is included in Appexdix A.

4.4 Florida Underground Tank Regulations: FAC 62-761

In May 1984, the Florida Department of Environmental Regulation (FDER), now the Florida Department of Environmental Protection (FDEP), adopted Chapter 17-61 of the Florida Administrative Code (FAC). The FDEP regulations require registration and system compliance for stationary petroleum tanks used for transportation use.

In December 1990, the Department of Environmental Protection implemented Chapter 17-761 and 17-762, which supersedes the requirements of Chapter 17-61. Chapter 17-761 of the new rules provides standards for the construction, installation, maintenance, registration, removal, and disposal of underground tank systems with a capacity greater than 110 gallons. In August 1994, Chapters 17-761 and 17-762 were moved from Title 17 to Title 62 as 62-761 and 62-762 respectively. On July 30, 1996, 62-761 was revised with no substantial changes. A copy of this regulation can be found in Appendix B.

The following systems are exempt from 62-761:

- Any tank containing Subtitle C RCRA wastes or mixtures
- Hydraulic machinery tanks
- Emergency spill sumps or overflow containment tanks
- Agriculture tanks less than or equal to 550 gallon capacity
- Flow-through process tank systems
- Tanks located in basements or vaults
- Residential storage tanks
- Tanks regulated by DNR except marine tanks greater than 30,000 gallon capacity
- Airport hydrant piping regulated under 62-762

The new rule provides for notification of tank closure, replacement, upgrading, etc. and reporting of failures of any tank tightness test, or a release to the environment that exceeds 25 gallons or causes a sheen on surface water. Specific notification and reporting requirements are included in 62-761.450 and 62-761.460.

4.5 Florida Aboveground Tank Regulations: FAC 62-762

The Federal Government has not waived its "Sovereign Immunity" in the area of aboveground tanks. However, the Navy has agreed to use its best effort to comply with the following Florida aboveground tank regulations. In March 1991, FDEP implemented Chapter 17-762 for aboveground tanks to complement the earlier Chapter 17-761, which addressed underground tanks. As previously discussed, this Chapter was moved to Title 62 as 62-762. Chapter 62-762 provides standards for the construction, installation, maintenance, registration, removal and disposal of stationary aboveground tanks with a storage capacity greater than 550 gallons. A copy of this regulation is found in Appendix B.

The following systems are exempt from 62-762:

- LP gas tanks
- Skid or mobile tanks stored on-site for less than 180 days
- Product tanks such as asphalt, where the product's softening point is greater than 100 degrees F
- Flow-through process tanks
- Pipeline facilities
- Stormwater or wastewater collection/discharge systems
- Emergency spill or overflow tanks, as long as they are emptied immediately after the spill
- Hydraulic lift tanks or electric equipment tanks that contain pollutants for operational purposes
- Emergency generator tanks at nuclear power generation facilities
- Tanks storing substances that are solid or gaseous at standard temperature and pressure
- Subtitle C RCRA hazardous waste storage tanks
- Pesticide treatment tanks, regulated under FAC 17-660
- Heating oil tanks less than 30,000 gallon capacity for consumptive use on the premise
- Storage tanks that contain de minimis quantities as defined in 40 CFR 280.12, Federal UST regulations
- Storage tanks regulated by Chapter 377 FL. Statutes dealing with Energy Resources (i.e. oil and gas resources)
- Storage tanks located in an enclosed building with no floor drains, and free from infiltrating floodwaters
- Storage tanks regulated under the Toxic Substances Control Act

- Tanks used for temporary storage of pesticides or intended for reapplication as pesticides
- Tanks made of non-corrosive materials holding less then 80% fertilizer materials for application on-site.

4.6 State of Florida Department of Environmental Protection and the United States Navy Underground Storage Tank Consent Agreement

The Navy and FDEP entered into an agreement on June 10, 1993 insulating the commanding officers from prosecution for certain structural deficiencies (i.e., corrective actions requiring construction) through December 31, 2000. The purpose of this agreement is to ensure all USTs on Navy installations in Florida are in compliance with FAC Chapter 62-761 and, if applicable, Chapter 62-762 by December 31, 2000. The agreement applies to all upgrading, replacement or closure of all regulated USTs located at any Naval installation in the State of Florida. Compliance with all other provisions (i.e., leak detection monitoring, inventory reconciliation and record keeping, reporting and notifications, etc.) is still required. Aggressive actions should be continued to ensure total compliance as soon as possible. A copy of the FDEP and Navy underground storage tank consent agreement is included as Appendix C.

5.0 ACTION POTENTIAL PRIORITY RATING SYSTEM

5.1 General

The primary goal of the Tank Management Plan (TMP) for NAS Key West is to bring existing and future tank systems into regulatory compliance and maintain regulatory compliance. The Tank Inventory and Management System (TIMS) database is the tool used to manage compliance actions required for each tank system and when the actions are to be taken. In addition, actions can be planned for unregulated tanks, such as spill and overfill prevention for heating oil tank systems. Furthermore, some tank systems at NAS Key West may require replacement due to compliance with applicable regulations or the integrity of the system itself becoming susceptible to spills or leaks. The planning for replacement of tank systems or components thereof in the TMP is partially based on an action potential priority rating for each of the tank systems. Tank systems containing hazardous materials, however, were not included in the rating system since they are not directly comparable to oil storage tanks. These tank systems were evaluated on an individual basis and are discussed in Section 5.6.

Each tank system (including associated piping) was assessed for its potential to release due to corrosion and the potential for unsafe conditions subsequent to a petroleum release from the tank or its piping. The corrosion assessment was based on the tank system's age and materials of construction. The spill safety assessment was based on the size of the tank, the immediate danger imposed by the type of tank contents spilled, and the relative throughput of the tank. Tank throughput is defined as the quantity of tank contents used over a given period of time. For the purpose of this Plan, tank throughputs have been reported on an annual basis.

Following the assessments and scoring of each tank system, the scores were added together, multiplied by a tank system operational status factor, and given an overall tank system score. The tank systems were then ranked according to final score in descending order. Thus the higher the final score the more likely replacement is required. Recommendations for replacement and any other further actions pertaining to the results of the priority rating system are discussed in Section 7.0.

5.2 Tank System Release Potential

Corrosion of tank systems is a function of construction materials, soil characteristics, and time. Table 5.1 shows the matrix used to rank the tanks according to age and protection from corrosion. The ages of tanks were combined into groups of three year periods of installation. Each tank was assessed one point for each age group since its year of installation.

TABLE 5.1
TANK RELEASE POTENTIAL SCORE CHART

Installation Age Group		Material of Construction									
		Aboveground					Underground				
		Concrete	Fiberglass		Steel		Concrete	Fiberglass		Steel	
		-----	Double	Single	Protected	Unprotected	-----	Double	Single	Protected	Unprotected
		1	2	3	4	5	10	12	14	20	25
1996-1994	1	1	2	3	4	5	10	12	14	20	25
1993-1991	2	2	4	6	8	10	20	24	28	40	50
1990-1988	3	3	6	9	12	15	30	36	42	60	75
1987-1985	4	4	8	12	16	20	40	48	56	80	100
1984-1982	5	5	10	15	20	25	50	60	70	100	125
1981-1979	6	6	12	18	24	30	60	72	84	120	150
1978-1976	7	7	14	21	28	35	70	84	98	140	175
1975-1973	8	8	16	24	32	40	80	96	112	460	200
1972-1970	9	9	18	27	36	45	90	108	126	180	225
1969-1967	10	10	20	30	40	50	100	120	140	200	250
1966-1964	11	11	22	33	44	55	110	132	154	220	275
1963-1961	12	12	24	36	48	60	120	144	168	240	300
1960-1958	13	13	26	39	52	65	130	156	182	260	325
1957-1955	14	14	28	42	56	70	140	168	196	280	350
1954-1952	15	15	30	45	60	75	150	180	210	300	375
1951-1949	16	16	32	48	64	80	160	192	224	320	400
1948-1946	17	17	34	51	68	85	170	204	236	340	425
1945-1943	18	18	36	54	72	90	180	216	248	360	450
1942-1940	19	19	38	57	76	95	190	228	260	380	475

Across the top of this matrix are the tank materials of construction. They are ranked from left to right based on decreasing material longevity. A survey of vendors for concrete, fiberglass, and steel tanks provided the following:

Material	Ranges of Expected Material Longevity
Concrete	40-50 years
Fiberglass	20-30 years
Steel	10-15 years

These ranges reflect differences in tank design (i.e. underground versus aboveground) and differences in tank location environment. Naturally, an underground tank subjected to groundwater is not expected to last as long as an aboveground tank subjected to dryer weather. The expected material longevity is also dependent upon the initial tank protection and future tank maintenance provided throughout the tank's service life.

The material of construction category, in Table 5.1, is subdivided between installation designs of aboveground and underground tanks. Underground tanks are given a higher release potential score due to their location being subject to increased corrosion due to shallow groundwater. The two installation designs are further subdivided into three types of construction materials for tanks; concrete, fiberglass, and steel. The steel category includes carbon steel, stainless steel, aluminum, and other metallic materials. The fiberglass category is further subdivided into construction design parameters of double walled or single walled. Single walled tanks, of course, having a higher release potential. Similarly, the steel category is subdivided into protected and unprotected tanks. The term protected includes cathodic protection, dielectric coating, and fiberglass clad steel. Double walled steel tanks, vaulted steel tanks, aluminum tanks, and tanks with their exteriors completely (100%) painted were also considered to be protected.

The matrix shown as Table 5.1 has 10 categories of tank construction material and design and 19 tank installation age group categories. Each tank score results from matching the proper material of construction column with the installation age group row for the tank. For example, the tank score for an underground fiberglass single-walled tank that was installed in 1988 would be 42 (14 x 3 = 42).

Table 5.2 is the matrix used for scoring the associated piping of each tank system. Each piping system was assessed one point for each age group since its year of installation. The matrix is identical

to that of Table 5.1 for rating the tanks with the exception of eliminating the concrete material category. The associated piping score is, therefore, calculated in a similar manner to that of the tank scoring. For example, the piping score for a tank system with aboveground unprotected steel piping that was installed in 1983 would be 25 (5 x 5 = 25).

After exhausting all efforts to retrieve tank data from informational sources at NAS Key West, some tank and piping data remained undetermined. These tanks where data was not available (DNA) have been given the highest score in the corresponding category so that these tanks can be evaluated in the immediate future and re-scored such that subsequent actions can be planned. Some data was not completely identified, e.g. underground piping with no determination of material of construction. For the purpose of this Plan and scoring for the priority rating system, the following assumptions were made:

- Fiberglass tanks were assumed to be single walled if not identified otherwise
- Steel tanks were assumed to be unprotected if not identified otherwise
- If the piping material was not identified, it was assumed to be the same as the tank material type should it be identified
- Rubber piping was scored the same as single walled fiberglass
- Copper piping was scored the same as protected steel
- In cases where aboveground and underground piping both existed, the underground piping was used in the scoring system as a worse case scenario

5.3 Tank System Spill Impact

Table 5.3 is the spill impact potential score chart. The scoring parameters are tank system capacity on the vertical axis and the type of petroleum product in the tank on the horizontal axis. The order of tank contents is based on an increasing degree of volatility, regulatory requirements, and tank usage. This score focuses on the immediate consequences of a major spill. It is presumed that a larger capacity spill results in larger environmental impact. It is also presumed that the mission of the tank implies throughput of product. For instance, unleaded gasoline for vehicles is consistently used throughout the year requiring frequent refilling of these tanks while heating fuel usage varies with the season and requires minimal refilling. The rationale behind the arrangement of the petroleum products on the horizontal axis and their increasing score potentials from left to right can be explained by the following:

TABLE 5.2
PIPING RELEASE POTENTIAL SCORE CHART

Installation Age Group		Material of Construction							
		Aboveground				Underground			
		Fiberglass		Steel		Fiberglass		Steel	
		Double	Single	Protected	Unprotected	Double	Single	Protected	Unprotected
		2	3	4	5	12	14	20	25
1996-1994	1	2	3	4	5	12	14	20	25
1993-1991	2	4	6	8	10	24	28	40	50
1990-1988	3	6	9	12	15	36	42	60	75
1987-1985	4	8	12	16	20	48	56	80	100
1984-1982	5	10	15	20	25	60	70	100	125
1981-1979	6	12	18	24	30	72	84	120	150
1978-1976	7	14	21	28	35	84	98	140	175
1975-1973	8	16	24	32	40	96	112	460	200
1972-1970	9	18	27	36	45	108	126	180	225
1969-1967	10	20	30	40	50	120	140	200	250
1966-1964	11	22	33	44	55	132	154	220	275
1963-1961	12	24	36	48	60	144	168	240	300
1960-1958	13	26	39	52	65	156	182	260	325
1957-1955	14	28	42	56	70	168	196	280	350
1954-1952	15	30	45	60	75	180	210	300	375
1951-1949	16	32	48	64	80	192	224	320	400
1948-1946	17	34	51	68	85	204	236	340	425
1945-1943	18	36	54	72	90	216	248	360	450
1942-1940	19	38	57	76	95	228	260	380	475

TABLE 5.3

SPILL IMPACT POTENTIAL SCORE CHART

Capacity (gallons)		Tank Contents					
		Heating Fuel	Generator Diesel Fuel	Used Oil	Vehicular Diesel Fuel	Vehicular Gasoline	Contents DNA
		1	2	3	4	5	6
0 - 110	1	1	2	3	4	5	6
111 - 1,000	5	5	10	15	20	25	30
1,001 - 5,000	10	10	20	30	40	50	60
5,001 - 10,000	15	15	30	45	60	75	90
10,001 - 50,000	20	20	40	60	80	100	120
> 50,000	25	25	50	75	100	125	150
DNA	30	30	60	90	120	150	180

Notes:

1.) The Heating Fuel category includes Bunker C, #2 Diesel Fuel Oil, and JP-5 used for heating purposes on the premises.

2.) The Generator Diesel Fuel category includes # 2 Diesel Fuel Oil and JP-5 used for supplying power to emergency generators, generators, and/or pumps.

3.) The Used Oil category includes all Used Oil collected and stored at NAS Key West and assumes **no** hazardous substances are present.

4.) The Vehicular Diesel Fuel category includes Automotive Diesel, Marine Diesel, AVGAS, and Jet Fuel (JP-5) used for refueling vehicles.

5.) The Vehicular Gasoline category includes Leaded Gasoline and Unleaded Gasoline used for refueling vehicles.

6.) For the purpose of scoring in the rating system, tanks identified as being empty were scored using their previously identified contents.

TABLE 5.4

TANK SYSTEM OPERATIONAL STATUS FACTOR

Operational Status	Tank Score Factor
Active	2
Out of Service	1
Closed	0

Heating Fuel	• Second Most Volatile • Excluded From Regulation • Medium Average Throughput
Generator Diesel Fuel	• Second Most Volatile • Partially Deferred Regulation • Low Average Throughput
Used Oil	• Not Volatile • Stringent Regulation • Low Average Throughput
Vehicular Diesel Fuel	• Second Most Volatile • Stringent Regulation • High Average Throughput
Vehicular Gasoline	• Most Volatile • Stringent Regulation • High Average Throughput

Currently there are numerous types of fuels used at NAS Key West. The five categories of fuels identified in Table 5.3 were created for the purpose of scoring and ranking for the spill impact potential of each tank system. Four of the five categories are comprised of more than one type of fuel due their similar content or purpose. For instance, the heating fuel category includes bunker C, #2 diesel fuel oil and JP-5 when each is used for the purpose of heating on the premises. Generator diesel fuel, vehicular diesel fuel, and vehicular gasoline are the other three categories comprised of more than one type of fuel. The used oil category only includes used oil. All of these categories are further explained in the notes under Table 5.3. JP-5 and # 2 diesel fuel oil can be found in more than one category due to these fuels being used for multiple purposes, e.g. JP-5 used for heating as well as jet fuel.

After thorough research of all informational resources at NAS Key West, the identification of some tank's capacity and contents remained undetermined. Similar to the release potential scoring in Section 5.3, these tanks where data was not available (DNA) have been given the highest score in the corresponding category so that they can be evaluated in the immediate future and re-scored such that subsequent actions can be planned.

The highest score possible was applied to the used fuel in tank A937 at the Fuels Laboratory as well as the used fuel in tank A902-B at the Truck Farm. The Fuels Laboratory samples all the types of fuels used at NAS Key West and performs qualitative tests on each of the samples. The remaining fuel and used fuel samples are then stored in tank A937. Excess fuel from tanker trucks performing filling duties is stored in tank A902B. This tank also contains a mixture of several types of fuel. The exact contents of these two tanks are unknown, therefore, the highest score applied for the spill impact potential. Similarly, the highest score for spill impact potential was also applied to tank V4111B, an emergency spill reservoir for transformer oil at the Commissary at Sigsbee Park. At the time this tank was field investigated, the tank was observed to contain only clear water. However, this tank should be further investigated and an exact determination should be made of the tank contents.

Although the previously mentioned tanks have been assigned the highest score in the spill impact potential category, they do not score as high overall as do other systems. The highest scoring tank system was A986 due to information not available about its year of installation, tank capacity, as well as its tank and piping materials of construction. All data given a "DNA" (data not available) entry instead of a numerical score should be re-evaluated to try to determine the actual data such that an actual overall tank score can be achieved for subsequent planning.

5.4 Tank System Operational Status

After determining the scores for the tank release potential, piping release potential, and spill impact potential, the individual scores are summed and then multiplied by a tank operational status factor. Table 5.4 is the tank system operational status factor chart. Currently active tanks are multiplied by a factor of two, doubling the score. These tanks score higher due to their active status, thus almost always containing product. Out of service tanks receive a status factor of one, a unit multiplier. These tank systems may or may not contain product. Closed in place tanks receive a status factor of zero. These tanks will have an overall score of zero and can be found at the bottom of the ratings. Closed tanks are included in the inventory, however, require no action if closed per the applicable regulation.

5.5 Overall Tank Rating

As stated previously in Section 5.1, these tank system scores are added together, multiplied by the operational status factor and entered onto a spreadsheet listing of the tank systems covered under this plan. The spreadsheet, originally ordered according to tank number, is sorted and reordered according to overall tank score. Table 5.5 lists the results of this rating system.

The rating system was designed to give old, underground, unprotected, steel tanks containing regulated petroleum products the highest priority. Secondly, the ordering was to reflect a difference between fiberglass and steel. Thirdly, there was to be a partition between underground and aboveground, with underground tanks receiving a higher priority. Finally, the tanks were to be separated between the operational status such as active, out of service, and permanently closed. The goal in mind of this rating system was to establish an objective score for each tank system at NAS Key West for the purpose of prioritizing replacement of components of these systems Base wide. This objective scoring is considered along with the regulatory compliance requirements outlined in Section 6.0 of this Plan so that final activity recommendations can be made for the next 10 years at NAS Key West. These final recommendations are outlined in Section 7.0 of this Plan.

Distinctions among the overall tank scores separating them into the designed categories mentioned above, e.g. underground versus aboveground, are not perfectly clear. Overlapping of the results does occur. An example of this is the case in which an older, larger fiberglass tank rates higher than a more recently installed, smaller steel tank. It is noted here that no matter how the tanks are ordered, the data must still be surveyed and planning decisions made from the analysis of this sorted data. The priority rating system should be used only as a tool in the decision and planning process with regards to implementing a replacement program of tank systems.

5.6 Tanks Systems Containing Hazardous Material

As stated in Section 5.1, tank systems at NAS Key West containing hazardous materials were not included in the action potential priority rating system. The rating system was designed to include only tank systems containing petroleum related products. Only 27 tanks currently exist on Base that contain non-petroleum related products. These tanks include:

- A979A and B at the Liquid Oxygen Generation Building, which contain liquid oxygen and A979C also at this location which contains liquid nitrogen;
- Tanks AG(103, 104, 233, 234, 263, 264, 509, 510, 759, 760, 837, and 840)B and C, all of which contain ethylene glycol and are located at Arresting Gear locations along the runways.

The tanks at the Liquid Oxygen Generation Building are identical in materials and construction having been installed in 1989. They are 2000 gallon single walled painted steel ASTs on supports with tight fill connections. Each tank is fitted with aboveground double walled stainless steel piping. All three tanks are currently in service. These tanks and associated piping pose a low potential for release or spill due to an obviously well implemented maintenance program based upon the field investigation. Furthermore, a release or spill into the atmosphere will produce a change in the physical state of the

TABLE 5.5
TANK SYSTEM ACTION POTENTIAL PRIORITY RATING

Tank Number	Tank Location	Facility Description	AST, UST, or Closed	Tank Contents	Year Installed	Tank Capacity (gallons)	Tank Construction	Tank Release Score	Piping Release Score	Spill Impact Score	Tank Status Factor	Overall Tank Score
A986	Boca Chica Field	AIMD Ground Service Equipment Hangar	UST	Used Oil	DNA	DNA	DNA	475	475	90	2	2080
D1	Trumbo Point Annex	Fuel Farm	UST	Vehicular Diesel	1942	586,000	Concrete	190	475	100	2	1530
D3	Trumbo Point Annex	Fuel Farm	UST	Vehicular Diesel	1942	586,000	Concrete	190	475	100	2	1530
A443	Boca Chica Field Industrial Area	Public Works Auto. Maintenance Shop	UST	Used Oil	DNA	2,000	Concrete	190	475	30	2	1390
D25	Trumbo Point Annex	Fuel Farm	UST	Used Oil	DNA	3,500	Concrete	190	475	30	2	1390
A929	Boca Chica Field	Tank Farm	UST	Used Oil	1960	560	Steel	325	325	15	2	1330
437	Truman Annex	BEQ	UST	Heating Fuel	1958	1,000	Steel	325	325	5	2	1310
A419-A	Boca Chica Field Industrial Area	Power Plant	AST	Emergency Generator Diesel	1944	4,000	Steel	90	450	20	2	1120
A419-B	Boca Chica Field Industrial Area	Power Plant	AST	Emergency Generator Diesel	1944	4,000	Steel	90	450	20	2	1120
A419-C	Boca Chica Field Industrial Area	Power Plant	AST	Emergency Generator Diesel	1944	4,000	Steel	90	450	20	2	1120
1350	Truman Annex	BEQ	UST	Heating Fuel	1966	1,000	Steel	275	275	5	2	1110
A938	Boca Chica Field	Tank Farm	AST	Jet Fuel	1953	239,000	Steel	60	375	100	2	1070
A944	Boca Chica Field	Tank Farm	AST	Jet Fuel	1953	238,000	Steel	60	375	100	2	1070
A230	Boca Chica Field Industrial Area	Electrical Distribution Center	AST	Emergency Generator Diesel	1946	2,000	Steel	68	425	20	2	1026
A945	Boca Chica Field	Tank Farm	AST	Jet Fuel	1957	213,000	Steel	56	350	100	2	1012
290-B	Truman Annex	JIATFE	AST	Emergency Generator Diesel	DNA	1,500	Steel	95	380	20	2	990
V4022E	Sigsbee Park	Naval Exchange Service Station	UST	DNA	DNA	1,000	DNA	475	475	30	1	980
V4022F	Sigsbee Park	Naval Exchange Service Station	UST	DNA	DNA	1,000	DNA	475	475	30	1	980
V4022G	Sigsbee Park	Naval Exchange Service Station	UST	DNA	DNA	1,000	DNA	475	475	30	1	980
A418	Boca Chica Field Industrial Area	Naval Air Station Administration Office	UST	Emergency Generator Diesel	DNA	500	Steel	475	475	10	1	960
1351	Truman Annex	BEQ	UST	Heating Fuel	1966	1,000	Steel	175	275	5	2	910
A958	Boca Chica Field	Tank Farm	AST	Jet Fuel	1961	298,000	Steel	48	300	100	2	896
B43	Trumbo Point Annex	Potable Water Pump Station	UST	Leaded Gasoline	1954	280	Steel	375	375	25	1	775
D2	Trumbo Point Annex	Fuel Farm	UST	Vehicular Diesel	1942	586,000	Concrete	190	475	100	1	765
D4	Trumbo Point Annex	Fuel Farm	UST	Vehicular Diesel	1942	1,155,000	Concrete	190	475	100	1	765
D6	Trumbo Point Annex	Fuel Farm	UST	Used Oil	1942	1,155,000	Concrete	190	475	75	1	740
D21	Trumbo Point Annex	Fuel Farm	UST	Vehicular Diesel	1942	10,000	Concrete	190	475	60	1	725
D26A	Trumbo Point Annex	Fuel Farm	UST	Leaded Gasoline	1956	560	Steel	350	350	25	1	725
D27	Trumbo Point Annex	Fuel Farm	UST	Bunker C	1942	10,000	Concrete	190	475	15	1	680
438	Truman Annex	BEQ	UST	Heating Fuel	1958	1,000	Steel	325	325	5	1	655
439	Truman Annex	BEQ	UST	Heating Fuel	1958	1,000	Steel	325	325	5	1	655
A328	Boca Chica Field Industrial Area	FAA Radar Facility	AST	Emergency Generator Diesel	1968	2,300	Steel	40	250	20	2	620

TABLE 5.5
TANK SYSTEM ACTION POTENTIAL PRIORITY RATING

Tank Number	Tank Location	Facility Description	AST, UST, or Closed	Tank Contents	Year Installed	Tank Capacity (gallons)	Tank Construction	Tank Release Score	Piping Release Score	Spill Impact Score	Tank Status Factor	Overall Tank Score
V3005	Sigsbee Park	Marina	UST	Unleaded Gasoline	1970	4,000	Fiberglass	27	225	50	2	604
A924	Boca Chica Field	Tank Farm	AST	Used Oil	1951	24,600	Steel	80	400	60	1	540
A925	Boca Chica Field	Tank Farm	AST	Empty (Previously Used Oil)	1951	24,600	Steel	80	400	60	1	540
PD1A	Trumbo Point Annex	Pier D1	UST	Used Oil	1980	4,800	Concrete	60	150	30	2	480
A959	Boca Chica Field	Tank Farm	AST	Jet Fuel	1961	298,000	Steel	48	300	100	1	448
V4022A	Sigsbee Park	Naval Exchange Service Station	UST	Unleaded Gasoline	1983	10,000	Fiberglass	70	70	75	2	430
V4022B	Sigsbee Park	Naval Exchange Service Station	UST	Unleaded Gasoline	1983	10,000	Fiberglass	70	70	75	2	430
V4022C	Sigsbee Park	Naval Exchange Service Station	UST	Unleaded Gasoline	1983	10,000	Fiberglass	70	70	75	2	430
A317-H	Boca Chica Field Industrial Area	Service Station	UST	Unleaded Gasoline	1974	6,000	Fiberglass	24	112	75	2	422
A317-I	Boca Chica Field Industrial Area	Service Station	UST	Unleaded Gasoline	1974	6,000	Fiberglass	24	112	75	2	422
A937	Boca Chica Field	Fuel Laboratory	AST	Used Fuel	DNA	300	Steel	76	95	30	2	402
A419-D	Boca Chica Field Industrial Area	Power Plant	AST	Emergency Generator Diesel	DNA	300	Steel	95	95	10	2	400
A419-E	Boca Chica Field Industrial Area	Power Plant	AST	Emergency Generator Diesel	DNA	300	Steel	95	95	10	2	400
A447	Boca Chica Field Industrial Area	Potable Water Pump Station	AST	Emergency Generator Diesel	DNA	300	Steel	95	95	10	2	400
L19	Naval Regional Medical Clinic	Medical Clinic	AST	Emergency Generator Diesel	DNA	300	Steel	95	95	10	2	400
USDA1	Fleming Key	USDA	UST	Emergency Generator Diesel	1979	8,000	Fiberglass	84	84	30	2	396
A317-G	Boca Chica Field Industrial Area	Service Station	UST	Vehicular Diesel	1974	6,000	Fiberglass	24	112	60	2	392
L47	Naval Regional Medical Clinic	Medical Clinic	AST	Heating Fuel	DNA	300	Steel	95	95	5	2	390
290-D	Truman Annex	JIATFE	AST	Emergency Generator Diesel	DNA	35	Steel	95	95	2	2	384
USDA2	Fleming Key	USDA	UST	Emergency Generator Diesel	1979	4,000	Fiberglass	84	84	20	2	376
USDA3	Fleming Key	USDA	UST	Emergency Generator Diesel	1979	4,000	Fiberglass	84	84	20	2	376
A229-A	Boca Chica Field Industrial Area	Sprinkler System Pump Station	AST	Pump Diesel	DNA	220	Steel	76	95	10	2	362
A229-B	Boca Chica Field Industrial Area	Sprinkler System Pump Station	AST	Pump Diesel	DNA	220	Steel	76	95	10	2	362
A4010	Boca Chica Field	Tank Farm	AST	Emergency Generator Diesel	DNA	275	Steel	76	95	10	2	362
A4053A	Boca Chica Field	ASR-8	AST	Emergency Generator Diesel	DNA	500	Steel	76	95	10	2	362
A995	Boca Chica Field	Weapons Security Guard House	AST	Emergency Generator Diesel	DNA	275	Steel	76	95	10	2	362
A1004A	Boca Chica Field	Naval Communication Message Center	AST	Emergency Generator Diesel	DNA	50	Steel	76	95	2	2	346
A1004B	Boca Chica Field	Naval Communication Message Center	AST	Emergency Generator Diesel	DNA	50	Steel	76	95	2	2	346
V4111C	Sigsbee Park	Naval Exchange	AST	Emergency Generator Diesel	DNA	25	Steel	76	95	2	2	346
OW102A	Truman Annex	Inner Mole	UST	Used Oil	1985	650	Fiberglass	56	100	15	2	342
OW-1A	Truman Annex	Outer Mole	UST	Used Oil	1985	650	Fiberglass	56	100	15	2	342
PD1B	Trumbo Point Annex	Pier D1	UST	Used Oil	1985	650	Fiberglass	48	100	15	2	326

TABLE 5.5
TANK SYSTEM ACTION POTENTIAL PRIORITY RATING

Tank Number	Tank Location	Facility Description	AST, UST, or Closed	Tank Contents	Year Installed	Tank Capacity (gallons)	Tank Construction	Tank Release Score	Piping Release Score	Spill Impact Score	Tank Status Factor	Overall Tank Score
38	Truman Annex	Potable Water Pump Station	AST	Pump Diesel	DNA	300	Steel	76	76	10	2	324
A4054	Boca Chica Field	PAR	AST	Emergency Generator Diesel	DNA	500	Steel	76	76	10	2	324
A4165	Boca Chica Field	Taxiway "A" Compressed Air Station	AST	Emergency Generator Diesel	DNA	1,000	Steel	76	76	10	2	324
C83	Trumbo Point Annex	Gymnasium	AST	Pump Diesel	1942	275	Steel	76	76	10	2	324
A727	Boca Chica Field Industrial Area	BEQ	AST	Heating Fuel	1953	1,500	Steel	75	75	10	2	320
C59	Trumbo Point Annex	Special Forces Barracks	AST	Unleaded Gasoline	DNA	300	Aluminum	76	57	25	2	316
1279	Truman Annex	JIATFE	AST	Unleaded Gasoline	DNA	100	Steel	95	57	5	2	314
V1552C	Sigsbee Park	Potable Water System Pump Station	AST	Pump Diesel (JP-5)	DNA	10	Steel	76	76	4	2	312
A638	Boca Chica Field Industrial Area	BEQ	AST	Heating Fuel	1953	1,000	Steel	75	75	5	2	310
V1554A	Sigsbee Park	Sanitary Sewer Pump Station	AST	Used Oil	DNA	20	Fiberglass	57	95	3	2	310
290-E	Truman Annex	JIATFE	AST	Emergency Generator Diesel	DNA	25	Steel	76	76	2	2	308
A325-1	Boca Chica Field Industrial Area	CARIBROC	AST	Emergency Generator Diesel	1963	20,000	Steel	48	60	40	2	296
OW-1	Truman Annex	Outer Mole	UST	Used Oil	1990	4,000	Fiberglass	42	75	30	2	294
OW-102	Truman Annex	Inner Mole	UST	Used Oil	1990	4,000	Fiberglass	42	75	30	2	294
A631	Boca Chica Field Industrial Area	BEQ	AST	Heating Fuel	1953	550	Steel	60	75	5	2	280
A639	Boca Chica Field Industrial Area	BEQ	AST	Heating Fuel	1953	1,000	Steel	60	75	5	2	280
V4022D	Sigsbee Park	Naval Exchange Service Station	UST	Vehicular Diesel	1983	6,000	Fiberglass	10	70	60	2	280
A1025	Boca Chica Field	Transmitter	AST	Emergency Generator Diesel	1960	2,000	Steel	52	65	20	2	274
C12-A	Trumbo Point Annex	Naval Exchange Service Station	UST	Unleaded Gasoline	1976	10,000	Fiberglass	98	98	75	1	271
C12-B	Trumbo Point Annex	Naval Exchange Service Station	UST	Unleaded Gasoline	1976	10,000	Fiberglass	98	98	75	1	271
C12-C	Trumbo Point Annex	Naval Exchange Service Station	UST	Unleaded Gasoline	1976	6,000	Fiberglass	98	98	75	1	271
C12-D	Trumbo Point Annex	Naval Exchange Service Station	UST	Unleaded Gasoline	1976	6,000	Fiberglass	98	98	75	1	271
1279A	Truman Annex	JIATFE	UST	Used Oil	1987	350	Steel	20	100	15	2	270
A132	Boca Chica Field Industrial Area	Fire Station	AST	Emergency Generator Diesel	1961	300	Steel	60	60	10	2	260
C2076	Trumbo Point Annex	BOQ	AST	Heating Fuel	1985	1,000	Steel	16	100	10	2	252
149-1	Truman Annex	Port Services	AST	Unleaded Gasoline	1989	2,000	Steel	15	60	50	2	250
D1292B	Trumbo Point Annex	Fuel Farm	AST	Unleaded Gasoline	1995	20,000	Steel	4	20	100	2	248
A630	Boca Chica Field Industrial Area	BEQ	AST	Heating Fuel	1964	550	Steel	55	55	5	2	230
A625	Boca Chica Field Industrial Area	BEQ	AST	Heating Fuel	1961	550	Steel	48	60	5	2	226
1279B	Truman Annex	JIATFE	AST	Emergency Generator Diesel	1988	3,000	Steel	15	75	20	2	220
290	Truman Annex	JIATFE	AST	Emergency Generator Diesel	1987	750	Steel	20	80	10	2	220
A1006	Boca Chica Field	Ground Electronic Transmitter	AST	Emergency Generator Diesel	1969	300	Steel	50	50	10	2	220

TABLE 5.5
TANK SYSTEM ACTION POTENTIAL PRIORITY RATING

Tank Number	Tank Location	Facility Description	AST, UST, or Closed	Tank Contents	Year Installed	Tank Capacity (gallons)	Tank Construction	Tank Release Score	Piping Release Score	Spill Impact Score	Tank Status Factor	Overall Tank Score
A1103	Boca Chica Field	Generator Building	AST	Emergency Generator Diesel	1965	1,000	Steel	44	55	10	2	218
A325-3	Boca Chica Field Industrial Area	CARIBROC	AST	Emergency Generator Diesel	1963	250	Steel	48	48	10	2	212
B48A	Trumbo Point Annex	CAA & Photo Lab / Hurrican Shelter	AST	Emergency Generator Diesel	DNA	150	Steel	95	NONE	10	2	210
A632	Boca Chica Field Industrial Area	BEQ	AST	Heating Fuel	1964	550	Steel	44	55	5	2	208
A634	Boca Chica Field Industrial Area	Island Clipper Club	AST	Heating Fuel	1964	300	Steel	55	44	5	2	208
V4111B	Sigsbee Park	Naval Exchange	UST	Unknown (Reservoir for Transformer Oil)	1990	200	Concrete	30	42	30	2	204
A624	Boca Chica Field Industrial Area	BEQ	AST	Heating Fuel	1961	550	Steel	48	48	5	2	202
149-2	Truman Annex	Port Services	AST	Unleaded Gasoline	1989	1,000	Steel	15	60	25	2	200
A1020	Boca Chica Field	TACAN	AST	Emergency Generator Diesel	1967	300	Steel	40	50	10	2	200
A4115	Boca Chica Field Industrial Area	Flying Club	AST	AVGAS	1992	2,000	Steel	8	50	40	2	196
A1125	Boca Chica Field	Alert Forces	AST	Emergency Generator Diesel	DNA	300	Steel	76	95	10	1	181
B48	Trumbo Point Annex	CAA & Photo Lab / Hurrican Shelter	AST	Emergency Generator Diesel	1969	550	Steel	40	40	10	2	180
B43-A	Trumbo Point Annex	Potable Water Pump Station	AST	DNA	DNA	60	Steel	95	76	6	1	177
V1274A	Sigsbee Park	Sewage Pump Station	AST	Emergency Generator Diesel	DNA	250	Steel	76	NONE	10	2	172
A827	Boca Chica Field	Sewage / Waste Treatment Plant	AST	Emergency Generator Diesel	1974	330	Steel	32	40	10	2	164
A902-B	Boca Chica Field	Truck Farm	AST	Used Fuel	1970	800	Steel	45	NONE	30	2	150
A4011	Boca Chica Field Industrial Area	Naval Medical / Dental Clinic	AST	Emergency Generator Diesel	1987	300	Steel	16	48	10	2	148
A925A	Boca Chica Field	Tank Farm	AST	Used Oil	1996	10,000	Vaulted Steel	4	25	45	2	148
A314	Boca Chica Field Industrial Area	Navy Supply	AST	Emergency Generator Diesel	1980	300	Steel	24	30	10	2	128
F02	Fleming Key	Special Forces Boat Dock	AST	Unleaded Gasoline	1995	4,000	Vaulted Steel	4	4	50	2	116
V4111A	Sigsbee Park	Naval Exchange	UST	Emergency Generator Diesel	1990	550	Fiberglass	6	42	10	2	116
J1561A	Saddlebunch Key	Transmission Site	AST	Emergency Generator Diesel	1979	100	Steel	24	30	2	2	112
A902-C	Boca Chica Field	Truck Farm	AST	Unleaded Gasoline	1990	800	Steel	15	15	25	2	110
A4165A	Boca Chica Field	Taxiway "A" Compressed Air Station	AST	Compressor Diesel	DNA	560	Steel	95	NONE	10	1	105
A1004	Boca Chica Field	Naval Communication Message Center	AST	Emergency Generator Diesel	1987	2,000	Steel	16	16	20	2	104
290-C	Truman Annex	JIATFE	AST	Emergency Generator Diesel	1975	150	Steel	40	NONE	10	2	100
AG103A	Boca Chica Field	Arresting Gear @ Runway 3 / 21	AST	Unleaded Gasoline	1979	7	Steel	24	18	5	2	94
AG104A	Boca Chica Field	Arresting Gear @ Runway 3 / 21	AST	Unleaded Gasoline	1979	7	Steel	24	18	5	2	94
AG233A	Boca Chica Field	Arresting Gear @ Runway 7 / 25	AST	Unleaded Gasoline	1979	7	Steel	24	18	5	2	94
AG234A	Boca Chica Field	Arresting Gear @ Runway 7 / 25	AST	Unleaded Gasoline	1979	7	Steel	24	18	5	2	94
AG263A	Boca Chica Field	Arresting Gear @ Runway 3 / 21	AST	Unleaded Gasoline	1979	7	Steel	24	18	5	2	94
AG264A	Boca Chica Field	Arresting Gear @ Runway 3 / 21	AST	Unleaded Gasoline	1979	7	Steel	24	18	5	2	94

TABLE 5.5
TANK SYSTEM ACTION POTENTIAL PRIORITY RATING

Tank Number	Tank Location	Facility Description	AST, UST, or Closed	Tank Contents	Year Installed	Tank Capacity (gallons)	Tank Construction	Tank Release Score	Piping Release Score	Spill Impact Score	Tank Status Factor	Overall Tank Score
AG509A	Boca Chica Field	Arresting Gear @ Runway 7 / 25	AST	Unleaded Gasoline	1979	7	Steel	24	18	5	2	94
AG510A	Boca Chica Field	Arresting Gear @ Runway 7 / 25	AST	Unleaded Gasoline	1979	7	Steel	24	18	5	2	94
AG759A	Boca Chica Field	Arresting Gear @ Runway 13 / 31	AST	Unleaded Gasoline	1979	7	Steel	24	18	5	2	94
AG760A	Boca Chica Field	Arresting Gear @ Runway 13 / 31	AST	Unleaded Gasoline	1979	7	Steel	24	18	5	2	94
AG837A	Boca Chica Field	Arresting Gear @ Runway 13 / 31	AST	Unleaded Gasoline	1979	7	Steel	24	18	5	2	94
AG840A	Boca Chica Field	Arresting Gear @ Runway 13 / 31	AST	Unleaded Gasoline	1979	7	Steel	24	18	5	2	94
290-A	Truman Annex	JIATFE	AST	Emergency Generator Diesel	1987	700	Steel	16	20	10	2	92
4163	Truman Annex	MUSE	AST	Emergency Generator Diesel	1993	5,200	Steel	8	8	30	2	92
A994	Boca Chica Field	ASF / Hurricane Shelter	AST	Emergency Generator Diesel	1985	600	Steel	16	20	10	2	92
KW400	Fleming Key	Fire Pump Station	AST	Pump Diesel	1993	250	Steel	8	28	10	2	92
F01E	Fleming Key	Compressor / Generator Building	UST	Used Oil	1994	400	Fiberglass	14	14	15	2	86
KW600	Fleming Key	Special Forces Boat Maintenance Facility	UST	Used Oil	1994	400	Fiberglass	14	14	15	2	86
B27	Trumbo Point Annex	Ordnance Research / Development	AST	Emergency Generator Diesel	1975	150	Steel	32	NONE	10	2	84
B28A	Trumbo Point Annex	Ordnance Research / Development	AST	Emergency Generator Diesel	1975	150	Steel	32	NONE	10	2	84
D29	Trumbo Point Annex	Fuel Farm	AST	Emergency Generator Diesel	1985	560	Steel	16	16	10	2	84
A225	Boca Chica Field Industrial Area	Ground Electronics Shop	AST	Emergency Generator Diesel	1985	60	Steel	16	20	2	2	76
J1561	Saddlebunch Key	Transmission Site	AST	Emergency Generator Diesel	1994	10,000	Steel	4	4	30	2	76
D4169	Trumbo Point Annex	Fuel Farm	AST	Vehicular Diesel	1992	250	Vaulted Steel	8	8	20	2	72
B28	Trumbo Point Annex	Ordnance Research / Development	AST	Unleaded Gasoline	1994	250	Aluminum	4	3	25	2	64
V4114	Sigsbee Park	Navy Lodge	AST	Heating Fuel	1990	550	Steel	12	15	5	2	64
V1554	Sigsbee Park	Sanitary Sewer Pump Station	AST	Emergency Generator Diesel	1990	110	Steel	12	15	4	2	62
L3A	Naval Regional Medical Clinic	Medical Clinic	AST	Emergency Generator Diesel	1995	3,000	Steel	4	5	20	2	58
F01	Fleming Key	Compressor / Generator Building	AST	Diesel	1994	2,650	Steel	4	4	20	2	56
C59A	Trumbo Point Annex	Special Forces Barracks	AST	Emergency Generator Diesel	1983	30	Steel	25	NONE	2	2	54
USDA4	Fleming Key	USDA	AST	Vehicular Diesel	1996	250	Steel	4	3	20	2	54
V988	Sigsbee Park	Sanitary Sewer Pump Station	AST	Emergency Generator Diesel	1990	110	Steel	12	12	2	2	52
A935R	Boca Chica Field	Truck Farm	AST	Used Oil	1995	250	Steel	4	4	15	2	46
1355	Truman Annex	Key West Foreign Broadcast Facility	AST	Emergency Generator (JP-5)	1995	250	Vaulted Steel	4	5	10	2	38
A244A	Boca Chica Field Industrial Area	Airfield Control Tower	AST	Emergency Generator Diesel	1994	500	Vaulted Steel	4	5	10	2	38
V1552B	Sigsbee Park	Potable Water System Pump Station	AST	Pump Diesel (JP-5)	1995	500	Vaulted Steel	4	5	10	2	38
C5	Trumbo Point Annex	Fire Station	AST	Emergency Generator Diesel	1976	30	Aluminum	35	NONE	2	1	37
A4082	Boca Chica Field	TACTS	AST	Emergency Generator (JP-5)	1994	500	Vaulted Steel	4	4	10	2	36

TABLE 5.5
TANK SYSTEM ACTION POTENTIAL PRIORITY RATING

Tank Number	Tank Location	Facility Description	AST, UST, or Closed	Tank Contents	Year Installed	Tank Capacity (gallons)	Tank Construction	Tank Release Score	Piping Release Score	Spill Impact Score	Tank Status Factor	Overall Tank Score
A940-3	Boca Chica Field	Fresh Water Pump House	AST	Pump Diesel	1994	350	Steel	4	4	10	2	36
A940-4	Boca Chica Field	Fresh Water Pump House	AST	Emergency Generator Diesel	1994	280	Steel	4	4	10	2	36
A940-5	Boca Chica Field	Fresh Water Pump House	AST	Pump Diesel	1994	350	Steel	4	4	10	2	36
438-A	Truman Annex	BEQ	AST	Heating Fuel (JP-5)	1995	500	Vaulted Steel	4	5	5	2	28
439-A	Truman Annex	BEQ	AST	Heating Fuel (JP-5)	1995	500	Vaulted Steel	4	5	5	2	28
A526A	Boca Chica Field Industrial Area	Boiler House	AST	Heating Fuel (JP-5)	1995	500	Vaulted Steel	4	5	5	2	28
F15	Fleming Key	Naval Research Lab Marine Corrosion Facility	AST	Emergency Generator Diesel	1988	100	Steel	12	NONE	2	2	28
F01A	Fleming Key	Compressor / Generator Building	AST	Generator Diesel	1993	60	Steel	8	3	2	2	26
F01B	Fleming Key	Compressor / Generator Building	AST	Emergency Generator Diesel	1993	60	Steel	8	3	2	2	26
F01C	Fleming Key	Compressor / Generator Building	AST	Emergency Generator Diesel	1993	60	Steel	8	3	2	2	26
A1019A	Boca Chica Field	Naval Communication / Message Administration	AST	Emergency Generator Diesel	1994	20	Aluminum	4	3	2	2	18
F01D	Fleming Key	Compressor / Generator Building	AST	Compressor Diesel	1994	25	Steel	4	NONE	2	2	12
A924A	Boca Chica Field	Tank Farm	AST	Empty (Never Used)	1996	10,000	Vaulted Steel	4	NONE	N/A	N/A	0
B14-A	Trumbo Point Annex	Gasoline Pumping Station	Closed UST	Unleaded Gasoline	1942	25,000	Steel	475	NONE	100	0	0
B14-B	Trumbo Point Annex	Gasoline Pumping Station	Closed UST	Vehicular Diesel	1942	10,000	Steel	475	NONE	60	0	0
G-01	Hawk Missile Sites	Generator Building	Closed AST	Emergency Generator Diesel	DNA	2,000	Steel	95	NONE	20	0	0
G-02	Hawk Missile Sites	Ready Building	Closed AST	Emergency Generator Diesel	DNA	300	Steel	95	NONE	10	0	0

tanks' contents from a liquid to a gas, thus posing little environmental impact. No replacement of these tanks is recommended at this time.

There are two types of tanks located at each of the Arresting Gear locations along the runways, all of which are in service. The "B" tanks are 250 gallon single walled painted steel ASTs on supports. These tanks were installed in 1979 and have aboveground rubber piping. They contain ethylene glycol used as a hydraulic fluid when the arresting gear is activated. These tanks pose a moderate threat for release and spill potential due to their age, their size, and their proximity to waterfront conditions. These tanks are currently visually inspected weekly and maintained frequently. Weekly inspections should continue in the future as well as the manual tank gauging also currently performed. Replacement of these tanks should be considered from a material longevity standpoint within the next three to five years to ensure tank integrity. The "C" tanks are 300 gallon single walled steel USTs encased in concrete beneath the arresting gear mechanism. These tanks were also installed in 1979. The material of construction for the underground piping is unknown. These tanks also contain ethylene glycol used as a hydraulic fluid when the arresting gear is activated. The two tanks are connected and operate collectively. These tanks, although underground, pose a low potential for release or spill impact due to being encased in concrete. Tank gauging and weekly inspections of the arresting gear should continue, however, no replacement is recommended for the "C" tanks at this time.

5.7 Environmental Risk Rating

The environmental risk rating system is used independent of the action potential priority rating system. The environmental risk rating gives a relative comparison among tank capacity and tank location so actions can be taken at locations that pose the greatest potential for environmental impact due to a major product release. All of the tank systems, with the exception of the hazardous material containing systems, currently at NAS Key West were rated. The majority of tanks at NAS Key West contain petroleum products, thus, environmental damage is constant and not included as a parameter in the rating system.

It is noted here, however, that the ethylene glycol contained in the tanks at the arresting gear locations is considered more of a threat to environmentally sensitive areas than a similar tank containing a petroleum product. For this reason, careful planning should be done in regards to these tanks in providing the utmost protection against a major spill or release. Replacement of these tanks is not suitable due to their importance in aviation activities at the Base. Providing secondary containment for these tanks is also not suitable according to NAS Key West due to their immediate location to the runways. The Best Management Practices of weekly inspections and frequent

operation and maintenance should continue routinely to provide the necessary protection for the environment.

As shown in Table 5.6, tank capacity is more rigorously defined by 10 categories. These categories are matched with low and high potential environmental impact categories. The high potential category is based on the assumption that a major spill (i.e., loss of tank integrity) may pose a threat if it occurs within 1000 feet of an environmentally sensitive site. The order of rank for the two types of sites are based on the following:

- Waterfront
  - damage to aquatic and marine life
  - surface water enhances spread of pollution
- Base Housing
  - health threat to residents

The scores for the high potential categories are designed to be larger than the highest score that is allowed for the low potential category. The low potential category is the collection of tanks that are greater than 1000 feet from the designated environmentally sensitive sites. The locations of all tanks currently at NAS Key West are indicated on the large maps in Section 6.0 (Drawings 37147-1 thru -9). Each tank was evaluated as to its proximity to waterfront and housing areas and given an environmental risk score. A tank type factor, shown in Table 5.7, was then applied to this score. The type factor weighs more heavily on USTs due to their potential impact to the environment not being immediately recognized and the escalated costs associated with groundwater and soil remediation. The overall environmental risk score results for each of the tanks is presented as Table 5.8.

As was the case with release potential and spill impact rating results, the results of the environmental risk rating present the tank systems with the highest scores as those that could potentially harm the environment. These tanks, as well as the hazardous material-containing tanks, will be taken into consideration for replacement and/or retrofit and recommendations made to protect the environment from harm. The final tank system recommendations are found in Section 7.0 of this Plan.

TABLE 5.6
ENVIRONMENTAL RISK RATING SCORE CHART

Capacity (gallons)		Low Potential for Environmental Impact	High Potential for Environmental Impact	
		Greater than 1000' from Waterfront and Base Housing	Within 1000' of:	
			Base Housing	Waterfront
		1	15	20
0 - 110	1	1	15	20
111 - 1,000	2	2	30	40
1,001 - 2,000	3	3	45	60
2,001 - 3,000	4	4	60	80
3,001 - 5,000	5	5	75	100
5,001 - 7,000	6	6	90	120
7,001 - 10,000	7	7	105	140
10,001 - 50,000	8	8	120	460
> 50,000	9	9	135	180
DNA	10	10	150	200

TABLE 5.7
ENVIRONMENTAL RISK TANK TYPE FACTOR

Tank Type	Tank Type Factor
AST	1
UST	2

TABLE 5.8
ENVIRONMENTAL RISK RATING

Tank Number	Tank Location	Facility Description	Tank Capacity (gallons)	Env. Risk Score	Tank Type Factor	Overall Env. Risk Score
A986	Boca Chica Field	AIMD Ground Service Equipment Hangar	DNA	200	2	400
D1	Trumbo Point Annex	Fuel Farm	586,000	180	2	360
D2	Trumbo Point Annex	Fuel Farm	586,000	180	2	360
D3	Trumbo Point Annex	Fuel Farm	586,000	180	2	360
D4	Trumbo Point Annex	Fuel Farm	1,155,000	180	2	360
D6	Trumbo Point Annex	Fuel Farm	1,155,000	180	2	360
C12-A	Trumbo Point Annex	Naval Exchange Service Station	10,000	140	2	280
C12-B	Trumbo Point Annex	Naval Exchange Service Station	10,000	140	2	280
D21	Trumbo Point Annex	Fuel Farm	10,000	140	2	280
D27	Trumbo Point Annex	Fuel Farm	10,000	140	2	280
USDA1	Fleming Key	USDA	8,000	140	2	280
V4022A	Sigsbee Park	Naval Exchange Service Station	10,000	140	2	280
V4022B	Sigsbee Park	Naval Exchange Service Station	10,000	140	2	280
V4022C	Sigsbee Park	Naval Exchange Service Station	10,000	140	2	280
V4022E	Sigsbee Park	Naval Exchange Service Station	1,000	140	2	280
V4022F	Sigsbee Park	Naval Exchange Service Station	1,000	140	2	280
V4022G	Sigsbee Park	Naval Exchange Service Station	1,000	140	2	280
A317-G	Boca Chica Field Industrial Area	Service Station	6,000	120	2	240
A317-H	Boca Chica Field Industrial Area	Service Station	6,000	120	2	240
A317-I	Boca Chica Field Industrial Area	Service Station	6,000	120	2	240
C12-C	Trumbo Point Annex	Naval Exchange Service Station	6,000	120	2	240
C12-D	Trumbo Point Annex	Naval Exchange Service Station	6,000	120	2	240
V4022D	Sigsbee Park	Naval Exchange Service Station	6,000	120	2	240
D25	Trumbo Point Annex	Fuel Farm	3,500	100	2	200
OW-1	Truman Annex	Outer Mole	4,000	100	2	200
OW-102	Truman Annex	Inner Mole	4,000	100	2	200
PD1A	Trumbo Point Annex	Pier D1	4,800	100	2	200
USDA2	Fleming Key	USDA	4,000	100	2	200
USDA3	Fleming Key	USDA	4,000	100	2	200
V3005	Sigsbee Park	Marina	4,000	100	2	200
A938	Boca Chica Field	Tank Farm	239,000	180	1	180
A944	Boca Chica Field	Tank Farm	238,000	180	1	180
A945	Boca Chica Field	Tank Farm	213,000	180	1	180
A958	Boca Chica Field	Tank Farm	298,000	180	1	180
A959	Boca Chica Field	Tank Farm	298,000	180	1	180
A325-1	Boca Chica Field Industrial Area	CARIBROC	20,000	160	1	160
A924	Boca Chica Field	Tank Farm	24,600	160	1	160
A925	Boca Chica Field	Tank Farm	24,600	160	1	160
D1292B	Trumbo Point Annex	Fuel Farm	20,000	160	1	160

TABLE 5.8
ENVIRONMENTAL RISK RATING

Tank Number	Tank Location	Facility Description	Tank Capacity (gallons)	Env. Risk Score	Tank Type Factor	Overall Env. Risk Score
A925A	Boca Chica Field	Tank Farm	10,000	140	1	140
J1561	Saddlebunch Key	Transmission Site	10,000	140	1	140
4163	Truman Annex	MUSE	5,200	120	1	120
F02	Fleming Key	Special Forces Boat Dock	4,000	100	1	100
A443	Boca Chica Field Industrial Area	Public Works Auto. Maintenance Shop	2,000	45	2	90
1279A	Truman Annex	JIATFE	350	40	2	80
1279B	Truman Annex	JIATFE	3,000	80	1	80
1350	Truman Annex	BEQ	1,000	40	2	80
1351	Truman Annex	BEQ	1,000	40	2	80
A328	Boca Chica Field Industrial Area	FAA Radar Facility	2,300	80	1	80
A929	Boca Chica Field	Tank Farm	560	40	2	80
B43	Trumbo Point Annex	Potable Water Pump Station	280	40	2	80
D26A	Trumbo Point Annex	Fuel Farm	560	40	2	80
F01	Fleming Key	Compressor / Generator Building	2,650	80	1	80
F01E	Fleming Key	Compressor / Generator Building	400	40	2	80
KW600	Fleming Key	Special Forces Boat Maintenance Facility	400	40	2	80
L3A	Naval Regional Medical Clinic	Medical Clinic	3,000	80	1	80
OW102A	Truman Annex	Inner Mole	650	40	2	80
OW-1A	Truman Annex	Outer Mole	650	40	2	80
PD1B	Trumbo Point Annex	Pier D1	650	40	2	80
V4111A	Sigsbee Park	Naval Exchange	550	40	2	80
V4111B	Sigsbee Park	Naval Exchange	200	40	2	80
A419-A	Boca Chica Field Industrial Area	Power Plant	4,000	75	1	75
A419-B	Boca Chica Field Industrial Area	Power Plant	4,000	75	1	75
A419-C	Boca Chica Field Industrial Area	Power Plant	4,000	75	1	75
149-1	Truman Annex	Port Services	2,000	60	1	60
290-B	Truman Annex	JIATFE	1,500	60	1	60
437	Truman Annex	BEQ	1,000	30	2	60
438	Truman Annex	BEQ	1,000	30	2	60
439	Truman Annex	BEQ	1,000	30	2	60
A1004	Boca Chica Field	Naval Communication Message Center	2,000	60	1	60
A418	Boca Chica Field Industrial Area	Naval Air Station Administration Office	500	30	2	60
A4165	Boca Chica Field	Taxiway "A" Compressed Air Station	1,000	60	1	60
A727	Boca Chica Field Industrial Area	BEQ	1,500	60	1	60
A230	Boca Chica Field Industrial Area	Electrical Distribution Center	2,000	45	1	45
A4115	Boca Chica Field Industrial Area	Flying Club	2,000	45	1	45
1355	Truman Annex	Key West Foreign Broadcast Facility	250	40	1	40
149-2	Truman Annex	Port Services	1,000	40	1	40
290	Truman Annex	JIATFE	750	40	1	40

TABLE 5.8
ENVIRONMENTAL RISK RATING

Tank Number	Tank Location	Facility Description	Tank Capacity (gallons)	Env. Risk Score	Tank Type Factor	Overall Env. Risk Score
290-A	Truman Annex	JIATFE	700	40	1	40
290-C	Truman Annex	JIATFE	150	40	1	40
38	Truman Annex	Potable Water Pump Station	300	40	1	40
A1006	Boca Chica Field	Ground Electronic Transmitter	300	40	1	40
A1020	Boca Chica Field	TACAN	300	40	1	40
A1103	Boca Chica Field	Generator Building	1,000	40	1	40
A325-3	Boca Chica Field Industrial Area	CARIBROC	250	40	1	40
A4010	Boca Chica Field	Tank Farm	275	40	1	40
A4011	Boca Chica Field Industrial Area	Naval Medical / Dental Clinic	300	40	1	40
A4053A	Boca Chica Field	ASR-8	500	40	1	40
A4054	Boca Chica Field	PAR	500	40	1	40
A4082	Boca Chica Field	TACTS	500	40	1	40
A4165A	Boca Chica Field	Taxiway "A" Compressed Air Station	560	40	1	40
A624	Boca Chica Field Industrial Area	BEQ	550	40	1	40
A625	Boca Chica Field Industrial Area	BEQ	550	40	1	40
A630	Boca Chica Field Industrial Area	BEQ	550	40	1	40
A631	Boca Chica Field Industrial Area	BEQ	550	40	1	40
A632	Boca Chica Field Industrial Area	BEQ	550	40	1	40
A634	Boca Chica Field Industrial Area	Island Clipper Club	300	40	1	40
A638	Boca Chica Field Industrial Area	BEQ	1,000	40	1	40
A639	Boca Chica Field Industrial Area	BEQ	1,000	40	1	40
A827	Boca Chica Field	Sewage / Waste Treatment Plant	330	40	1	40
A902-B	Boca Chica Field	Truck Farm	800	40	1	40
A902-C	Boca Chica Field	Truck Farm	800	40	1	40
A935R	Boca Chica Field	Truck Farm	250	40	1	40
A937	Boca Chica Field	Fuel Lababoratory	300	40	1	40
A994	Boca Chica Field	ASF / Hurricane Shelter	600	40	1	40
A995	Boca Chica Field	Weapons Security Guard House	275	40	1	40
B27	Trumbo Point Annex	Ordnance Research / Development	150	40	1	40
B28	Trumbo Point Annex	Ordnance Research / Development	250	40	1	40
B28A	Trumbo Point Annex	Ordnance Research / Development	150	40	1	40
B48	Trumbo Point Annex	CAA & Photo Lab / Hurrican Shelter	550	40	1	40
B48A	Trumbo Point Annex	CAA & Photo Lab / Hurrican Shelter	150	40	1	40
C2076	Trumbo Point Annex	BOQ	1,000	40	1	40
C59	Trumbo Point Annex	Special Forces Barracks	300	40	1	40
C83	Trumbo Point Annex	Gymnasium	275	40	1	40
D29	Trumbo Point Annex	Fuel Farm	560	40	1	40
D4169	Trumbo Point Annex	Fuel Farm	250	40	1	40
KW400	Fleming Key	Fire Pump Station	250	40	1	40

TABLE 5.8
ENVIRONMENTAL RISK RATING

Tank Number	Tank Location	Facility Description	Tank Capacity (gallons)	Env. Risk Score	Tank Type Factor	Overall Env. Risk Score
L19	Naval Regional Medical Clinic	Medical Clinic	300	40	1	40
L47	Naval Regional Medical Clinic	Medical Clinic	300	40	1	40
USDA4	Fleming Key	USDA	250	40	1	40
V1274A	Sigsbee Park	Sewage Pump Station	250	40	1	40
V1552B	Sigsbee Park	Potable Water System Pump Station	500	40	1	40
V4114	Sigsbee Park	Navy Lodge	550	40	1	40
438-A	Truman Annex	BEQ	500	30	1	30
439-A	Truman Annex	BEQ	500	30	1	30
A132	Boca Chica Field Industrial Area	Fire Station	300	30	1	30
A229-A	Boca Chica Field Industrial Area	Sprinkler System Pump Station	220	30	1	30
A229-B	Boca Chica Field Industrial Area	Sprinkler System Pump Station	220	30	1	30
A244A	Boca Chica Field Industrial Area	Airfield Control Tower	500	30	1	30
A314	Boca Chica Field Industrial Area	Navy Supply	300	30	1	30
A419-D	Boca Chica Field Industrial Area	Power Plant	300	30	1	30
A419-E	Boca Chica Field Industrial Area	Power Plant	300	30	1	30
A447	Boca Chica Field Industrial Area	Potable Water Pump Station	300	30	1	30
A526A	Boca Chica Field Industrial Area	Boiler House	500	30	1	30
290-D	Truman Annex	JIATFE	35	20	1	20
290-E	Truman Annex	JIATFE	25	20	1	20
A1004A	Boca Chica Field	Naval Communication Message Center	50	20	1	20
A1004B	Boca Chica Field	Naval Communication Message Center	50	20	1	20
A1019A	Boca Chica Field	Naval Communication / Message Administration	20	20	1	20
AG103A	Boca Chica Field	Arresting Gear @ Runway 3 / 21	7	20	1	20
AG104A	Boca Chica Field	Arresting Gear @ Runway 3 / 21	7	20	1	20
AG233A	Boca Chica Field	Arresting Gear @ Runway 7 / 25	7	20	1	20
AG234A	Boca Chica Field	Arresting Gear @ Runway 7 / 25	7	20	1	20
AG263A	Boca Chica Field	Arresting Gear @ Runway 3 / 21	7	20	1	20
AG264A	Boca Chica Field	Arresting Gear @ Runway 3 / 21	7	20	1	20
AG509A	Boca Chica Field	Arresting Gear @ Runway 7 / 25	7	20	1	20
AG510A	Boca Chica Field	Arresting Gear @ Runway 7 / 25	7	20	1	20
AG759A	Boca Chica Field	Arresting Gear @ Runway 13 / 31	7	20	1	20
AG760A	Boca Chica Field	Arresting Gear @ Runway 13 / 31	7	20	1	20
AG837A	Boca Chica Field	Arresting Gear @ Runway 13 / 31	7	20	1	20
AG840A	Boca Chica Field	Arresting Gear @ Runway 13 / 31	7	20	1	20
B43-A	Trumbo Point Annex	Potable Water Pump Station	60	20	1	20
C5	Trumbo Point Annex	Fire Station	30	20	1	20
C59A	Trumbo Point Annex	Special Forces Barracks	30	20	1	20
F01A	Fleming Key	Compressor / Generator Building	60	20	1	20
F01B	Fleming Key	Compressor / Generator Building	60	20	1	20

TABLE 5.8
ENVIRONMENTAL RISK RATING

Tank Number	Tank Location	Facility Description	Tank Capacity (gallons)	Env. Risk Score	Tank Type Factor	Overall Env. Risk Score
F01C	Fleming Key	Compressor / Generator Building	60	20	1	20
F01D	Fleming Key	Compressor / Generator Building	25	20	1	20
F15	Fleming Key	Naval Research Lab Marine Corrosion Facility	100	20	1	20
J1561A	Saddlebunch Key	Transmission Site	100	20	1	20
V1552C	Sigsbee Park	Potable Water System Pump Station	10	20	1	20
V1554	Sigsbee Park	Sanitary Sewer Pump Station	110	20	1	20
V1554A	Sigsbee Park	Sanitary Sewer Pump Station	20	20	1	20
V4111C	Sigsbee Park	Naval Exchange	25	20	1	20
V988	Sigsbee Park	Sanitary Sewer Pump Station	110	20	1	20
1279	Truman Annex	JIATFE	100	20	1	20
A225	Boca Chica Field Industrial Area	Ground Electronics Shop	60	15	1	15
A1025	Boca Chica Field	Transmitter	2,000	3	1	3
A1125	Boca Chica Field	Alert Forces	300	2	1	2
A940-3	Boca Chica Field	Fresh Water Pump House	350	2	1	2
A940-4	Boca Chica Field	Fresh Water Pump House	280	2	1	2
A940-5	Boca Chica Field	Fresh Water Pump House	350	2	1	2
A924A	Boca Chica Field	Tank Farm	10,000	N/A	1	0
B14-A	Trumbo Point Annex	Gasoline Pumping Station	25,000	N/A	2	0
B14-B	Trumbo Point Annex	Gasoline Pumping Station	10,000	N/A	2	0
G-01	Hawk Missle Sites	Generator Building	2,000	N/A	1	0
G-02	Hawk Missle Sites	Ready Building	300	N/A	1	0

6.0 SITE SPECIFIC TANK LISTINGS

This Section contains a comprehensive listing of specific tank information for all petroleum and hazardous substance tanks at NAS Key West in order of location, i.e., Boca Chica Field, Truman Annex, then by ascending tank number. Table 6.1 provides an alpha numeric index of each tank and its applicable subsections. Drawings 34147-1 through 34147-9 show the locations of existing and removed tanks at NAS Key West. Table 6.2 provides an index of the aforementioned drawings. Associated with each tank are four sets of information as follows:

- General site description
- Specific tank information
- Regulatory compliance requirements and associated cost estimates
- Scaled plan view map of tank site

The general site description and specific tank information are complied from information provided by facility personnel, obtained from Navy documents (construction drawings, contracts, former TIMS reports and other tank related plans), and data gathered during site visits. The Specific Tank Information section presents this information in tabular form. Any tank system feature necessary to meet regulatory requirements is included in these tables. For example, if a tank system meets the requirements for spill/overfill prevention it is shown as follows:

-Spill/Overfill Prevention Concrete secondary containment; manual gauging

If a tank system has features required by the regulations but those features are not sufficient, the information is presented as follows:

-Spill/Overfill Prevention Concrete secondary containment; additional required

Tanks with no compliance features but where features are required to meet regulations are indicated with: None; required. Tanks system features not required by the regulations are shown by: (Applicable Feature, if present, or none if none present); not required.

An evaluation of each tank was made to determine what upgrades, if any, are required to bring existing tanks into compliance with state and federal regulations. Evaluations reflect the tank and piping conditions at the time of the site visit. The upgrade options with associated costs are included in the Regulatory Compliance Requirement subsection of this Section.

Site specific scaled maps generated for this Plan reflect the information contained in the general site descriptions, specific tank information tables, and data gathered by physical survey.

The Florida AST Regulation, 62-762, exempts any AST containing less than 550-gallons of pollutant from regulation. However, due to the total storage capacity at NAS Key West these tanks are regulated under the Federal Regulation 40 CFR 112 and secondary containment is required. 40 CFR 112 allows an exemption from this requirement if, in the engineer's judgement, a tank is located in an area where in the event of a release the pollutant released would not enter navigable waters. This exemption has been taken where applicable. The FDEP has also allowed an exemption for oil/water separators. These units are considered process tanks and are therefore eligible for the process tank exemption. Appendix D contains the telephone communication with FDEP on the oil/water separator exemption.

Presently there are several projects underway at NAS Key West regarding the upgrading and removal of tank systems. These projects address the recommendations made in previous tank assessments. Evaluations and recommendations for these tanks are made in the Regulatory Compliance Requirement subsection and can be used in case of project scope changes.

Table 6.1
Tank Index

Tank ID	Tank Location	Subsection
A132	Boca Chica Field Industrial Area	6.23
A225	Boca Chica Field Industrial Area	6.24
A229-A	Boca Chica Field Industrial Area	6.25
A229-B	Boca Chica Field Industrial Area	6.25
A230	Boca Chica Field Industrial Area	6.26
A244A	Boca Chica Field Industrial Area	6.27
A314	Boca Chica Field Industrial Area	6.28
A317-G	Boca Chica Field Industrial Area	6.29
A317-H	Boca Chica Field Industrial Area	6.29
A317-I	Boca Chica Field Industrial Area	6.29
A325-1	Boca Chica Field Industrial Area	6.30
A325-3	Boca Chica Field Industrial Area	6.30
A328	Boca Chica Field Industrial Area	6.31
A418	Boca Chica Field Industrial Area	6.32
A419-A	Boca Chica Field Industrial Area	6.33
A419-B	Boca Chica Field Industrial Area	6.33
A419-C	Boca Chica Field Industrial Area	6.33
A419-D	Boca Chica Field Industrial Area	6.33
A419-E	Boca Chica Field Industrial Area	6.33
A443	Boca Chica Field Industrial Area	6.34
A447	Boca Chica Field Industrial Area	6.35
A526A	Boca Chica Field Industrial Area	6.36
A624	Boca Chica Field Industrial Area	6.37
A625	Boca Chica Field Industrial Area	6.38
A630	Boca Chica Field Industrial Area	6.39
A631	Boca Chica Field Industrial Area	6.40
A632	Boca Chica Field Industrial Area	6.41
A634	Boca Chica Field Industrial Area	6.42
A638	Boca Chica Field Industrial Area	6.43
A639	Boca Chica Field Industrial Area	6.44
A727	Boca Chica Field Industrial Area	6.45
A827	Boca Chica Field	6.1
A902-B	Boca Chica Field	6.2
A902-C	Boca Chica Field	6.2
A924	Boca Chica Field	6.3

Tank ID	Tank Location	Subsection
A924A	Boca Chica Field	6.3
A925	Boca Chica Field	6.3
A925A	Boca Chica Field	6.3
A929	Boca Chica Field	6.3
A935R	Boca Chica Field	6.2
A937	Boca Chica Field	6.4
A938	Boca Chica Field	6.3
A940-3	Boca Chica Field	6.5
A940-4	Boca Chica Field	6.5
A940-5	Boca Chica Field	6.5
A944	Boca Chica Field	6.3
A945	Boca Chica Field	6.3
A958	Boca Chica Field	6.3
A959	Boca Chica Field	6.3
A979A	Boca Chica Field	6.6
A979B	Boca Chica Field	6.6
A979C	Boca Chica Field	6.6
A986	Boca Chica Field	6.7
A994	Boca Chica Field	6.8
A995	Boca Chica Field	6.9
A1004	Boca Chica Field	6.10
A1004A	Boca Chica Field	6.10
A1004B	Boca Chica Field	6.10
A1006	Boca Chica Field	6.11
A1019A	Boca Chica Field	6.12
A1020	Boca Chica Field	6.13
A1025	Boca Chica Field	6.14
A1103	Boca Chica Field	6.15
A1125	Boca Chica Field	6.16
A4010	Boca Chica Field	6.3
A4011	Boca Chica Field Industrial Area	6.46
A4053A	Boca Chica Field	6.17
A4054	Boca Chica Field	6.18
A4082	Boca Chica Field	6.19
A4115	Boca Chica Field Industrial Area	6.47
A4165	Boca Chica Field	6.20
A4165A	Boca Chica Field	6.21
AG103A	Boca Chica Field	6.22

Tank ID	Tank Location	Subsection
AG103B	Boca Chica Field	6.22
AG103C	Boca Chica Field	6.22
AG104A	Boca Chica Field	6.22
AG104B	Boca Chica Field	6.22
AG104C	Boca Chica Field	6.22
AG233A	Boca Chica Field	6.22
AG233B	Boca Chica Field	6.22
AG233C	Boca Chica Field	6.22
AG234A	Boca Chica Field	6.22
AG234B	Boca Chica Field	6.22
AG234C	Boca Chica Field	6.22
AG263A	Boca Chica Field	6.22
AG263B	Boca Chica Field	6.22
AG263C	Boca Chica Field	6.22
AG264A	Boca Chica Field	6.22
AG264B	Boca Chica Field	6.22
AG264C	Boca Chica Field	6.22
AG509A	Boca Chica Field	6.22
AG509B	Boca Chica Field	6.22
AG509C	Boca Chica Field	6.22
AG510A	Boca Chica Field	6.22
AG510B	Boca Chica Field	6.22
AG510C	Boca Chica Field	6.22
AG759A	Boca Chica Field	6.22
AG759B	Boca Chica Field	6.22
AG759C	Boca Chica Field	6.22
AG760A	Boca Chica Field	6.22
AG760B	Boca Chica Field	6.22
AG760C	Boca Chica Field	6.22
AG837A	Boca Chica Field	6.22
AG837B	Boca Chica Field	6.22
AG837C	Boca Chica Field	6.22
AG840A	Boca Chica Field	6.22
AG840B	Boca Chica Field	6.22
AG840C	Boca Chica Field	6.22
B14-A	Trumbo Point Annex	6.48
B14-B	Trumbo Point Annex	6.48
B27	Trumbo Point Annex	6.49

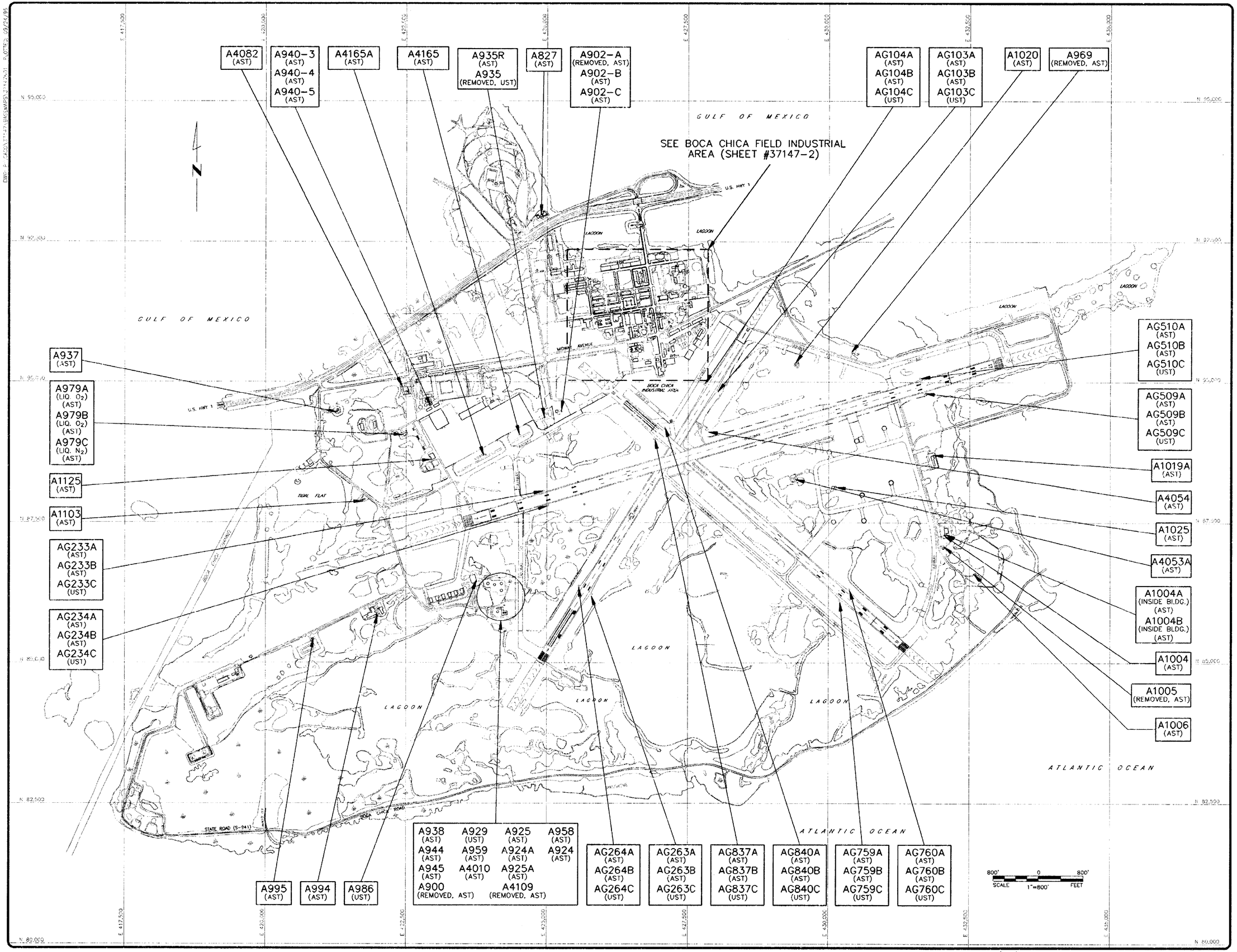
Tank ID	Tank Location	Subsection
B28	Trumbo Point Annex	6.50
B28A	Trumbo Point Annex	6.51
B43	Trumbo Point Annex	6.53
B43-A	Trumbo Point Annex	6.53
B48	Trumbo Point Annex	6.54
B48A	Trumbo Point Annex	6.54
C5	Trumbo Point Annex	6.55
C12-A	Trumbo Point Annex	6.56
C12-B	Trumbo Point Annex	6.56
C12-C	Trumbo Point Annex	6.56
C12-D	Trumbo Point Annex	6.56
C59	Trumbo Point Annex	6.57
C59A	Trumbo Point Annex	6.57
C83	Trumbo Point Annex	6.58
C2076	Trumbo Point Annex	6.59
D1	Trumbo Point Annex	6.60
D2	Trumbo Point Annex	6.60
D3	Trumbo Point Annex	6.60
D4	Trumbo Point Annex	6.60
D6	Trumbo Point Annex	6.60
D21	Trumbo Point Annex	6.60
D25	Trumbo Point Annex	6.60
D26A	Trumbo Point Annex	6.60
D27	Trumbo Point Annex	6.60
D29	Trumbo Point Annex	6.60
D1292B	Trumbo Point Annex	6.60
D4169	Trumbo Point Annex	6.60
F01	Fleming Key	6.64
F01A	Fleming Key	6.64
F01B	Fleming Key	6.64
F01C	Fleming Key	6.64
F01D	Fleming Key	6.64
F01E	Fleming Key	6.65
F02	Fleming Key	6.66
F15	Fleming Key	6.61
G-01	Hawk Missile Sites	6.93
G-02	Hawk Missile Sites	6.93
J1561	Saddlebunch Key	6.89

Tank ID	Tank Location	Subsection
J1561A	Saddlebunch Key	6.89
KW400	Fleming Key	6.62
KW600	Fleming Key	6.63
L3A	Naval Regional Medical Clinic	6.90
L19	Naval Regional Medical Clinic	6.91
L47	Naval Regional Medical Clinic	6.92
OW-1	Truman Annex	6.80
OW-102	Truman Annex	6.80
OW102A	Truman Annex	6.80
OW-1A	Truman Annex	6.80
PD1A	Trumbo Point Annex	6.52
PD1B	Trumbo Point Annex	6.52
USDA1	Fleming Key	6.67
USDA2	Fleming Key	6.67
USDA3	Fleming Key	6.67
USDA4	Fleming Key	6.67
V988	Sigsbee Park	6.81
V1274A	Sigsbee Park	6.82
V1552B	Sigsbee Park	6.83
V1552C	Sigsbee Park	6.83
V1554	Sigsbee Park	6.84
V1554A	Sigsbee Park	6.84
V3005	Sigsbee Park	6.85
V4022A	Sigsbee Park	6.86
V4022B	Sigsbee Park	6.86
V4022C	Sigsbee Park	6.86
V4022D	Sigsbee Park	6.86
V4022E	Sigsbee Park	6.86
V4022F	Sigsbee Park	6.86
V4022G	Sigsbee Park	6.86
V4111A	Sigsbee Park	6.87
V4111B	Sigsbee Park	6.87
V4111C	Sigsbee Park	6.87
V4114	Sigsbee Park	6.88
38	Truman Annex	6.68
149-1	Truman Annex	6.69
149-2	Truman Annex	6.69
290	Truman Annex	6.70

Tank ID	Tank Location	Subsection
290-A	Truman Annex	6.70
290-B	Truman Annex	6.71
290-C	Truman Annex	6.70
290-D	Truman Annex	6.70
290-E	Truman Annex	6.71
437	Truman Annex	6.72
438	Truman Annex	6.73
438-A	Truman Annex	6.73
439	Truman Annex	6.74
439-A	Truman Annex	6.74
1279	Truman Annex	6.75
1279A	Truman Annex	6.75
1279B	Truman Annex	6.75
1350	Truman Annex	6.76
1351	Truman Annex	6.77
1355	Truman Annex	6.78
4163	Truman Annex	6.79

Table 6.2
Drawing Index

Drawing Number	Drawing Title
37147-1	Naval Air Station Boca Chica Field (Site Map)
37147-2	Naval Air Station Boca Chica Field Industrial Area (Site Map)
37147-3	Naval Air Station Trumbo Point Annex (Site Map)
37147-4	Naval Air Station Fleming Key (Site Map)
37147-5	Naval Air Station Truman Annex (Site Map)
37147-6	Naval Air Station Sigsbee Park (Site Map)
37147-7	Naval Air Station Saddlebunch Key (Site Map)
37147-8	Naval Air Station Naval Regional Medical Center (Site Map)
37147-9	Naval Air Station Hawk Missile Sites (Site Map)



TOPOGRAPHIC MAP SYMBOLS

- HORIZONTAL CONTROL POINT
- SHORE OR DRAINAGE LINE
- BUILDING
- ROAD, DRIVE (PAVED)
- ROAD, DRIVE (UNPAVED)
- FENCE
- WETLAND AREA
- TREE CLUSTER

REFERENCE:
GENERAL DEVELOPMENT MAP OF THE EXISTING CONDITIONS FOR BOCA CHICA FIELD NAS KEY WEST, FL. BY SOUTHERN RESOURCE MAPPING CORPORATION, HOLLY HILL, FL. DATE OF PHOTOGRAPHY: NOVEMBER 3, 1994.

REV. NO.	CODE	CIRCLES	DATE	DESCRIPTION	RUST APPV.

NOTE:
CIRCLE ALL REVISIONS, IDENTIFY WITH DIAMOND, NUMBER AND ARROW. REMOVE ONLY CIRCLE AND ARROW BEFORE NEXT REVISION

ISSUE CODE			
A PRELIMINARY	C MAT'L T.O.	F CONST'N	
B DESIGN	D MAT'L PURC.		
	E BIDS		

P.E. SEAL CORPORATE SEAL

SIGNATURE DATE

RUST ENVIRONMENT & INFRASTRUCTURE

DSGN.		SCALE	1"=800'
DR.	L. FANNING	DATE	OCTOBER 1996
CK.	J. JOHNSON	RUST FILE NUMBER	37147N01.DWG
APPV.			

NAVAL AIR STATION
BOCA CHICA FIELD
KEY WEST, FLORIDA

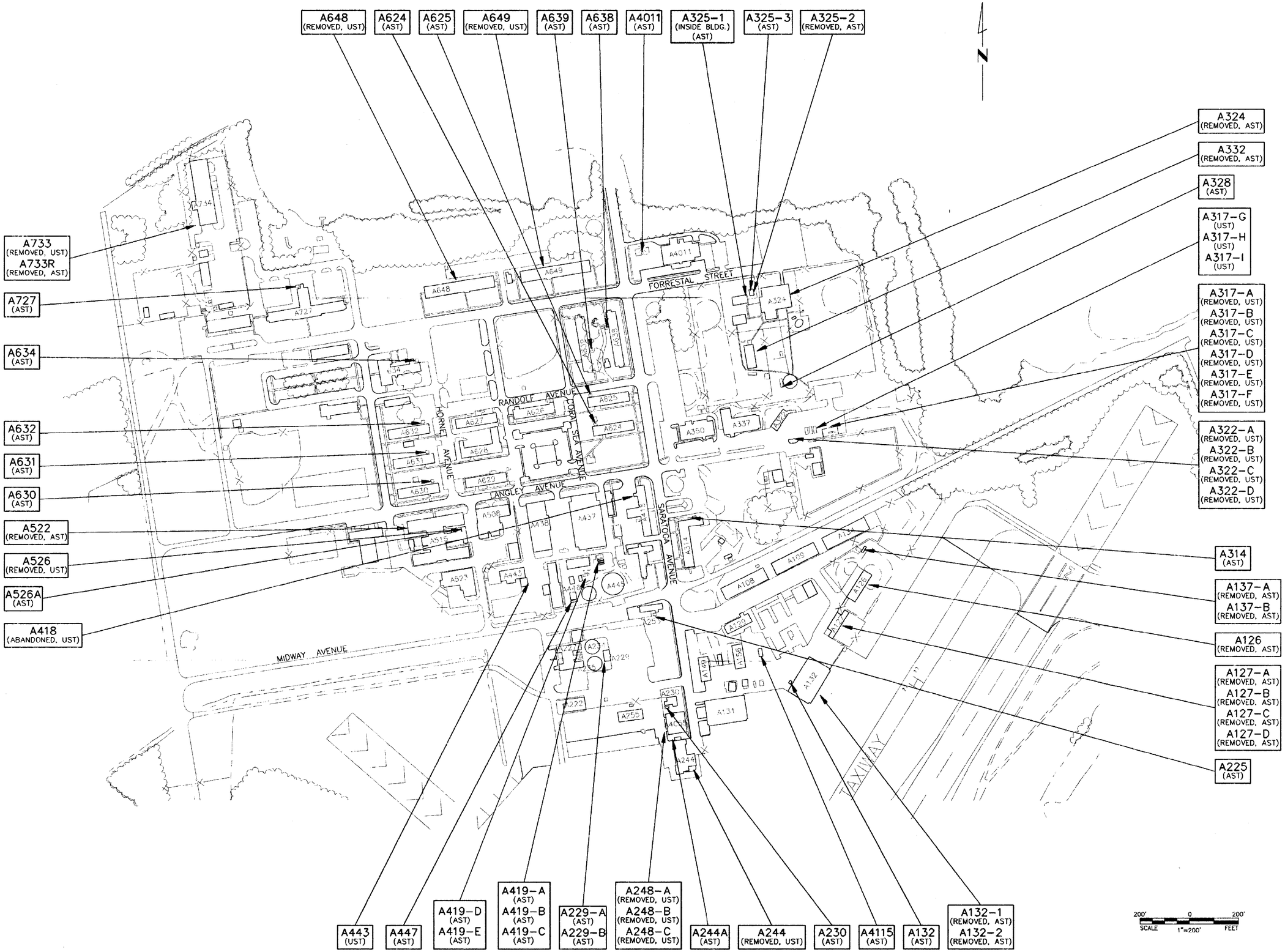
SITE MAP

CLIENT DRAWING NUMBER

RUST DRAWING NUMBER
37147-1

NADA

0088BB2X



TOPOGRAPHIC MAP SYMBOLS

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- FENCE
- WETLAND AREA
- TREE CLUSTER

REFERENCE:
GENERAL DEVELOPMENT MAP OF THE EXISTING CONDITIONS FOR BOCA CHICA INDUSTRIAL AREA NAS KEY WEST, FL. BY SOUTHERN RESOURCE MAPPING CORPORATION, HOLLY HILL, FL. DATE OF PHOTOGRAPHY: NOVEMBER 3, 1994.

REV. NO.	CODE	CIRCLES	DATE	DESCRIPTION	RUST APPV.

NOTE:
CIRCLE ALL REVISIONS, IDENTIFY WITH DIAMOND, NUMBER AND ARROW. REMOVE ONLY CIRCLE AND ARROW BEFORE NEXT REVISION

	ISSUE CODE	C	MAT'L T.O.	F	CONST'N
A	PRELIMINARY	D	MAT'L PURC.		
B	DESIGN	E	BIDS		

P.E. SEAL

CORPORATE SEAL

SIGNATURE DATE

RUST ENVIRONMENT & INFRASTRUCTURE

DSGN.		SCALE	1"=200'
DR.	L. FANNING	DATE	JANUARY 1997
CK.	J. JOHNSON	RUST FILE NUMBER	37147N02.DWG
APPV.			

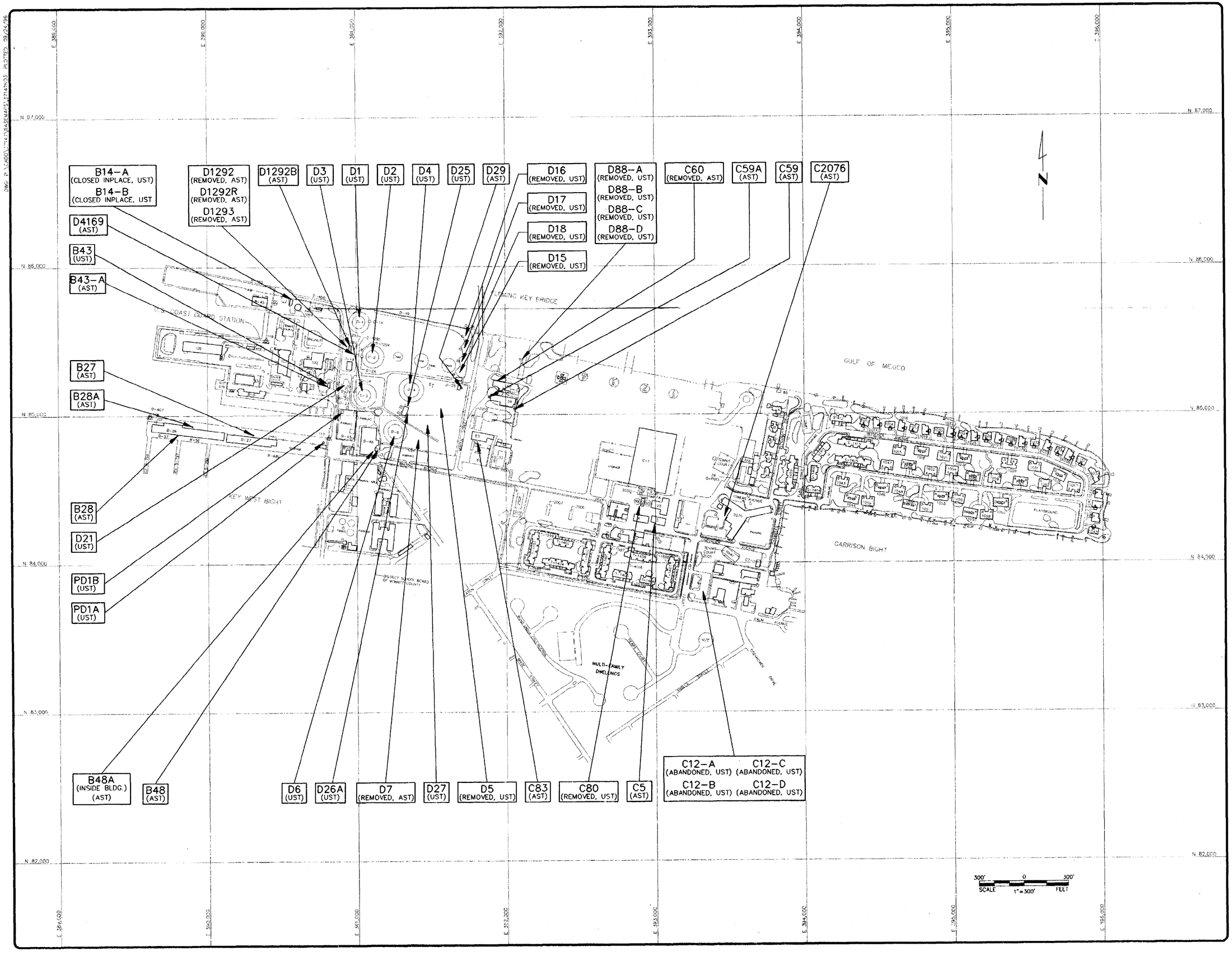
NAVAL AIR STATION
BOCA CHICA FIELD
INDUSTRIAL AREA
KEY WEST, FLORIDA

SITE MAP

CLIENT DRAWING NUMBER

RUST DRAWING NUMBER
37147-2

DWG: F:\CADD\37147\BASEMAPS\37147N02 PLOTTED:07/17/97



TOPOGRAPHIC MAP SYMBOLS

- HORIZONTAL CONTROL POINT
- SHORE OR DRAINAGE LINE
- BUILDING
- ROAD, DRIVE (PAVED)
- ROAD, DRIVE (UNPAVED)
- FENCE
- WETLAND AREA
- TREE CLUSTER

REFERENCE:
GENERAL DEVELOPMENT MAP OF THE EXISTING CONDITIONS FOR TRUMBO POINT ANNEX NAS KEY WEST, FL. BY SOUTHERN RESOURCE MAPPING CORPORATION, HOLLY HILL, FL. DATE OF PHOTOGRAPHY: NOVEMBER 3, 1994.

REV. NO.	CODE	CIRCLES	DATE	DESCRIPTION	RUST APPV.
				NOTE: CIRCLE ALL REVISIONS, IDENTIFY WITH DIAMOND, NUMBER AND ARROW, REMOVE ONLY CIRCLE AND ARROW BEFORE NEXT REVISION	

ISSUE CODE					
A	PRELIMINARY	C	MAT'L T.O.	F	CONST'N
B	DESIGN	D	MAT'L PURC.		
		E	BIDS		

FILE SEAL

CORPORATE SEAL

SIGNATURE

DATE

RUST ENVIRONMENT & INFRASTRUCTURE

DSGN.		SCALE	1"=300'
DR.	L. FANNING	DATE	OCTOBER 1996
CK.	J. JOHNSON	RUST FILE NUMBER	37147N03.DWG
APPV.			

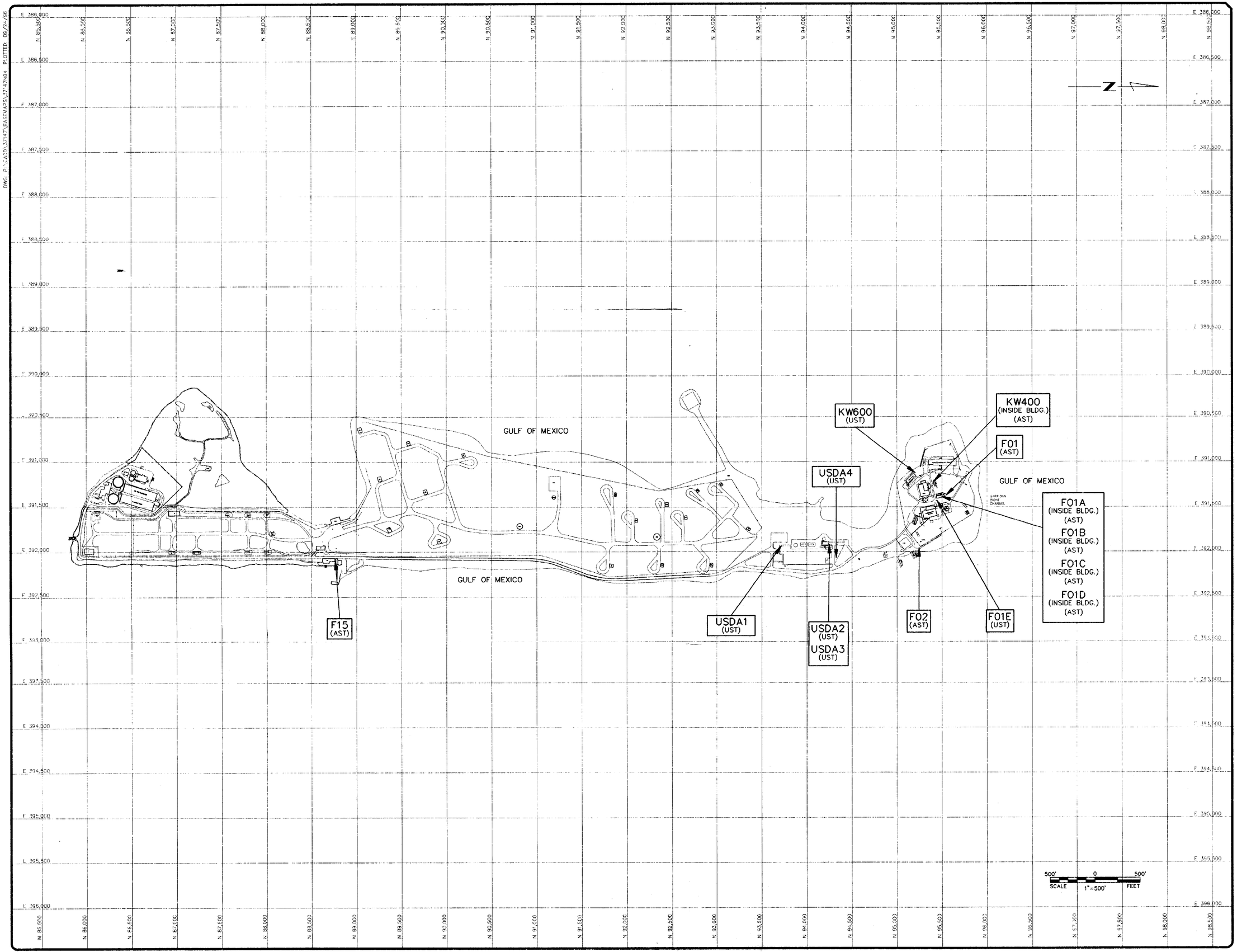
NAVAL AIR STATION
TRUMBO POINT ANNEX
KEY WEST, FLORIDA

SITE MAP

CLIENT DRAWING NUMBER

RUST DRAWING NUMBER
37147-3

DWG: P:\CADD\37147\BASEMAPS\37147N04 PLOTTED 06/26/96



TOPOGRAPHIC MAP SYMBOLS

- HORIZONTAL CONTROL POINT
- SHORE OR DRAINAGE LINE
- BUILDING
- ROAD, DRIVE (PAVED)
- ROAD, DRIVE (UNPAVED)
- FENCE
- WETLAND AREA
- TREE CLUSTER

REFERENCE:
GENERAL DEVELOPMENT MAP OF THE EXISTING CONDITIONS FOR FLEMING KEY NAS KEY WEST, FL. BY SOUTHERN RESOURCE MAPPING CORPORATION, HOLLY HILL, FL. DATE OF PHOTOGRAPHY: NOVEMBER 3, 1994.

REV. NO.	CODE	CIRCLES	DATE	DESCRIPTION	RUST APPV.
				NOTE: CIRCLE ALL REVISIONS, IDENTIFY WITH DIAMOND, NUMBER AND ARROW, REMOVE ONLY CIRCLE AND ARROW BEFORE NEXT REVISION	

ISSUE CODE					
A	PRELIMINARY	C	MAT'L T.O.	F	CONST'N
B	DESIGN	D	MAT'L PURC.		
		E	BIDS		

P.E. SEAL

CORPORATE SEAL

SIGNATURE

DATE

RUST ENVIRONMENT & INFRASTRUCTURE

DSGN.		SCALE	1"=500'
DR.	L. FANNING	DATE	OCTOBER 1996
CK.	J. JOHNSON	RUST FILE NUMBER	34147N04.DWG
APPV.			

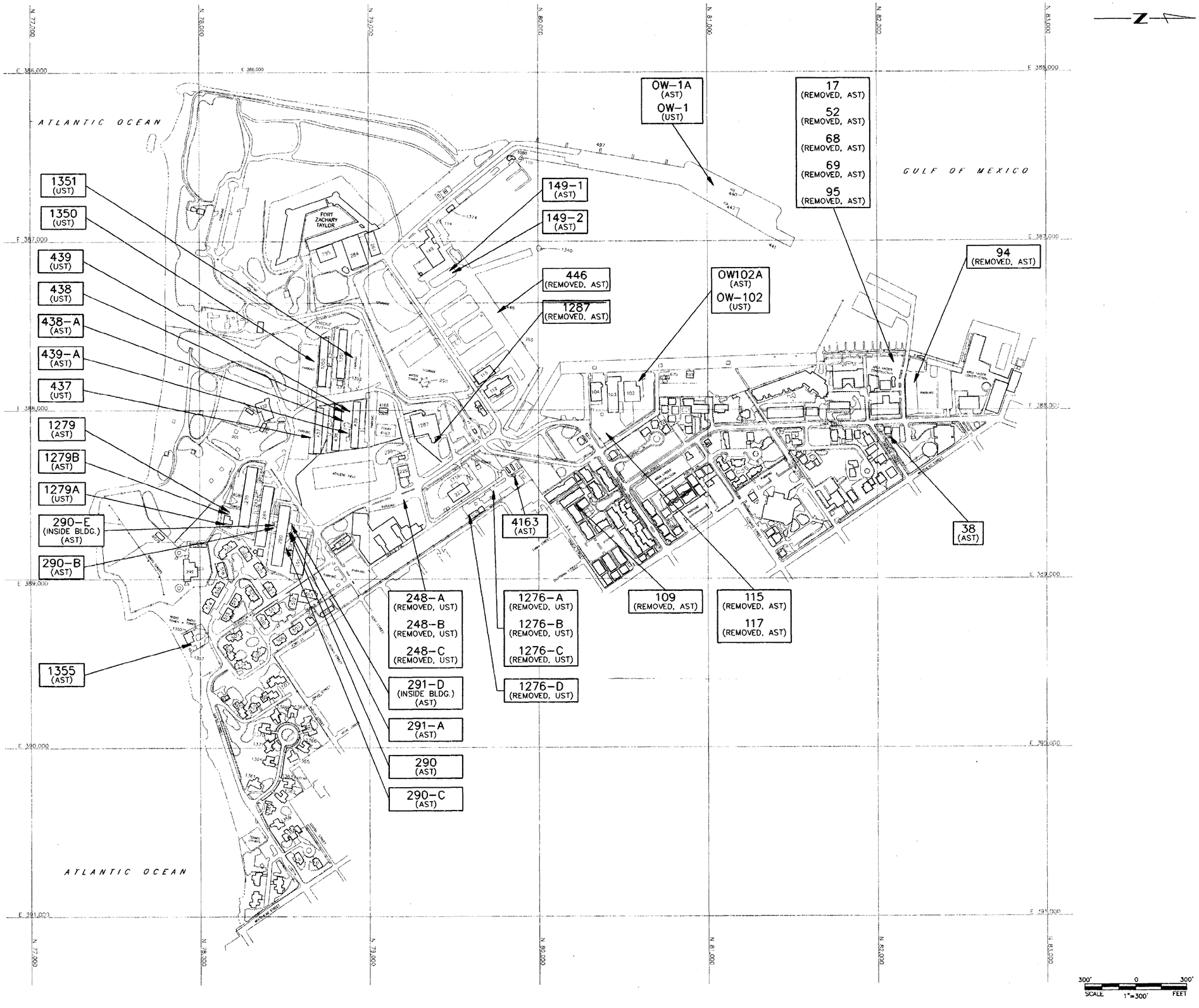
NAVAL AIR STATION
FLEMING KEY
KEY WEST, FLORIDA

SITE MAP

CLIENT DRAWING NUMBER

RUST DRAWING NUMBER
37147-4

DWG: P:\CADD\37147\BASEMAPS\37147N05 PLOTTED: 09/24/96



TOPOGRAPHIC MAP SYMBOLS

- HORIZONTAL CONTROL POINT
- SHORE OR DRAINAGE LINE
- BUILDING
- ROAD, DRIVE (PAVED)
- ROAD, DRIVE (UNPAVED)
- FENCE
- WETLAND AREA
- TREE CLUSTER

REFERENCE:
GENERAL DEVELOPMENT MAP OF THE EXISTING CONDITIONS FOR TRUMAN ANNEX NAS KEY WEST, FL. BY SOUTHERN RESOURCE MAPPING CORPORATION, HOLLY HILL, FL. DATE OF PHOTOGRAPHY: NOVEMBER 3, 1994.

REV. NO.	CODE	CIRCLES	DATE	DESCRIPTION	RUST APPV.

NOTE:
CIRCLE ALL REVISIONS, IDENTIFY WITH DIAMOND, NUMBER AND ARROW. REMOVE ONLY CIRCLE AND ARROW BEFORE NEXT REVISION

ISSUE CODE				
A PRELIMINARY	C MAT'L T.O.	F CONST'N
B DESIGN	D MAT'L PURC.	
	E BIDS	

P.E. SEAL

CORPORATE SEAL

SIGNATURE

DATE

RUST ENVIRONMENT & INFRASTRUCTURE

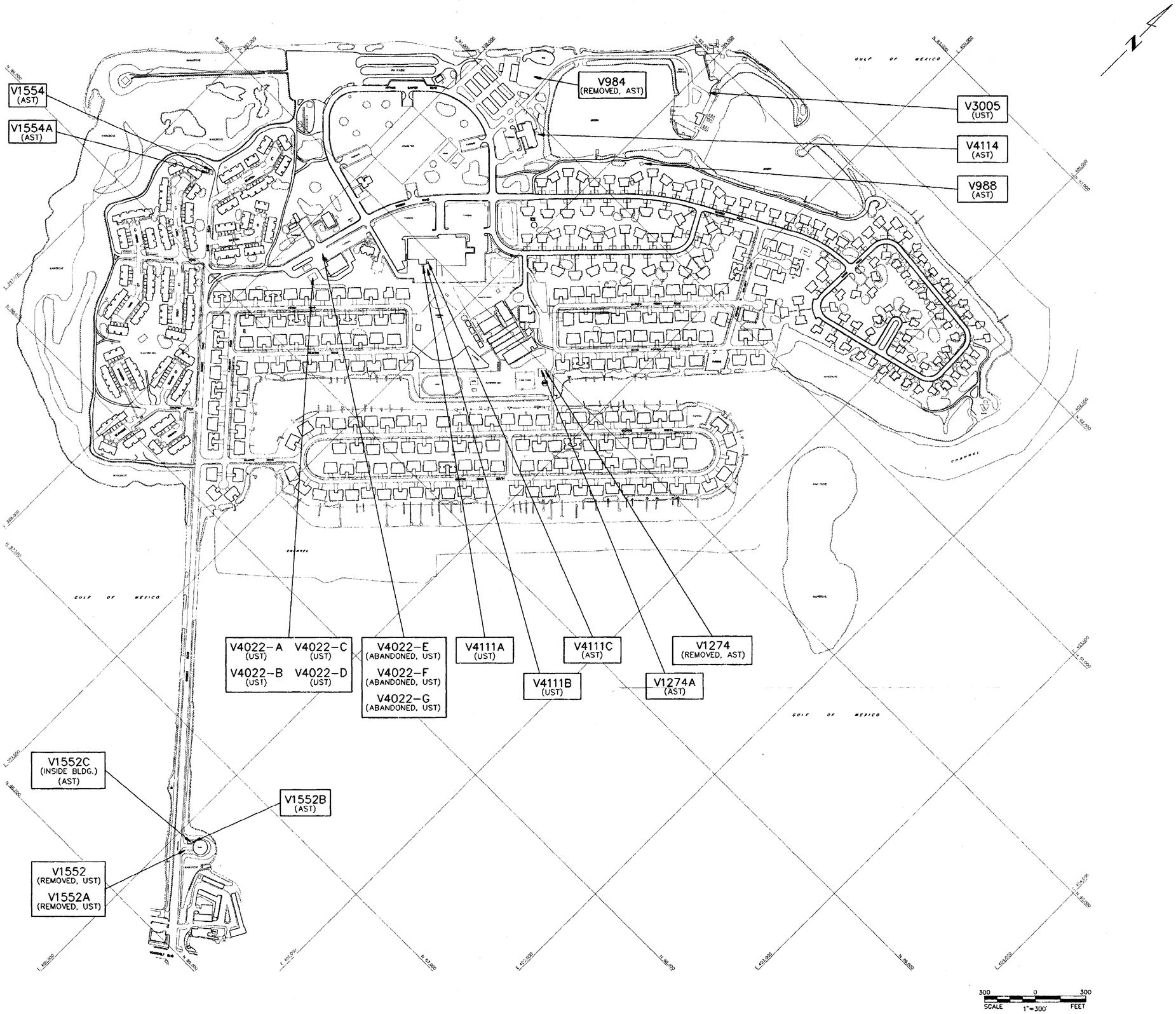
DSGN.		SCALE	1"=300'
DR.	L. FANNING	DATE	OCTOBER 1996
CK.	J. JOHNSON	RUST FILE NUMBER	37147N05.DWG
APPV.			

NAVAL AIR STATION
TRUMAN ANNEX
KEY WEST, FLORIDA

SITE MAP

CLIENT DRAWING NUMBER

RUST DRAWING NUMBER
37147-5



DWG. J:\CADD\37147\SASEMAPS\37147N06 PLOTTED: 09/24/95

TOPOGRAPHIC MAP SYMBOLS

- HORIZONTAL CONTROL POINT
- SHORE OR DRAINAGE LINE
- BUILDING
- ROAD, DRIVE (PAVED)
- ROAD, DRIVE (UNPAVED)
- FENCE
- WETLAND AREA
- TREE CLUSTER

REFERENCE:
GENERAL DEVELOPMENT MAP OF THE EXISTING CONDITIONS FOR SIGSBEE PARK NAS KEY WEST, FL. BY SOUTHERN RESOURCE MAPPING CORPORATION, HOLLY HILL, FL. DATE OF PHOTOGRAPHY: NOVEMBER 3, 1994.

REV NO.	CODE	CIRCLES	DATE	DESCRIPTION	RUST APPV.
				NOTE: CIRCLE ALL REVISIONS, IDENTIFY WITH DIAMOND, NUMBER AND ARROW. REMOVE ONLY CIRCLE AND ARROW BEFORE NEXT REVISION	

ISSUE CODE			
A PRELIMINARY	C MAT'L T.O.	F CONST'N	
B DESIGN	D MAT'L PURC.		
	E BIDS		

P.E. SEAL

CORPORATE SEAL

SIGNATURE

DATE

RUST ENVIRONMENT & INFRASTRUCTURE

DSGN.		SCALE	1"=300'
DR.	L. FANNING	DATE	OCTOBER 1996
CK.	J. JOHNSON	RUST FILE NUMBER	37147N06.DWG
APPV.			

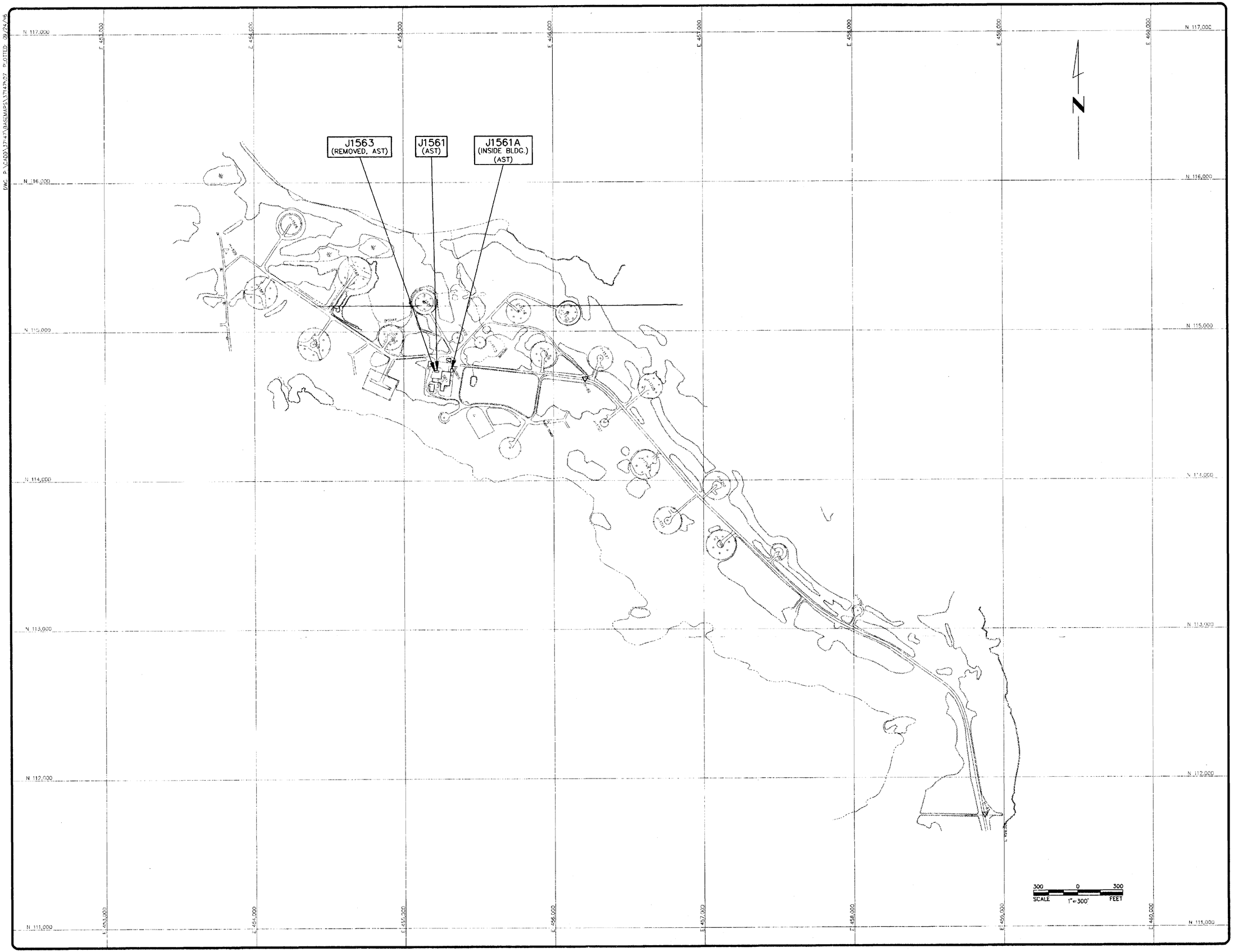
NAVAL AIR STATION
SIGSBEE PARK
KEY WEST, FLORIDA

SITE MAP

CLIENT DRAWING NUMBER

RUST DRAWING NUMBER
37147-6

DWG: P:\CADD\37147\BASEMAPS\37147N07 PLOTTED 09/24/96



TOPOGRAPHIC MAP SYMBOLS

- HORIZONTAL CONTROL POINT
- SHORE OR DRAINAGE LINE
- BUILDING
- ROAD, DRIVE (PAVED)
- ROAD, DRIVE (UNPAVED)
- FENCE
- WETLAND AREA
- TREE CLUSTER

REFERENCE:
GENERAL DEVELOPMENT MAP OF THE EXISTING CONDITIONS FOR NAVAL COMMUNICATIONS UNIT, NAS KEY WEST, FL. BY SOUTHERN RESOURCE MAPPING CORPORATION, HOLLY HILL, FL. DATE OF PHOTOGRAPHY: NOVEMBER 3, 1994.

REV. NO.	CODE	CIRCLES	DATE	DESCRIPTION	RUST APPV.

NOTE:
CIRCLE ALL REVISIONS. IDENTIFY WITH DIAMOND, NUMBER AND ARROW. REMOVE ONLY CIRCLE AND ARROW BEFORE NEXT REVISION

ISSUE CODE					
A	PRELIMINARY	C	MAT'L T.O.	F	CONST'N
B	DESIGN	D	MAT'L PURC.		
		E	BIDS		

P.E. SEAL

CORPORATE SEAL

SIGNATURE

DATE

RUST ENVIRONMENT & INFRASTRUCTURE

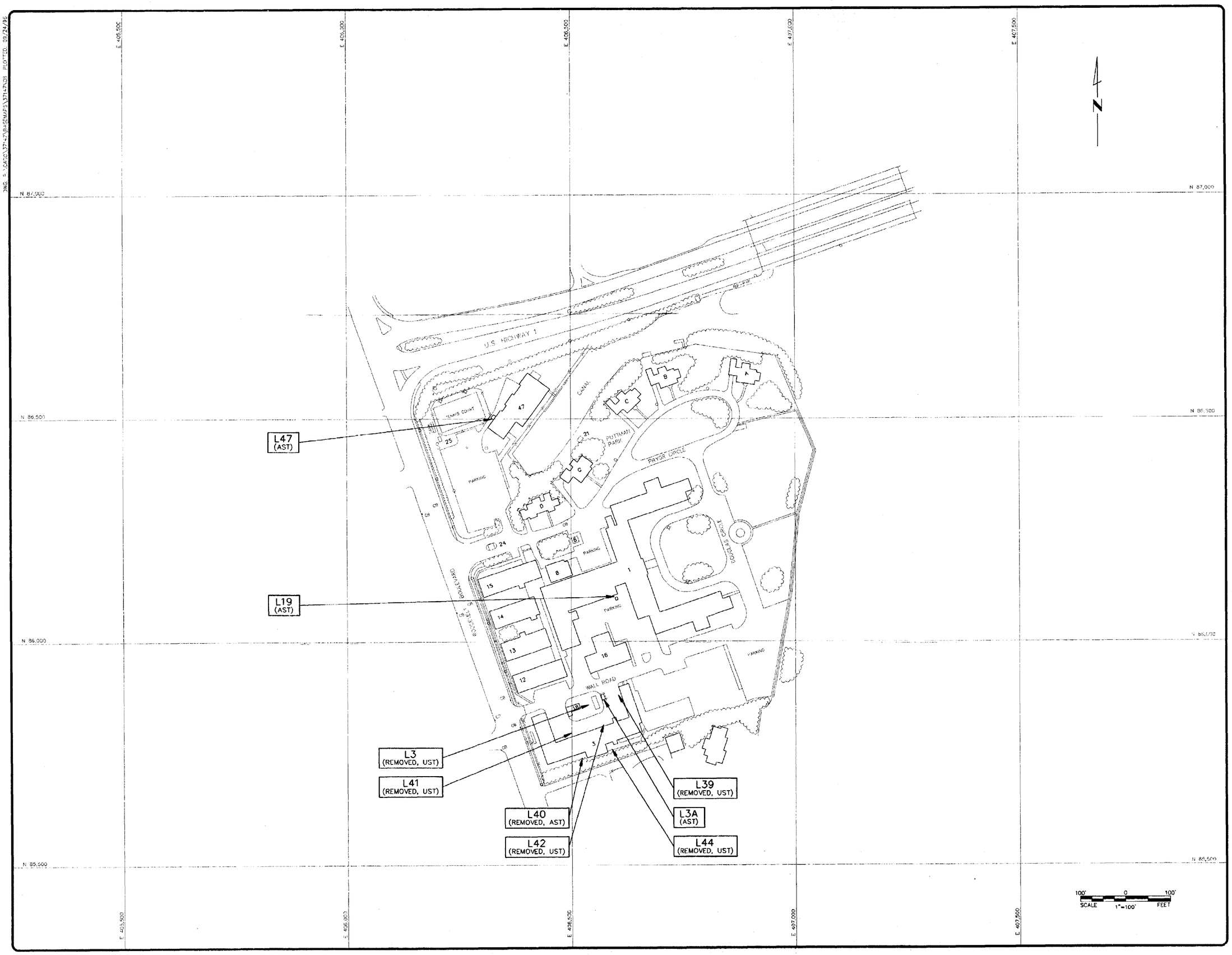
DSGN.		SCALE	1"=300'
DR.	L. FANNING	DATE	OCTOBER 1996
CK.	J. JOHNSON	RUST FILE NUMBER	34147N07.DWG
APPV.			

NAVAL AIR STATION
SADDLEBUNCH KEY
KEY WEST, FLORIDA

SITE MAP

CLIENT DRAWING NUMBER

RUST DRAWING NUMBER
37147-7



TOPOGRAPHIC MAP SYMBOLS

- HORIZONTAL CONTROL POINT
- SHORE OR DRAINAGE LINE
- BUILDING
- ROAD, DRIVE (PAVED)
- ROAD, DRIVE (UNPAVED)
- FENCE
- WETLAND AREA
- TREE CLUSTER

REFERENCE:
GENERAL DEVELOPMENT MAP OF THE EXISTING CONDITIONS FOR NAVAL REGIONAL MEDICAL CLINIC NAS KEY WEST, FL. BY SOUTHERN RESOURCE MAPPING CORPORATION, HOLLY HILL, FL.
DATE OF PHOTOGRAPHY: NOVEMBER 3, 1994.

REV. NO.	CODE	CIRCLES	DATE	DESCRIPTION	RUST APPV.
				NOTE: CIRCLE ALL REVISIONS, IDENTIFY WITH DIAMOND, NUMBER AND ARROW. REMOVE ONLY CIRCLE AND ARROW BEFORE NEXT REVISION	

ISSUE CODE					
A	PRELIMINARY	C	MAT'L T.O.	F	CONST'N
B	DESIGN	D	MAT'L PURC.		
		E	BIDS		

P.E. SEAL

CORPORATE SEAL

SIGNATURE

DATE

RUST ENVIRONMENT & INFRASTRUCTURE

DSGN.		SCALE	1"=100'
DR.	L. FANNING	DATE	OCTOBER 1996
CK.	J. JOHNSON	RUST FILE NUMBER	37147N08.DWG
APPV.			

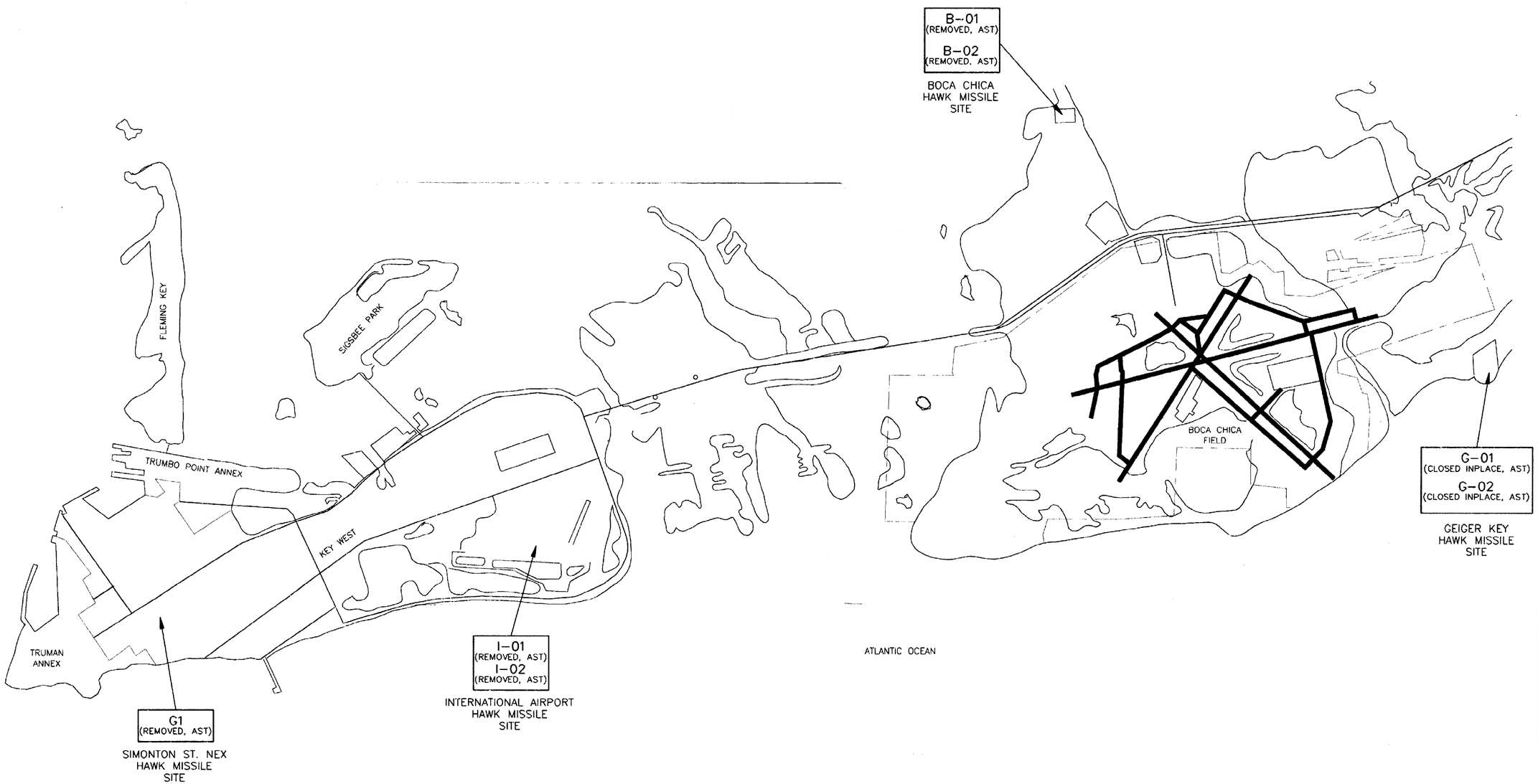
NAVAL AIR STATION
NAVAL REGIONAL MEDICAL CLINIC
KEY WEST, FLORIDA

SITE MAP

CLIENT DRAWING NUMBER

RUST DRAWING NUMBER
37147-8

DWG: F:\CADD\37147\BASEMAPS\37147N09 PLOTTED: 09/24/96



REV. NO.	CODE	CIRCLES	DATE	DESCRIPTION	RUST APPV.
				NOTE: CIRCLE ALL REVISIONS, IDENTIFY WITH DIAMOND, NUMBER AND ARROW. REMOVE ONLY CIRCLE AND ARROW BEFORE NEXT REVISION	

ISSUE CODE					
A	PRELIMINARY	C	MAT'L T.O.	F	CONST'N
B	DESIGN	D	MAT'L PURC.		
		E	BIDS		

P.E. SEAL CORPORATE SEAL

SIGNATURE DATE

RUST ENVIRONMENT & INFRASTRUCTURE

DSGN.		SCALE	1"=2000'
DR.	L. FANNING	DATE	OCTOBER 1996
CK	J. JOHNSON	RUST FILE NUMBER	37147N09.DWG
APPV.			

NAVAL AIR STATION
HAWK MISSILE SITES
KEY WEST, FLORIDA

SITE MAP

CLIENT DRAWING NUMBER

RUST DRAWING NUMBER
37147-9

BOCA CHICA FIELD

6.1 Boca Chica Sewage/Waste Treatment Plant - Building 827 (Tank A827)

6.1.1 General Information

Tank A827 is a 330-gallon aboveground diesel fuel tank within a 2'-2" deep valved concrete secondary containment. Tank A827 is located at the northwest corner of building A827 of the Boca Chica Sewage/Waste Treatment Plant (SWTP). Fuel from this tank is used in the operation of the SWTP's emergency generator. The SWTP is found north of U.S. Hwy. 1 and is bounded to the north by the Gulf of Mexico.

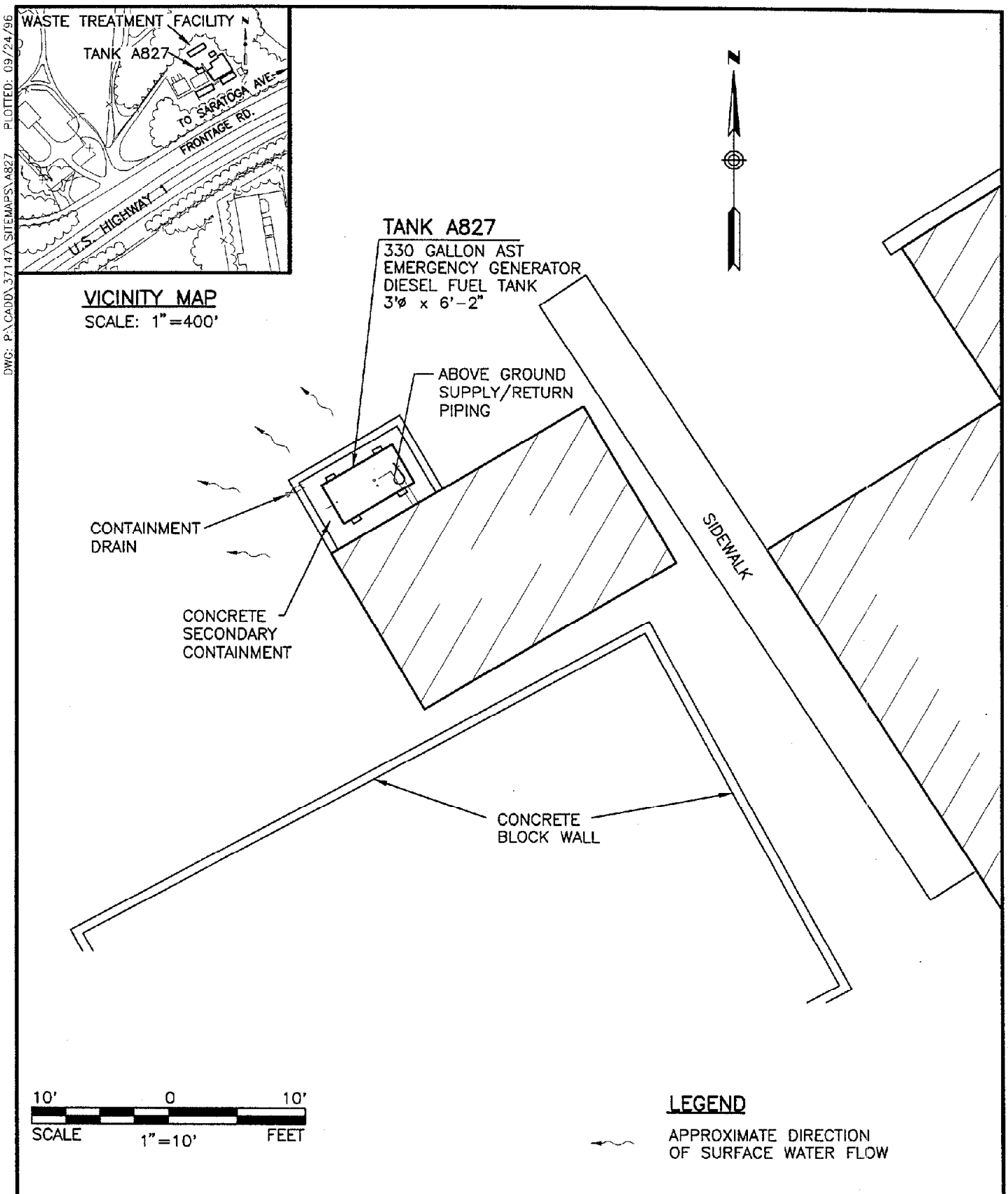
6.1.2 Specific Tank Information

Tank ID A827 - AST	
Year of Installation	1974
Size	330-gallons
Contents	Emergency Generator Diesel
Throughput	256 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	Not required
Status	In-Service
Tank Construction	
- Type and Material	Single-walled painted steel on supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Concrete secondary containment
Piping Construction	
- Type and Material	Aboveground unpainted steel
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	SPCC
- Piping	SPCC
- Site	SPCC
Integrity Testing	Data not available; not required

6.1.3 Regulatory Compliance Requirements

Tank A827

Recommend painting piping to provide corrosion protection. Estimated cost $100.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.1

SITE MAP OF TANK A827
BOCA CHICA FIELD
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.2 Boca Chica Truck Farm - Building 902 and 935 (Tanks A902-B, A902-C and A935R)

6.2.1 General Information

The Boca Chica Truck Farm is located at the south end of Shangrila Avenue just north of the east/west Taxiway 7-13. The facility fills fuel trucks that refuel aircraft on the flight line with JP-5 fuel. The fueling activities are accomplished via a truck fill stand found west of building A902. The truck farm site contains three ASTs, A902-B, A902-C, and A935R.

6.2.2 Specific Tank Information

Tank A902-B is an 800-gallon AST found east of building A902. Excess fuel from the facility's tanker trucks are deposited in this tank for testing by the Boca Chica Fuels Lab. No secondary containment exists for tank A902-B.

Tank ID A902-B - AST	
Year of Installation	1970
Size	800-gallons
Contents	Used Fuel
Throughput	8,000 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Regulated; FAC 62-762
Florida Registration	None; registration required
Status	In-Service
Tank Construction	
- Type and Material	Single-walled painted steel on skids
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	None; required
Piping Construction	
- Type and Material	None
- Cathodic Protection	N/A
- Leak Prevention	N/A

Tank ID A902-B - AST	
Leak Detection - Tank - Piping - Site	 SPCC N/A SPCC
Integrity Testing	Data not available; not required

6.2.3 Specific Tank Information

Tank A902-C an 800-gallon AST is located east of building A902 within a valved concrete containment. A small electric pump is used to transfer unleaded vehicular gasoline from the tank to tanker trucks via a rubber hose dispenser. The tank is refueled with fuel from the Trumbo Point Fuel Farm via tanker truck.

Tank ID A902-C - AST	
Year of Installation	1990
Size	800-gallons
Contents	Unleaded Gasoline
Throughput	15,600 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Regulated; FAC 62-762
Florida Registration	None; registration required
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Single-walled painted steel on skids None; not required Concrete secondary containment; manual gauging; additional required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground unpainted steel None; not required None; not required

Tank ID A902-C - AST	
Leak Detection - Tank - Piping - Site	 SPCC SPCC SPCC
Integrity Testing	Data not available; not required

6.2.4 Specific Tank Information

Located west of building A902 is the tanker truck fill stand and tank A935R. This tank is a 250-gallon aboveground vaulted storage tank used for the storage of used oil generated from the truck fill rack filters. The gravity feed lines into tank A935R are steel piping equipped with a manual shutoff valve.

Tank ID A935R - AST	
Year of Installation	1995
Size	250-gallons
Contents	Used Oil
Throughput	3,000 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Vaulted steel None; not required Spill containment; level gauge
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground painted steel None; not required None; not required

Tank ID A935R - AST	
Leak Detection - Tank - Piping - Site	 None; required None; required None; required
Integrity Testing	Data not available; not required

6.2.5 Regulatory Compliance Requirements

Tank A902-B

For compliance with FAC 62-762, provide closure assessment and secondary containment with locking valve by December 31, 1999.

For compliance with 40 CFR 112, provide closure assessment required by FAC 62-762 and secondary containment with locking valve by January 1, 1998. Estimated cost $1,500.00

Provide manual tank gauging by December 31, 1999.

Register tank with FDEP.

Tank A902-C

Provide lock for secondary containment by December 31, 1999. Estimated cost $50.00

Recommend painting piping to provide corrosion protection. Estimated cost $100.00.

Register tank with FDEP.

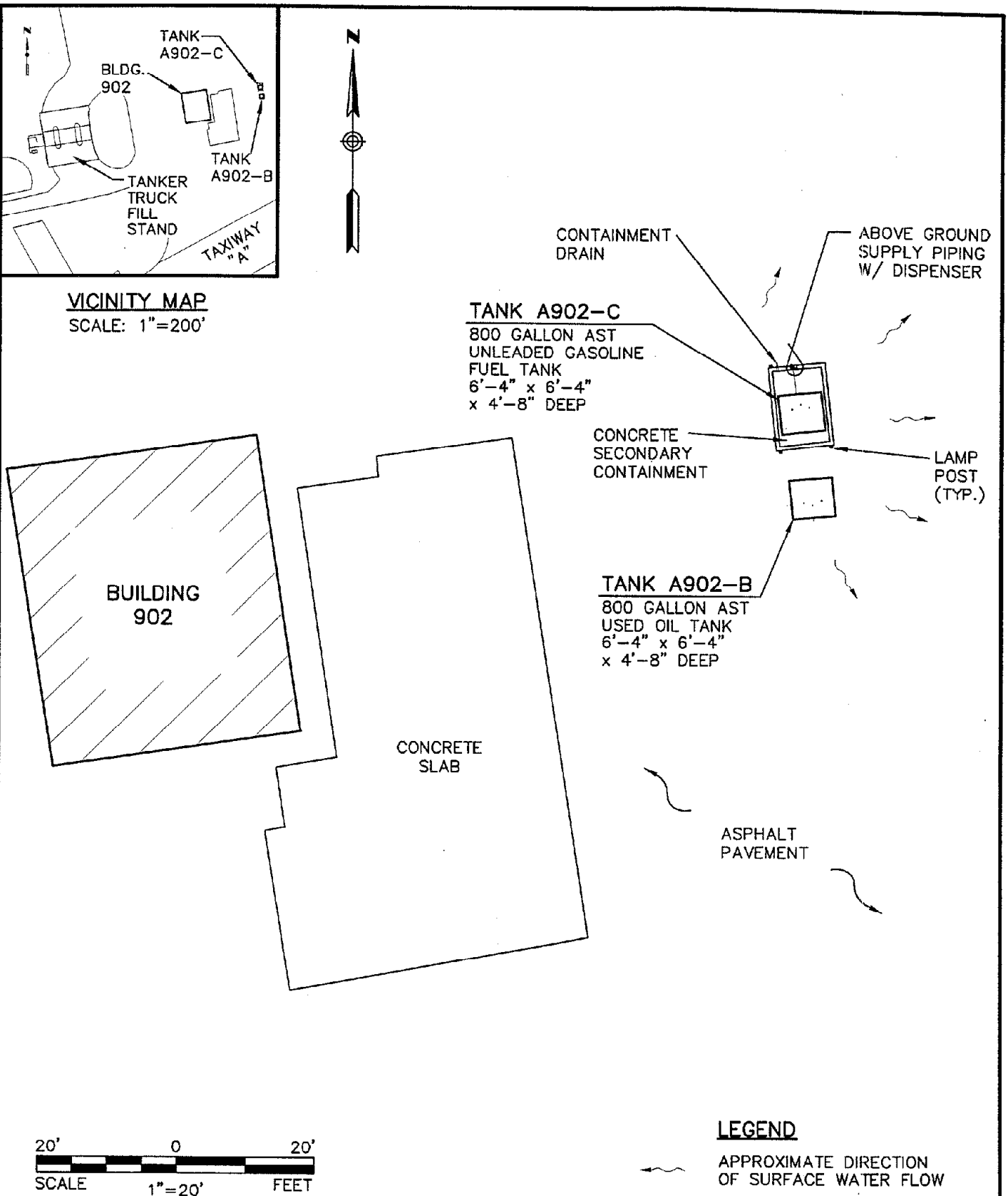
Tank A935R

Inspect tank, piping and site monthly and incorporate into SPCC Plan by January 1, 1998.

Recommend installation of an anti-syphon valve on all aboveground piping routed outside secondary containment. Estimated cost $500.00.

DWG: P:\CADD\37147\SITEMAPS\A902 PLOTTED: 09/24/96

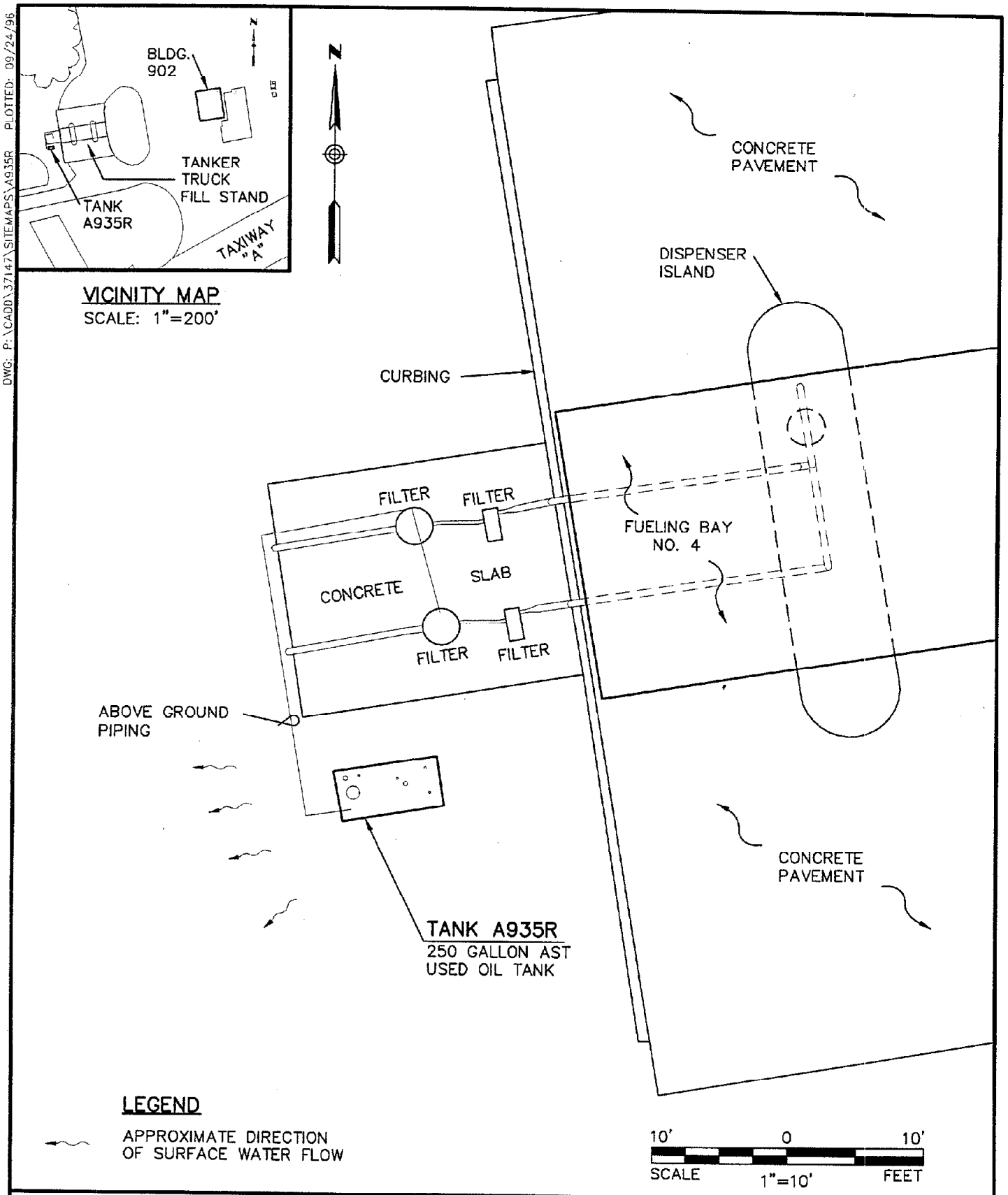
VICINITY MAP
SCALE: 1"=200'



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.2

SITE MAP OF TANKS A902-B & A902-C
BOCA CHICA FIELD
NAVAL AIR STATION – KEY WEST, FLORIDA
RUST Project No. 37147 OCTOBER, 1996



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.2A

SITE MAP OF TANK A935R
BOCA CHICA FIELD
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147

OCTOBER, 1996

6.3 Boca Chica Tank Farm (Tanks A924, A924A, A925, A925A, A929, A938, A944, A945, A958, A959, A4010, Bulk Piping to Boca Chica Truck Farm and Bulk Piping to Boca Chica Fuel Pier)

6.3.1 General Information

The Boca Chica Tank Farm is located at the south end of Midway Avenue, south of the Runway 7 approach. Saltwater lagoons are found to the south, east and west of this facility. The fuel farm supplies JP-5 fuel to the Boca Chica Truck Farm for use in refueling of naval aircraft. A total of eleven tanks comprise the tank farm: A924; A924A; A925; A925A; A929; A938; A944; A945; A958; A959; and A4010.

6.3.2 Specific Tank Information

Tank A924 is a 24,600-gallon AST in the southeast quadrant of the Boca Chica Tank Farm. This tank is currently out-of-service but previously contained used petroleum products. Tanks A924 and A925 share a bermed concrete containment. Tank A924 is scheduled for removal in FY96.

Tank ID A924 - AST	
Year of Installation	1951
Size	24,600-gallons
Contents	Empty (previously contained used oil)
Throughput	0 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Regulated; FAC 62-762
Florida Registration	Registered
Status	Out-of-Service
Tank Construction	
- Type and Material	Field erected single-walled unpainted steel on supports
- Cathodic Protection	None; N/A
- Spill/Overfill Prevention	Concrete secondary containment; N/A
Piping Construction	
- Type and Material	Aboveground and underground single-walled steel
- Cathodic Protection	None; required
- Leak Prevention	None; required

Tank ID A924 - AST	
Leak Detection - Tank - Piping - Site	 N/A N/A N/A
Integrity Testing	Cleaned 3/95

6.3.3 Specific Tank Information

Tank A924A located west of building A929 in the southeastern quadrant of the tank farm is currently not in use. Tank A924A is a 10,000-gallon vaulted AST. This tank will be put into service as a replacement for tank A924.

Tank ID A924A - AST	
Year of Installation	1996
Size	10,000-gallons
Contents	Empty (never used)
Throughput	N/A
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Regulated; FAC 62-762
Florida Registration	None; Registration required
Status	Not yet in service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Vaulted steel None; N/A Double-walled tank; additional required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 None N/A N/A

Tank ID A924A - AST	
Leak Detection - Tank - Piping - Site	 None; required N/A None; required
Integrity Testing	Data not available; required

6.3.4 Specific Tank Information

Tank A925 is a 24,600-gallon AST found in the southeast quadrant of the Boca Chica Tank Farm. Tank A925 is currently out-of-service but previously contained used oil. A bermed concrete containment is shared by tanks A924 and A925. Tank A925 is scheduled for removal in FY96.

Tank ID A925 - AST	
Year of Installation	1951
Size	24,600-gallons
Contents	Empty (previously contained used oil)
Throughput	0 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Regulated; FAC 62-762
Florida Registration	Registered
Status	Out-of-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Field erected single-walled unpainted steel on supports None; N/A Concrete secondary containment; N/A
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground and underground steel unpainted steel None; required None; required

Tank ID A925 - AST	
Leak Detection - Tank - Piping - Site	 N/A N/A N/A
Integrity Testing	Cleaned 3/95

6.3.5 Specific Tank Information

Located in the southeastern quadrant of the tank farm tank west of building A929, tank A925A is used for the storage of used oil. Tank A925A is a 10,000-gallon vaulted AST.

Tank ID A925A- AST	
Year of Installation	1996
Size	10,000-gallons
Contents	Used Oil
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Regulated; FAC 62-762
Florida Registration	None; Registrations required
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Vaulted steel None; not required Double-walled tank; additional required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground galvanized steel None; not required None; required

Tank ID A925A- AST	
Leak Detection - Tank - Piping - Site	 None; required None; required None; required
Integrity Testing	Data not available; not required

6.3.6 Specific Tank Information

Tank A929 is a 560-gallon UST found at the Boca Chica Tank Farm on the south side of building A929. Tank A929 is used to store used oil generated from pump filters during fuel transfer operations

.

Tank ID A929 - UST	
Year of Installation	1960
Size	560-gallons
Contents	Used Oil
Throughput	1,000 gal/yr
Regulated - Federal	Regulated; 40 CFR 112; 40 CFR 280
Regulated - Florida	Regulated; FAC 62-761
Florida Registration	Registered
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Single-walled steel; additional required None; required None; required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Underground steel; additional required None; required None; required

Tank ID A929 - UST	
Leak Detection - Tank - Piping - Site	 SPCC; additional required SPCC; additional required SPCC; additional required
Integrity Testing	August 1996

6.3.7 Specific Tank Information

The 239,000-gallon JP-5 tank A938 is located in the northeast quadrant of the Boca Chica Tank Farm west of building A933. This floating roof AST is equipped with a high level alarm and is surrounded by an earthen/lime dike with a chained discharge valve.

Tank ID A938 - AST	
Year of Installation	1953
Size	239,000-gallons
Contents	Jet Fuel (JP-5)
Throughput	1,526,820 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Regulated; FAC 62-762
Florida Registration	Registered
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Field erected single-walled painted steel Yes; required Lime rock secondary containment; high level alarm; tank gauge; additional required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground painted steel and underground steel None; required None; not required

Tank ID A938 - AST	
Leak Detection - Tank - Piping - Site	 Groundwater monitoring; SPCC Groundwater monitoring; SPCC; additional required Groundwater monitoring; SPCC
Integrity Testing	Cleaned 3/95

6.3.8 Specific Tank Information

Located west of building A1305 in the northeast quadrant of the tank farm is tank A944. Tank A944 is a 239,000-gallon floating roof AST equipped with a high-level alarm and is in an earthen/lime dike with a chained discharge valve. This tank supplies JP-5 fuel for aircraft fueling activities.

Tank ID A944 - AST	
Year of Installation	1953
Size	239,000-gallons
Contents	Jet Fuel (JP-5)
Throughput	6,907,305 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Regulated; FAC 62-762
Florida Registration	Registered
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Field erected single-walled painted steel Yes; out-of-service; required Lime rock secondary containment, tank level gauge and high level alarm; additional required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground painted and underground steel None; required None; not required

Tank ID A944 - AST	
Leak Detection - Tank - Piping - Site	 Groundwater monitoring; SPCC Groundwater monitoring; SPCC; additional required Groundwater monitoring; SPCC
Integrity Testing	Cleaned 3/95

6.3.9 Specific Tank Information

Tank A945 is a 213,000-gallon floating top AST containing JP-5 fuel. A945 is located in the northwest quadrant of the fuel farm west of tanks A944 and A958. This tank is equipped with a high-level alarm and has an earthen/lime dike with a chained discharge valve. JP-5 from tank A945 is used in the refueling of aircraft.

Tank ID A945 - AST	
Year of Installation	1957
Size	213,000-gallons
Contents	Jet Fuel (JP-5)
Throughput	4,206,850 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Regulated; FAC 62-762
Florida Registration	Registered
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Field erected single-walled painted steel Yes; out-of-service; required Lime rock secondary containment, level gauge, and high level alarm; additional required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground painted and underground steel None; required None; not required

Tank ID A945 - AST	
Leak Detection - Tank - Piping - Site	 Groundwater monitoring; SPCC Groundwater monitoring; SPCC; additional required Groundwater monitoring; SPCC
Integrity Testing	Cleaned 3/95

6.3.10 Specific Tank Information

Tank A958 is located in the northwest quadrant of the Boca Chica Fuel Farm west of tank A938. This 298,000-gallon floating roof AST contains JP-5 for use in aircraft refueling operation. Fitted with a high-level alarm tank A958 is located in an earthen/lime diked secondary containment with a chained discharge valve.

Tank ID A958 - AST	
Year of Installation	1961
Size	298,000-gallons
Contents	Jet Fuel (JP-5)
Throughput	6,976,600 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Regulated; FAC 62-762
Florida Registration	Registered
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Field erected single-walled painted steel Yes; out-of-service; required Lime rock secondary containment, tank level gauge, and high level alarm; additional required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground painted and underground steel None; required None; not required

Tank ID A958 - AST	
Leak Detection - Tank - Piping - Site	 Groundwater monitoring; SPCC Groundwater monitoring; SPCC; additional required Groundwater monitoring; SPCC
Integrity Testing	Cleaned 3/95

6.3.11 Specific Tank Information

Tank A959 is located in the southwest quadrant of the fuel farm west of tanks A924 and A925. Tank A959 is a 298,000-gallon floating roof AST within an earthen/lime dike secondary containment. The secondary containment is 50% removed. This tank is currently being demolished and therefore out-of-service. Demolition should be completed in FY96.

Tank ID A959 - AST	
Year of Installation	1961
Size	298,000-gallons
Contents	Empty (previously contained Jet Fuel (JP-5))
Throughput	0 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Regulated; FAC 62-762
Florida Registration	Registered
Status	Out-of-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Field erected single-walled painted steel None; N/A Earthen secondary containment half removed; N/A
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground painted steel and underground steel None; N/A None; N/A

Tank ID A959 - AST	
Leak Detection - Tank - Piping - Site	 N/A N/A N/A
Integrity Testing	None; N/A

6.3.12 Specific Tank Information

The 275-gallon diesel fuel tank A4010 is located east of building A1305 in the northeast quadrant of the Boca Chica Fuel Farm. Fuel from this tank is used to operate an emergency generator found inside building A4010. Tank A4010 is located within a 3' deep valved concrete secondary containment.

Tank ID A4010 - AST	
Year of Installation	Data not available
Size	275-gallons
Contents	Emergency Generator Diesel
Throughput	97 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Single-walled painted steel on supports None; not required Concrete secondary containment
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground unpainted steel None; not required None; required

Tank ID A4010 - AST	
Leak Detection - Tank - Piping - Site	 None; required None; required None; required
Integrity Testing	Data not available; not required

6.3.13 Bulk Piping to the Boca Chica Truck Farm

The Boca Chica Tank Farm provides fuel to the Boca Chica Truck Farm via two six-inch underground pipelines. The JP-5 fuel transported in these pipeline is dispensed to the facilities tanker trucks by a truck fill stand located north of Taxiway 7-13. A schematic drawing of this pipeline can be found in the "Repair Aviation Fuel Piping Site Plan" found in the NAS Key West Public Works Plan room. These drawings are part of the Construction Contract No. N62467-86-C-0829, dated 12/09/85.

6.3.14 Bulk piping to the Boca Chica Fuel Pier

The Boca Chica Fuel Pier is found north of the Boca Chica Marina and is no longer in service. During operation, the fuel pier received fuel from the Boca Chica Tank Farm via three six-inch underground pipelines. These lines are still functional and are charged with fuel. A schematic drawing of this pipeline can be found in the "Repair Aviation Fuel Piping Site Plan" found in the NAS Key West Public Works Plan room. These drawings are part of the Construction Contract No. N62467-86-C-0829, dated 12/09/85.

6.3.15 Regulatory Compliance Requirements

Tanks A924, A925, and A959

These tanks are scheduled for removal FY96 (already funded).

Provide leak detection and cathodic protection for underground piping by December 31, 1999 or close. Estimated cost (leak detection and cathodic protection) $7,500.00.

Tank closure and removal including assessment must be completed by December 31, 2000. Estimated cost for assessment per tank $1,000.00.

Tanks A924A and A925A

Install tank level gauge by January 1, 1998. Estimated cost per tank $2000.00

Inspect tank, piping and site monthly and incorporate into SPCC Plan by January 1, 1998.

For tank A925A, install anti-syphon valve on all aboveground piping routed outside secondary containments by December 31, 1999.
Estimated cost $500.00.

Register tank with FDEP.

Tank A929

Tank A929 is scheduled for removal and replacement with a vaulted tank under Navy contract no. N62467-96-C-0849 (already funded).

Tank closure and removal including assessment must be completed by December 31, 2000.
Estimated cost $15,000.00.

Tanks A938, A944, A945, and A958

Improvements required for tanks:
Provide impervious secondary containment with closure assessment by December 31, 1999.
Estimated cost per tank $93000.00

Provide cathodic protection system for tank bottom by December 31, 1999. Estimated cost per tank $5000.00

Perform a baseline internal inspection by December 31, 1999 (verify). Estimated cost per tank $5000.00

Existing underground pipe shall be:

1. Evaluated for structural integrity and tightness by January 1, 1993 (verify) and shall be pressure tested annually until December 31, 1999; and
2. Be cathodically protected and install monitoring wells by December 31, 1999; or
3. Be cathodically protected and pressure tested quarterly by December 31, 1999.

   Estimated cost (structural and tightness testing) $5000.00.
   Estimated cost (double-walled piping) very high cost, not a feasible

alternative.
Estimated cost (cathodic protection w/ wells) $19500.00.
Estimated cost (cathodic protection w/ pressure testing) $15000.00.

Pressure test aboveground piping not in secondary containment annually. Cost included in previous pipe testing.

Tank A4010

Inspect tank, piping and site monthly and incorporate into SPCC Plan by January 1, 1998.

Recommend installation of an anti-syphon valve on all aboveground piping routed outside secondary containment. Estimated cost $500.00.

Bulk Piping to Boca Chica Truck Farm

1. Evaluate for structural integrity and tightness by January 1, 1993 (verify) and shall be pressure tested annually until December 31, 1999; and
2. Be cathodically protected and install monitoring wells by December 31, 1999; or
3. Be cathodically protected and pressure tested quarterly by December 31, 1999.

Estimated cost (structural and tightness testing) $5000.00.
Estimated cost (double-walled piping) very high cost, not a feasible alternative.
Estimated cost (cathodic protection w/ wells) $19500.00.
Estimated cost (cathodic protection w/ pressure testing) $15000.00.

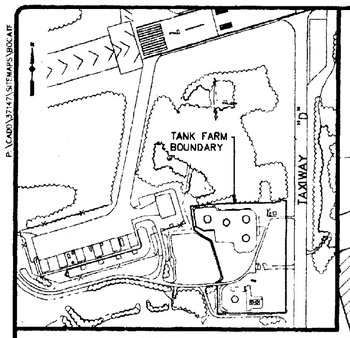
Pressure test aboveground piping not in secondary containment annually. Cost included in previous pipe testing.

Bulk Piping to the Boca Chica Fuel Pier

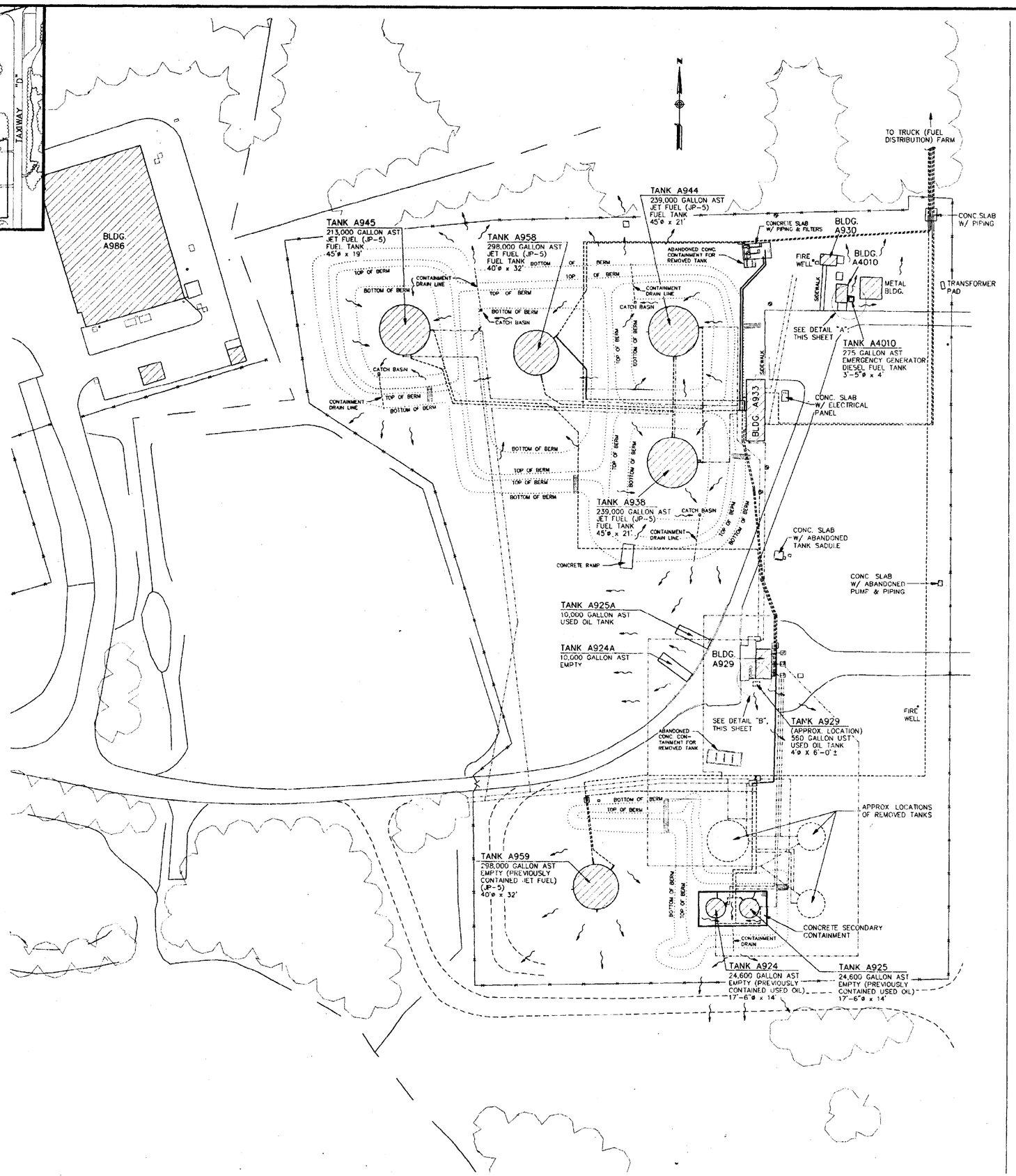
Recommend closing pipeline. Estimated cost $10,000.00.

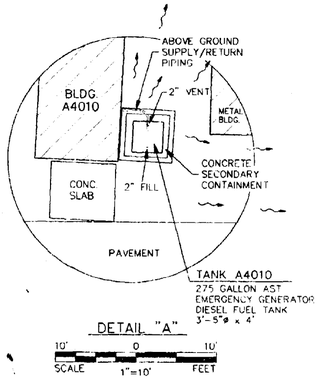
If pipeline is not closed:

1. Evaluate for structural integrity and tightness by January 1, 1993 (verify) and shall be pressure tested annually until December 31, 1999; and
2. Be cathodically protected and install monitoring wells by December 31, 1999;

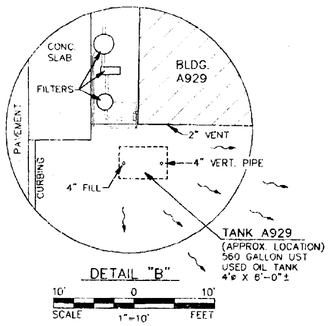


VICINITY MAP
SCALE: 1"=500'





DETAIL "A"



DETAIL "B"

LEGEND

- ABOVE GROUND FUEL LINE
- UNDERGROUND FUEL LINE (APPROX. LOCATION)
- ABANDONED FUEL LINE (APPROX. LOCATION)
- APPROXIMATE DIRECTION OF SURFACE WATER FLOW
- FENCE
- MONITORING WELL

50' 0 50'
SCALE 1"=50' FEET

TANK LIST:

TANK A924
TANK A924A
TANK A925
TANK A925A
TANK A929
TANK A938
TANK A944
TANK A945
TANK A958
TANK A959
TANK A4010

NOTE:
THE FOLLOWING DRAWINGS CONTAIN INFORMATION AS TO THE LOCATION OF ASSOCIATED BOCA CHICA TANK FARM PIPING AND CAN BE FOUND IN THE NAS KEY WEST PUBLIC WORKS OFFICE PLAN ROOM.

1. CATHODIC PROTECTION INSTALLATION ON FUEL STORAGE TANKS AND UNDERGROUND FUEL LINES.
   PW DRAWING NO. P-5468
   DATED AUGUST 1980
2. REPAIR AVIATION FUEL PIPING SITE PLAN
   NAVFAC DRAWING NO. 5150805
   CONST CONTRACT NO. N62467-86-C-0829
   SHEET 2 OF 4
   DATED 12/09/85
3. TANK CLEAN/PIPE PRESSURE TEST
   NAVFAC DRAWING NO. 5263879
   NAVFAC CONTRACT NO. N62467-93-C-1069
   DATED 12/09/94

REV NO.	CODE	CIRCLES	DATE	DESCRIPTION	RUST APPV
				NOTE: CIRCLE ALL REVISIONS, IDENTIFY WITH DIAMOND, NUMBER AND ARROW. REMOVE ONLY CIRCLE AND ARROW BEFORE NEXT REVISION	

ISSUE CODE					
A	PRELIMINARY	C	MAT'L T.O.	F	CONST'N
B	DESIGN	D	MAT'L PURC.		
		E	BIDS		

SEAL

SIGNATURE

DATE

RUST ENVIRONMENT & INFRASTRUCTURE

DSGN.		SCALE:	1" = 50'
DR.	TOM WESTBURY	DATE	OCTOBER, 1996
CK.	J. JOHNSON	RUST FILE NUMBER:	BOCATF
APPV			

SITE MAP OF
BOCA CHICA
TANK FARM

NAVAL AIR STATION
KEY WEST, FLORIDA

FIGURE 6.3

00880B03X

6.4 Fuel Laboratory - Building 937 (Tank A937)

6.4.1 General Information

Building A937 is the Boca Chica Fuel Laboratory located off Midway Avenue. The Boca Chica Channel is found west of this site. Tank A937, a 300-gallon AST within a 2' deep valved concrete secondary containment, is located south of the fuels lab. This tank is used for storage of used fuel generated from lab activities until disposal or reentry into the Boca Chica fuel system.

6.4.2 Specific Tank Information

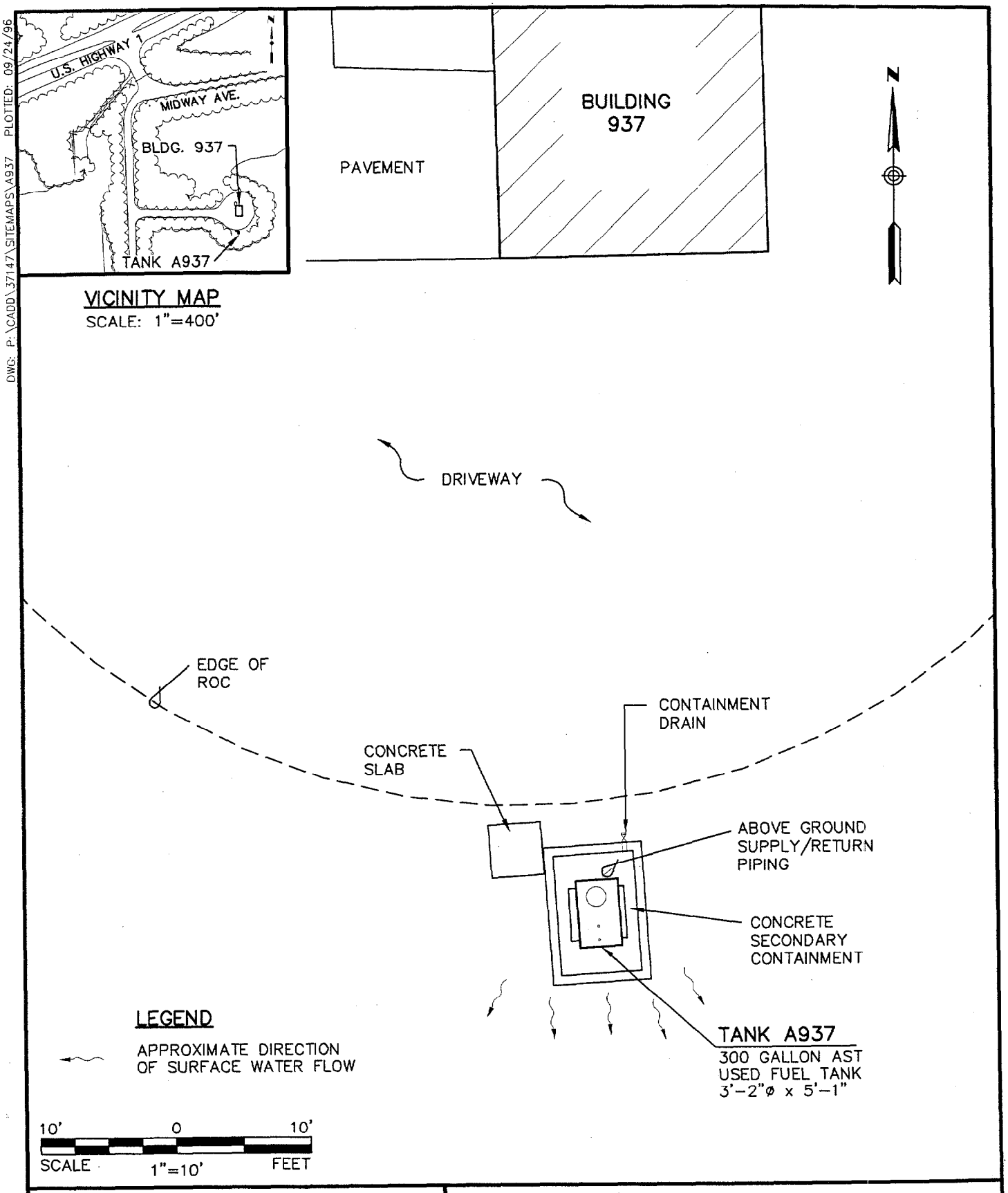
Tank ID A937 - AST	
Year of Installation	Data not available
Size	300-gallons
Contents	Used Fuel
Throughput	2,400 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Single-walled painted steel on supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Concrete secondary containment
Piping Construction	
- Type and Material	Aboveground unpainted steel
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	SPCC
- Piping	SPCC
- Site	SPCC
Integrity Testing	Data not available; not required

6.4.3 Regulatory Compliance Requirements

Tank A937

Install impervious liner for secondary containment by January 1, 1998.

Estimated cost $1,000.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.4

SITE MAP OF TANK A937
BOCA CHICA FIELD
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.5 Fresh Water Pump House - Building 940 (Tank A940-3, 4 and 5)

6.5.1 General Information

Building A940 is a Fresh Water Pump House. Three ASTs are found on the southwest side of building A940 in a shared 9" deep valved concrete secondary containment. Tank A940-3 and A940-5 are 350-gallon diesel fuel tanks used to supply fuel for the fresh water pumps in building A940. Tank A940-4 is a 280-gallon diesel fuel tank used to fuel an emergency generator found in building A940.

6.5.2 Specific Tank Information

Tank ID A940-3 - AST	
Year of Installation	1994
Size	350-gallons
Contents	Pump diesel
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Single-walled painted steel on supports None; not required Concrete secondary containment and level gauge
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground painted steel None; not required None; not required
Leak Detection - Tank - Piping - Site	 SPCC SPCC SPCC
Integrity Testing	Data not available; not required

6.5.3 Specific Tank Information

Tank ID A940-4 - AST	
Year of Installation	1994
Size	280-gallons
Contents	Emergency Generator Diesel
Throughput	130 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Single-walled painted steel on supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Concrete secondary containment and level gauge
Piping Construction	
- Type and Material	Aboveground painted steel
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	SPCC
- Piping	SPCC
- Site	SPCC
Integrity Testing	Data not available; not required

6.5.4 Specific Tank Information

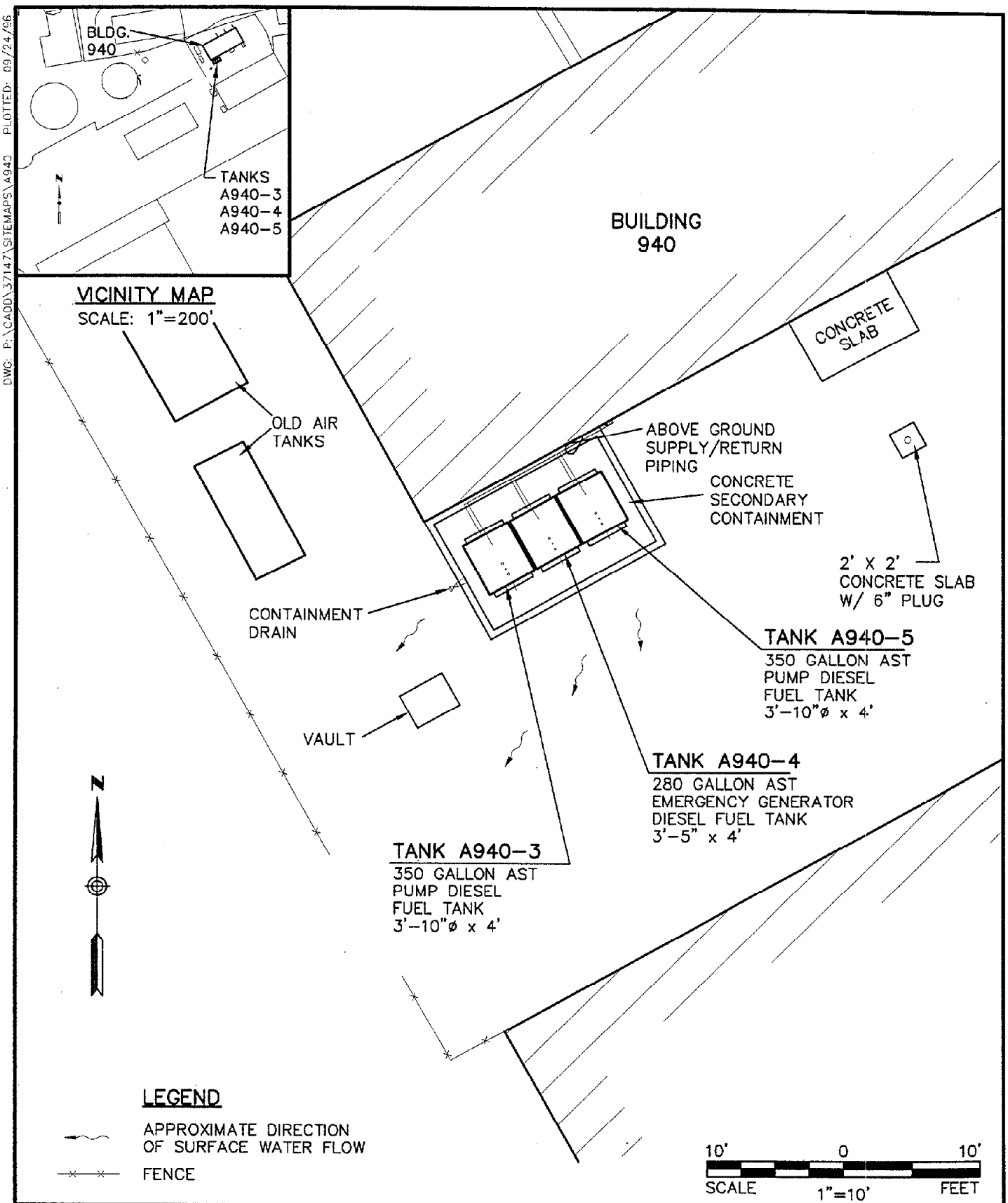
Tank ID A940-5 - AST	
Year of Installation	1994
Size	350-gallons
Contents	Pump diesel
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Single-walled painted steel on supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Concrete secondary containment and level gauge
Piping Construction	
- Type and Material	Aboveground painted steel
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	SPCC
- Piping	SPCC
- Site	SPCC
Integrity Testing	Data not available; not required

6.5.5 Regulatory Compliance Requirements

Tanks A940-3, 4, and 5

Install impervious liner for secondary containment by January 1, 1998.
Estimated cost $1,000.00.

Recommend installation of an anti-syphon valve on all aboveground piping routed outside secondary containment. Estimated cost $500.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.5

SITE MAP OF TANKS A940-3, 4, AND 5
BOCA CHICA FIELD
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.6 LOX Generation Station - Building A979 (Tank A979A, B, and C)

6.6.1 General Information

Building A979 is the Liquid Oxygen (LOX) Generation station found north of Runway 7-25. The LOX building supplies oxygen for aircraft used in flight training at NAS Key West. Located on the northwest side of building A979 are three 2,000-gallon ASTs. Tank A979A and A979B contain liquid oxygen. Tank A979C stores liquid nitrogen. All tanks are equipped with 1/2" stainless steel piping and pressure and fill gauges. No secondary containment is present at this site.

6.6.2 Specific Tank Information

Tank ID A979A - AST	
Year of Installation	1989
Size	2000-gallons
Contents	Liquid Oxygen
Throughput	Data not available
Regulated - Federal	Unregulated
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Single-walled painted steel on supports None; not required Tight fill connections; fill gauge
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground stainless steel None; not required Double-walled pipe
Leak Detection - Tank - Piping - Site	 None; not required None; not required None; not required
Integrity Testing	Data not available; not required

6.6.3 Specific Tank Information

Tank ID A979B - AST	
Year of Installation	1989
Size	2000-gallons
Contents	Liquid Oxygen
Throughput	Data not available
Regulated - Federal	Unregulated
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Single-walled painted steel on supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Tight fill connections; fill gauge
Piping Construction	
- Type and Material	Aboveground stainless steel
- Cathodic Protection	None; not required
- Leak Prevention	Double-walled pipe
Leak Detection	
- Tank	None; not required
- Piping	None; not required
- Site	None; not required
Integrity Testing	Data not available; not required

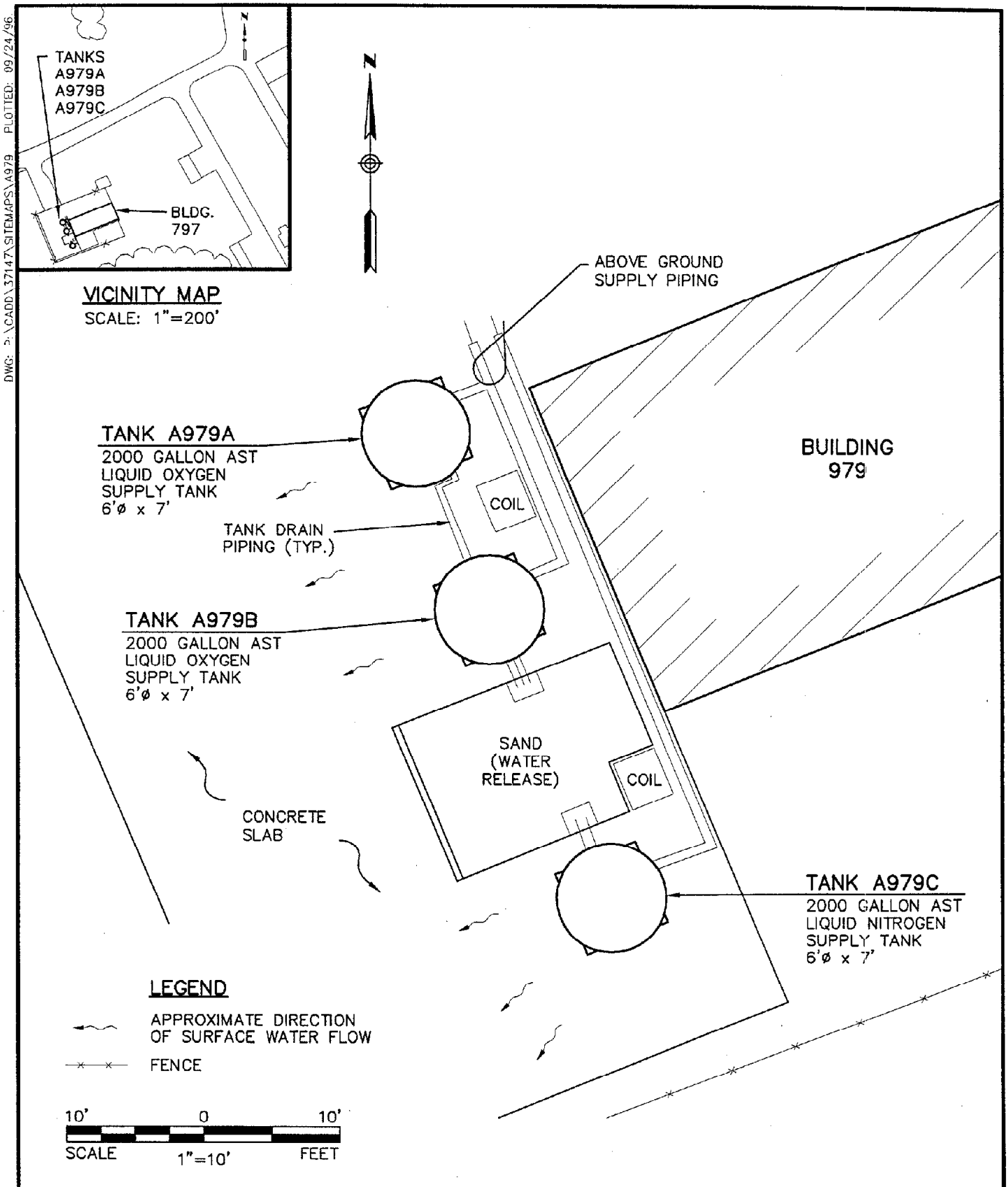
6.6.4 Specific Tank Information

Tank ID A979C - AST	
Year of Installation	1989
Size	2000-gallons
Contents	Liquid Nitrogen
Throughput	Data not available
Regulated - Federal	Unregulated
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Single-walled painted steel on supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Tight fill connection; fill gauge
Piping Construction	
- Type and Material	Aboveground stainless steel
- Cathodic Protection	None; not required
- Leak Prevention	Double-walled pipe
Leak Detection	
- Tank	None; not required
- Piping	None; not required
- Site	None; not required
Integrity Testing	Data not available; not required

6.6.5 Regulatory Compliance Requirements

Tanks A979A, B, and C

These tanks are exempt from the AST regulations due to tank content.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.6

SITE MAP OF TANKS A979A, B, AND C
BOCA CHICA FIELD
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.7 AIMD Ground Service Equipment Hangar - Building A986 (Tank A986)

6.7.1 General Information

The AIMD Ground Services Equipment Division (GSE) located west of the Boca Chica Tank Farm on Midway Avenue provides maintenance for ground service equipment used to support naval aircraft. The oil/water separator A986 is located on the east side of the GSE hangar A986. A986 collects drainage from the GSE equipment wash down pad and discharges the segregated water to the sanitary sewer system.

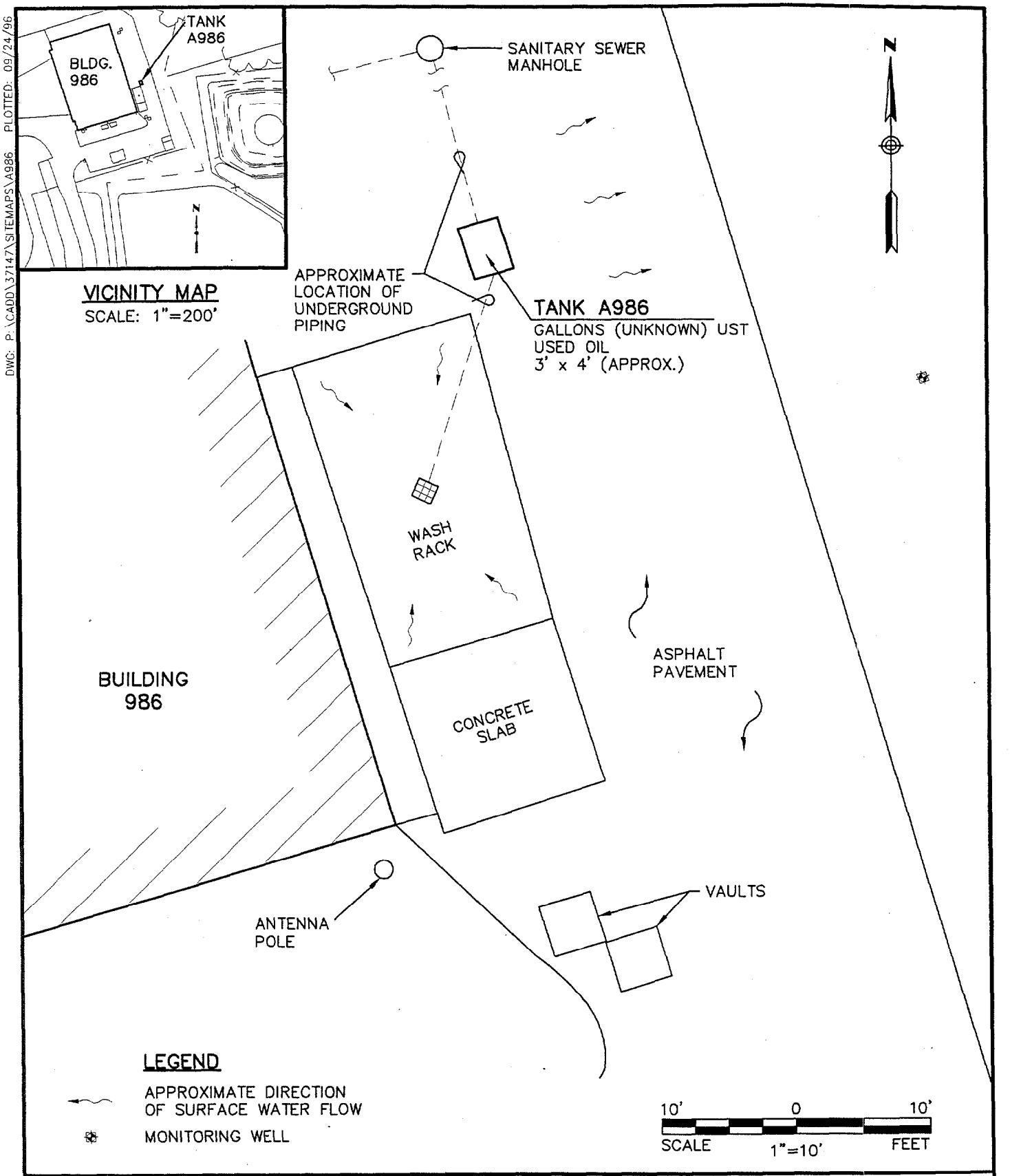
6.7.2 Specific Tank Information

Tank ID A986 - UST	
Year of Installation	Data Not Available
Size	Data Not Available
Contents	Used Oil
Throughput	Data not available
Regulated - Federal	Unregulated
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-service
Tank Construction	
- Type and Material	Data not available
- Cathodic Protection	Data not available; not required
- Spill/Overfill Prevention	Data not available; not required
Piping Construction	
- Type and Material	Data not available
- Cathodic Protection	Data not available; not required
- Leak Prevention	Data not available; not required
Leak Detection	
- Tank	Data not available; not required
- Piping	Data not available; not required
- Site	Data not available; not required
Integrity Testing	Data not available; not required

6.7.3 Regulatory Compliance Requirements

Tank A986

Tank A986 is considered a process tank and is therefore exempt from state or federal regulation.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.7

SITE MAP OF TANK A986
BOCA CHICA FIELD
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.8 ASF/Hurricane Shelter - Building A994 (Tank A994)

6.8.1 General Information

Tank A994 is located on the east side of the ASF building A994 currently used as a hurricane shelter. The ASF building is located on Bomb Farm Road. A994 is a 600-gallon AST located within a 3' deep valved concrete secondary containment. The diesel fuel stored in this tank is used to supply an emergency generator used as a backup power source during a power outage.

6.8.2 Specific Tank Information

Tank ID A994 - AST	
Year of Installation	1985
Size	600-gallons
Contents	Emergency Generator Diesel
Throughput	96 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Regulated; FAC 62-762
Florida Registration	Registered
Status	In-Service
Tank Construction	
- Type and Material	Single-walled painted steel on supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Concrete secondary containment; additional required
Piping Construction	
- Type and Material	Aboveground unpainted steel
- Cathodic Protection	None; not required
- Leak Prevention	None; required
Leak Detection	
- Tank	SPCC
- Piping	SPCC
- Site	SPCC
Integrity Testing	Data not available; not required

6.8.3 Regulatory Compliance Requirements

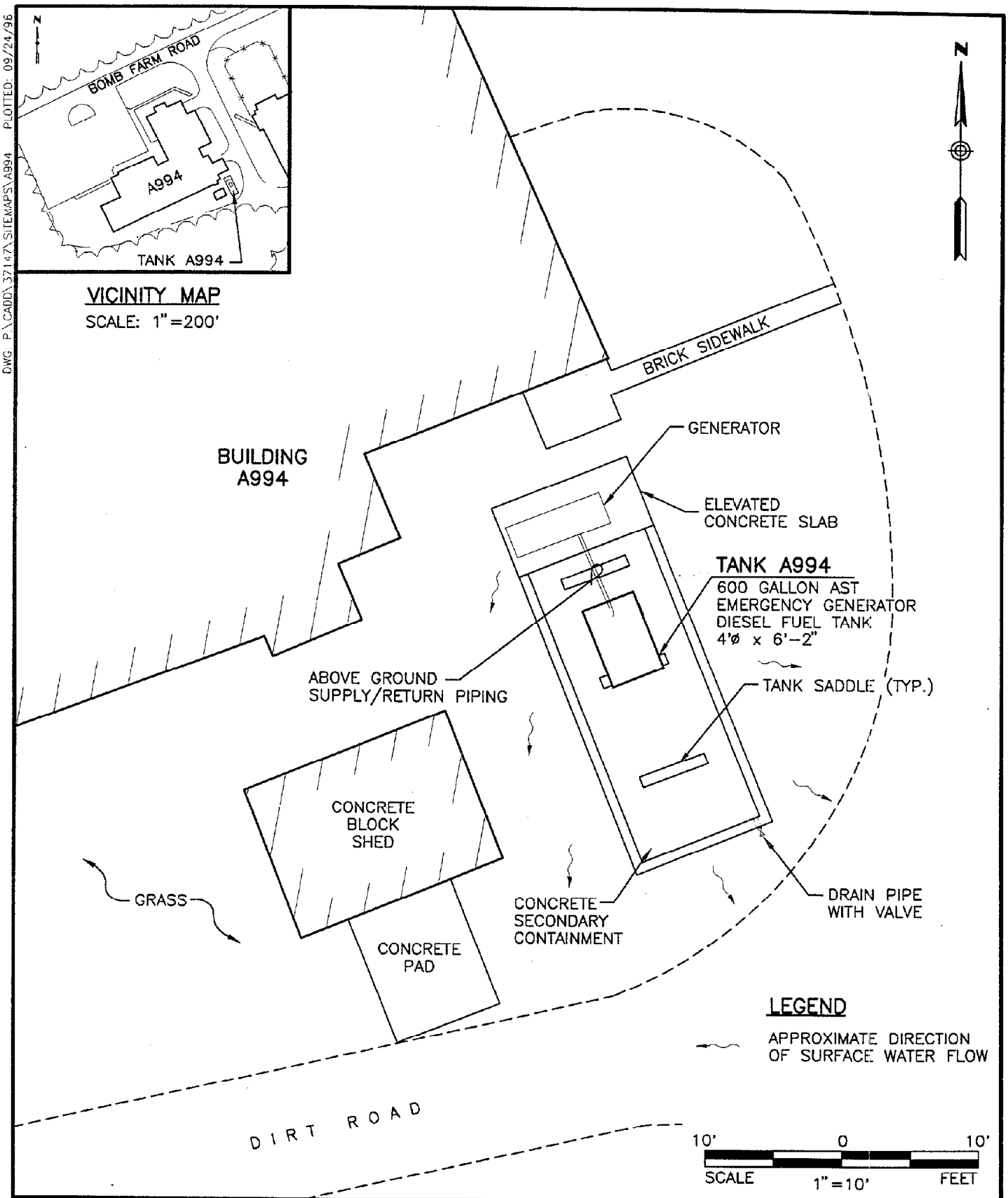
Tank A994

Provide lock for secondary containment by December 31, 1999. Estimated cost $50.00

Provide manual tank gauging by December 31, 1999.

Install anti-syphon valve on all aboveground piping routed outside secondary containment by December 31, 1999. Estimated cost $500.00.

Paint aboveground piping to provide corrosion protection by December 31, 1999. Estimated cost $100.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.8

SITE MAP OF TANK A994
BOCA CHICA FIELD
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147

OCTOBER, 1996

6.9 Weapons Security Guard House - Building A995 (Tank A995)

6.9.1 General Information

Tank A995 is a 275-gallon AST containing diesel fuel. Located on the north side of the Security Guard House A995, this tank provides fuel to an emergency generator. Building A995 is located on Bomb Farm Road. No secondary containment is present at this site.

6.9.2 Specific Tank Information

Tank ID A995 - AST	
Year of Installation	Data ot available
Size	275-gallons
Contents	Emergency Generator Diesel
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Single-walled painted steel on supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	None; required (waived)
Piping Construction	
- Type and Material	Aboveground unpainted steel
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	None; required
- Piping	None; required
- Site	None; required
Integrity Testing	Data not available; not required

6.9.3 Regulatory Compliance Requirements

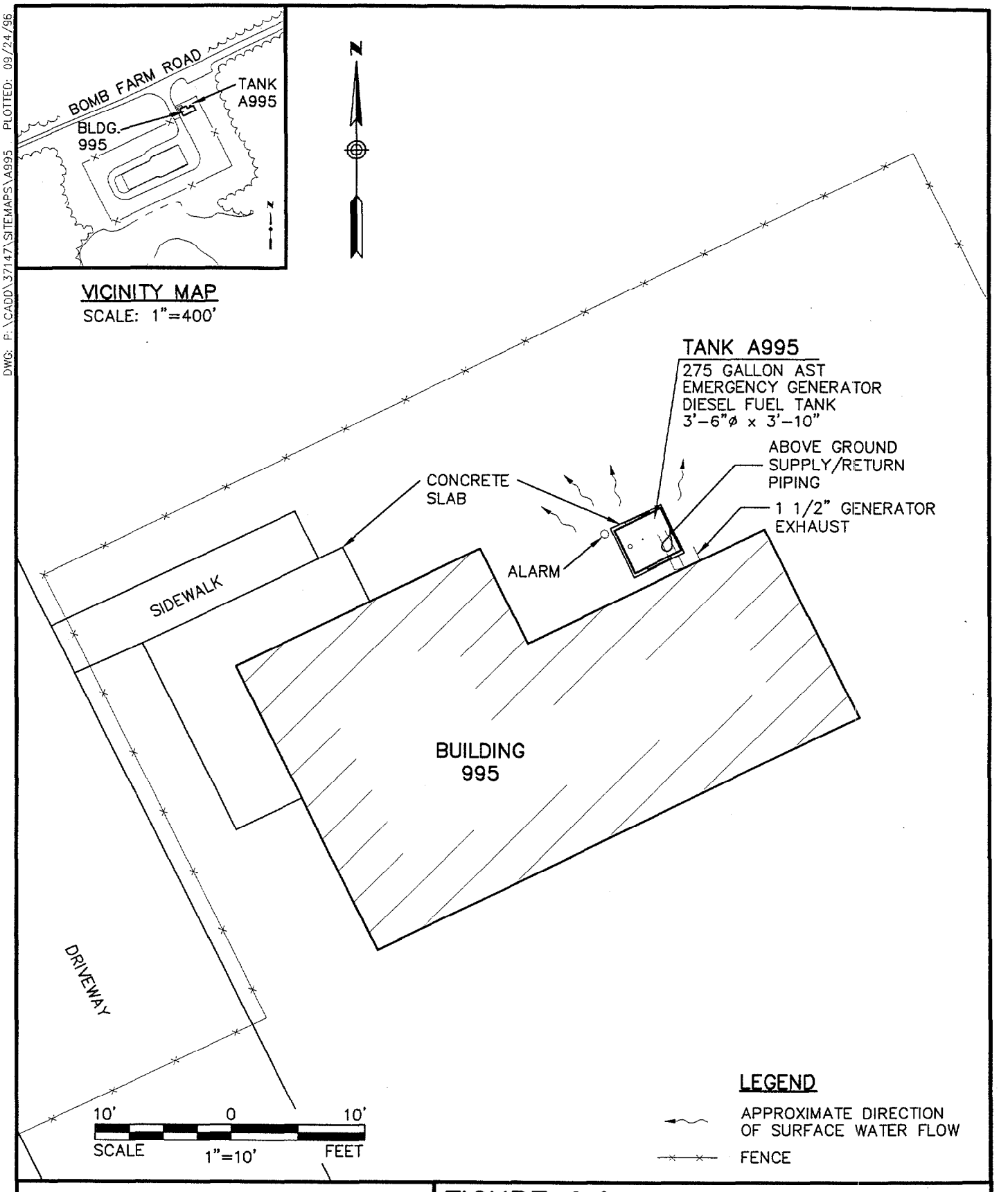
Tank A995

40 CFR 112 requires all ASTs to have secondary containment. Due to the location of tank A995, in the event of a release, the likelihood of the spill reaching navigable waters is low. Therefore, no secondary containment is required.

Inspect tank, piping and site monthly and incorporate into SPCC Plan by January 1, 1998.

Recommend installation of an anti-syphon valve on all aboveground piping routed outside secondary containment. Estimated cost $500.00.

Recommend paint aboveground piping to provide corrosion. Estimated cost $100.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.9

SITE MAP OF TANK A995
BOCA CHICA FIELD
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.10 Naval Communication Message Center- Building A1004 (Tank A1004, A1004A and A1004B)

6.10.1 General Information

The Naval Communication Message Center, building A1004, is located on the northeast side of Boca Chica Field on Midway Avenue. Adjacent to the west is Geiger Key Creek and a saltwater flat. Three ASTs are present at this site: A1004; A1004A and A1004B.

6.10.2 Specific Tank Information

Tank A1004 is a 2,000-gallon diesel fuel tank within a 2' deep concrete valved secondary containment. Fuel from tank A1004 supplies generator fuel for two day tanks located inside building A1004.

Tank ID A1004 - AST	
Year of Installation	1987
Size	2000-gallons
Contents	Emergency Generator Diesel
Throughput	130 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Regulated; FAC 62-762
Florida Registration	Registered
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Single-walled painted steel on supports None; not required Concrete secondary containment; manual gauging; additional required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground painted steel None; not required None; required

Tank ID A1004 - AST	
Leak Detection - Tank - Piping - Site	 SPCC SPCC SPCC
Integrity Testing	Data not available; not required

6.10.3 Specific Tank Information

Tanks A1004A and A1004B are 50-gallon day tanks providing fuel for the message center's two emergency generators. Building A1004 provides secondary containment for these day tanks.

Tank ID A1004A - AST	
Year of Installation	Data not available
Size	50-gallons
Contents	Emergency Generator Diesel
Throughput	130 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Single-walled painted steel on supports None; not required Level gauge and secondary containment
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground unpainted steel None; not required None; not required

Tank ID A1004A - AST	
Leak Detection - Tank - Piping - Site	 None; required None; required None; required
Integrity Testing	Data not available; not required

6.10.4 Specific Tank Information

Tank ID A1004B - AST	
Year of Installation	Data not available
Size	50-gallons
Contents	Emergency Generator Diesel
Throughput	130 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Single-walled painted steel on supports None; not required Level gauge and secondary containment
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground unpainted steel None; not required None; not required
Leak Detection - Tank - Piping - Site	 None; required None; required None; required
Integrity Testing	Data not available; not required

6.10.5 Regulatory Compliance Requirements

Tank A1004

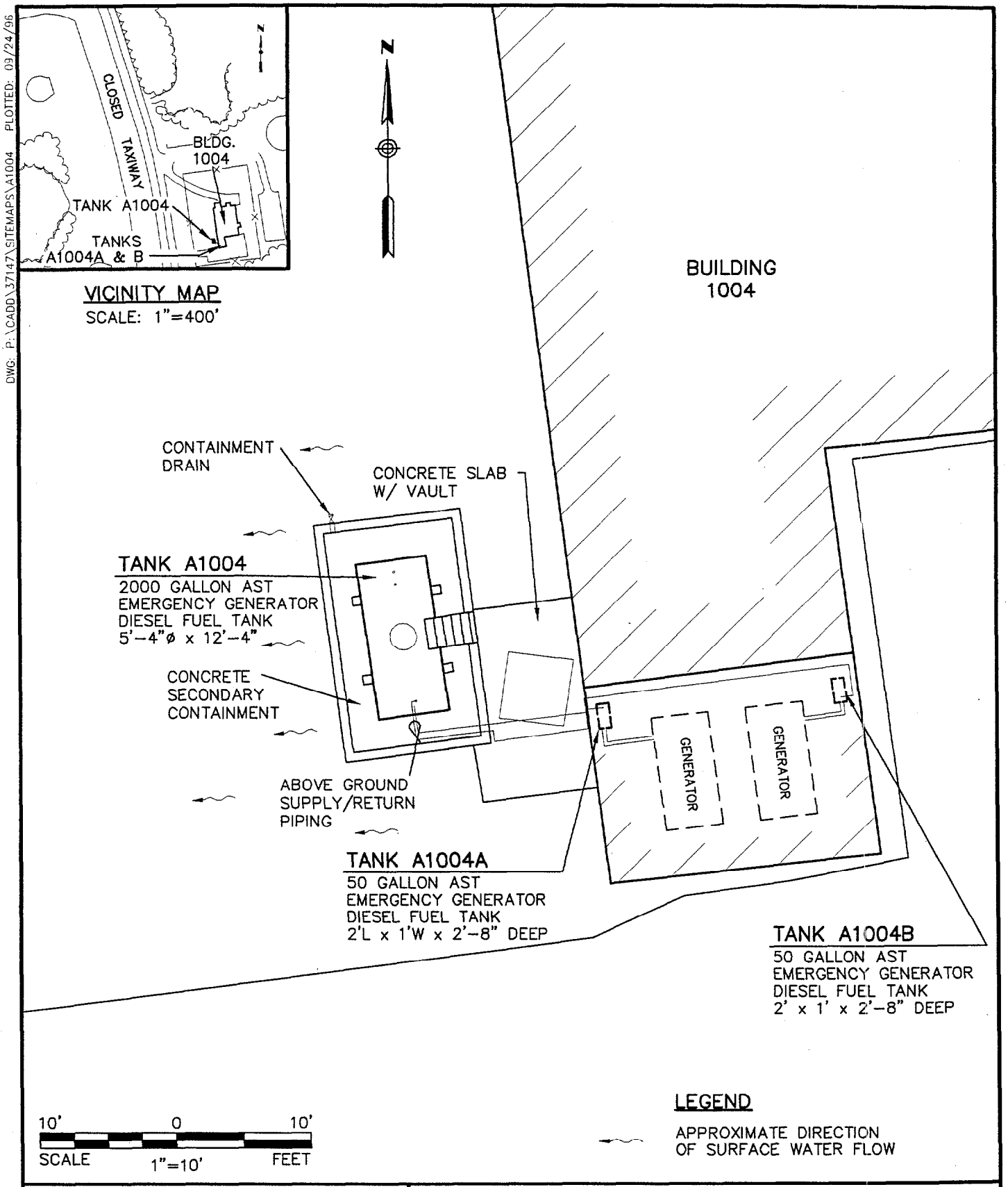
Provide lock for secondary containment by December 31, 1999. Estimated cost $50.00.

Install anti-syphon valve on all aboveground piping routed outside secondary containment by December 31, 1999. Estimated cost $500.00.

Tanks A1004A and B

Inspect tank, piping and site monthly and incorporate into SPCC Plan by January 1, 1998.

Recommend painting piping to provide corrosion protection. Estimated cost $100.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.10

SITE MAP OF TANKS A1004, A1004A AND A1004B
BOCA CHICA FIELD
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.11 Ground Electronic Transmitter - Building A1006 (Tank A1006)

6.11.1 General Information

The Ground Electronic Transmitter Site A1006 is located on Midway Avenue on the northeast side of Boca Chica Field. Geiger Key and saltwater flats bound this site to the south and east. Tank A1006 is located on the north side of building A1006 in a 2' deep concrete valved secondary containment. Diesel fuel from this 300-gallon AST provides fuel for the transmitter site's emergency generator.

6.11.2 Specific Tank Information

Tank ID A1006 - AST	
Year of Installation	1969
Size	300-gallons
Contents	Emergency Generator Diesel
Throughput	64 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Single-walled unpainted steel on supports None; not required Concrete secondary containment; manual gauging
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground unpainted steel None; not required None; not required
Leak Detection - Tank - Piping - Site	 SPCC SPCC SPCC
Integrity Testing	Data not available; not required

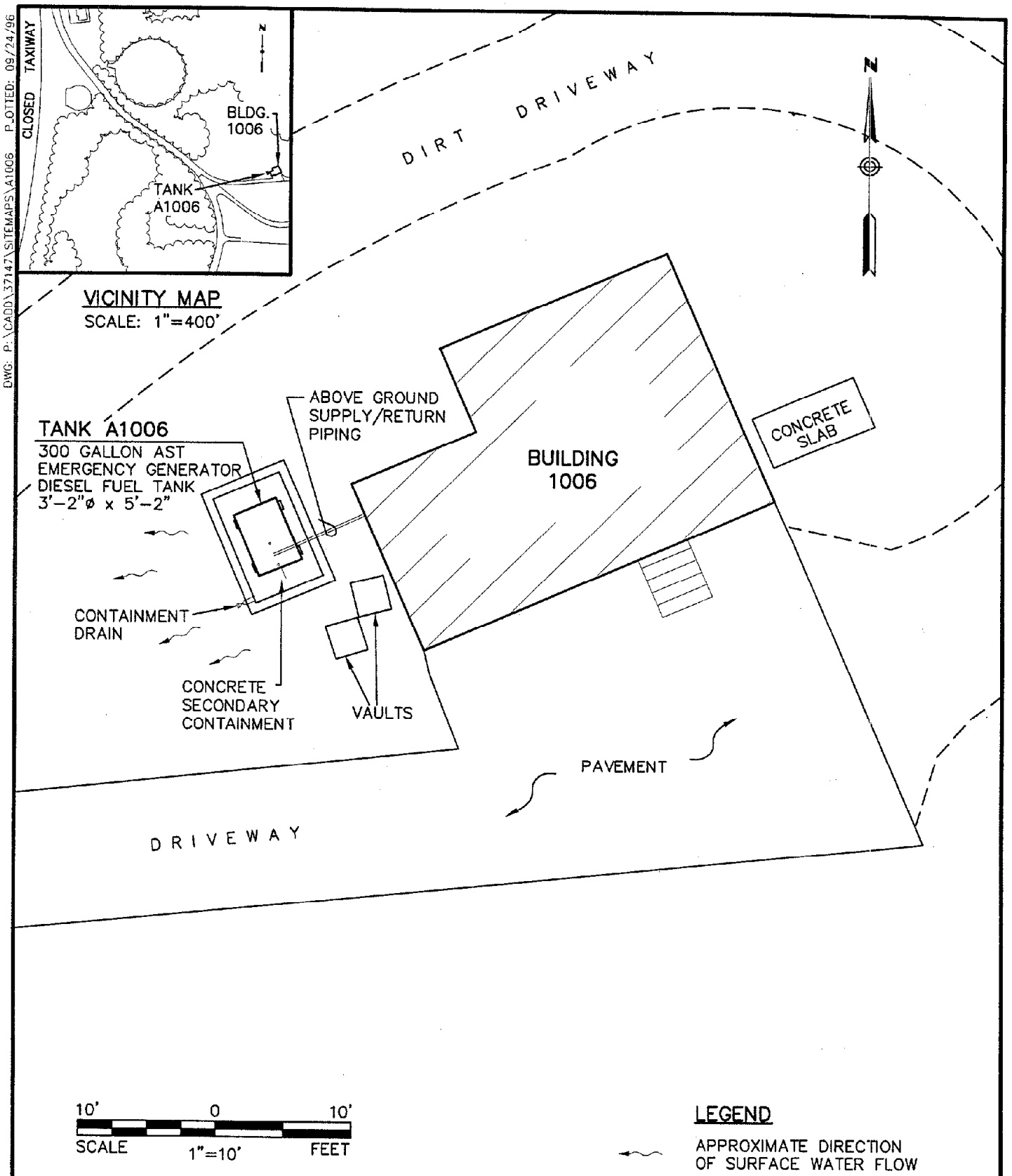
6.11.3 Regulatory Compliance Requirements

Tank A1006

Recommend installation of an anti-syphon valve on all aboveground piping routed outside secondary containment. Estimated cost $500.00.

Recommend painting piping to provide corrosion protection. Estimated cost $100.00.

Recommend painting tank to provide corrosion protection. Estimated cost $400.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.11

SITE MAP OF TANK A1006
BOCA CHICA FIELD
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147

OCTOBER, 1996

6.12 Naval Communication/Message Administration (Tank A1019A)

6.12.1 General Information

The Naval Communication/Message Administration Office building A1019 is located on Midway Avenue on the northeast side of Boca Chica Field. Geiger Key and saltwater flats are found to the east of this site. Tank A1019A is a 20-gallon AST on supports within a plastic secondary containment unit. Diesel fuel from this tank is used to fuel an emergency generator that provides power during electrical outages.

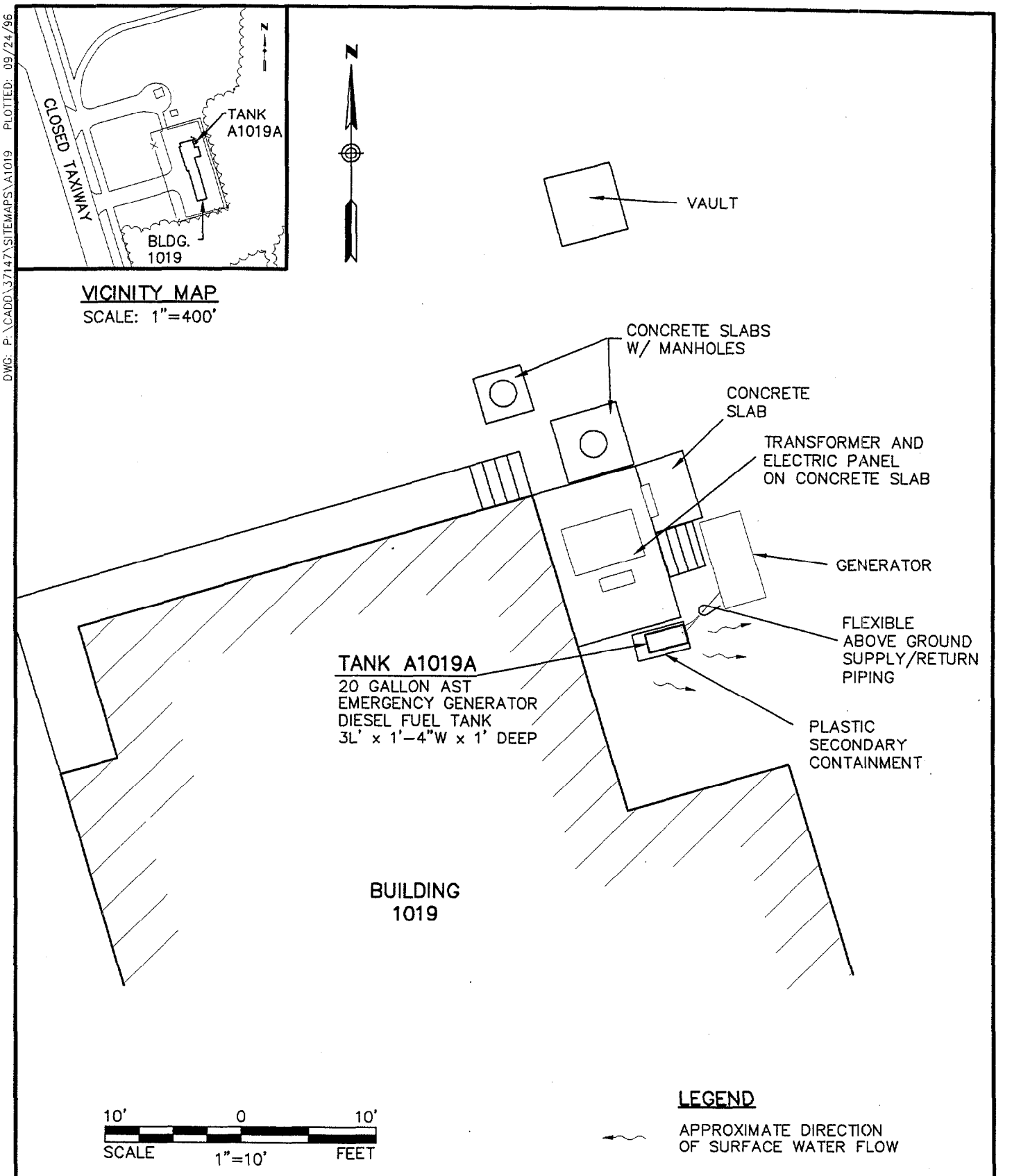
6.12.2 Specific Tank Information

Tank ID A1019A - AST	
Year of Installation	1994
Size	20-gallons
Contents	Emergency Generator Diesel
Throughput	64 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Unpainted aluminum on supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Plastic secondary containment
Piping Construction	
- Type and Material	Aboveground rubber
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	SPCC
- Piping	SPCC
- Site	SPCC
Integrity Testing	Data not available; not required

6.12.3 Regulatory Compliance Requirements

Tank A1019A

Recommend installation of an anti-syphon valve on all aboveground piping routed outside secondary containment. Estimated cost $500.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.12

SITE MAP OF TANK A1019A
BOCA CHICA FIELD
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.13 TACAN - Building A1020 (Tank A1020)

6.13.1 General Information

Tank A1020 is located on the north side of the TACAN building A1020. Building A1020 is located south of Taxiway "G". This 300-gallon AST contains diesel fuel that supplies fuel to the site's emergency generator. A 2' deep valved concrete secondary containment is present to control any spills or leakage.

6.13.2 Specific Tank Information

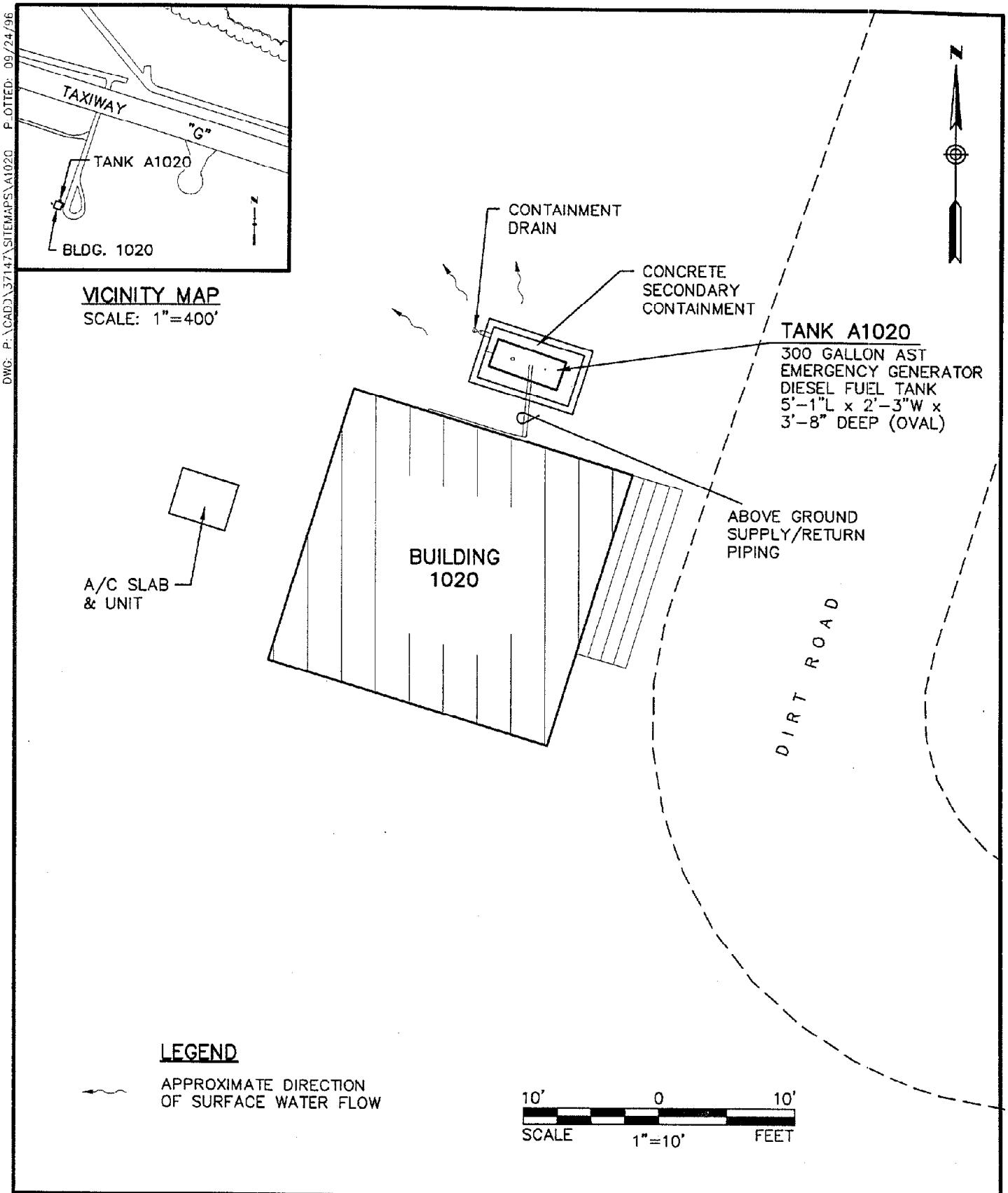
Tank ID A1020 - AST	
Year of Installation	1967
Size	300-gallons
Contents	Emergency Generator Diesel
Throughput	97 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Single-walled painted steel on supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Concrete secondary containment; manual gauging
Piping Construction	
- Type and Material	Aboveground unpainted steel
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	SPCC
- Piping	SPCC
- Site	SPCC
Integrity Testing	Data not available; not required

6.13.3 Regulatory Compliance Requirements

Tank A1020

Recommend installation of an anti-syphon valve on all aboveground piping routed outside secondary containment. Estimated cost $500.00.

Recommend painting piping to provide corrosion protection. Estimated cost $100.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.13

SITE MAP OF TANK A1020
BOCA CHICA FIELD
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.14 Transmitter - Building A1025 (Tank A1025)

6.14.1 General Information

Tank A1025 is a 2,000-gallon aboveground diesel storage tank. A1025 is located on the east side of the Transmitter Building A1025. This tank provides fuel for the emergency generator located inside building A1025. A 2' deep valved concrete secondary containment has been constructed around tank A1025. The transmitter building is located south of Runway 7-25 and north of Runway 13-31.

6.14.2 Specific Tank Information

Tank ID A1025 - AST	
Year of Installation	1960
Size	2,000-gallons
Contents	Emergency Generator Diesel
Throughput	96 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Regulated; FAC 62-762
Florida Registration	Registered
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Single-walled painted steel on supports None; not required Concrete secondary containment; manual gauging; additional required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground unpainted steel None; not required None; required
Leak Detection - Tank - Piping - Site	 SPCC SPCC SPCC
Integrity Testing	Data not available; not required

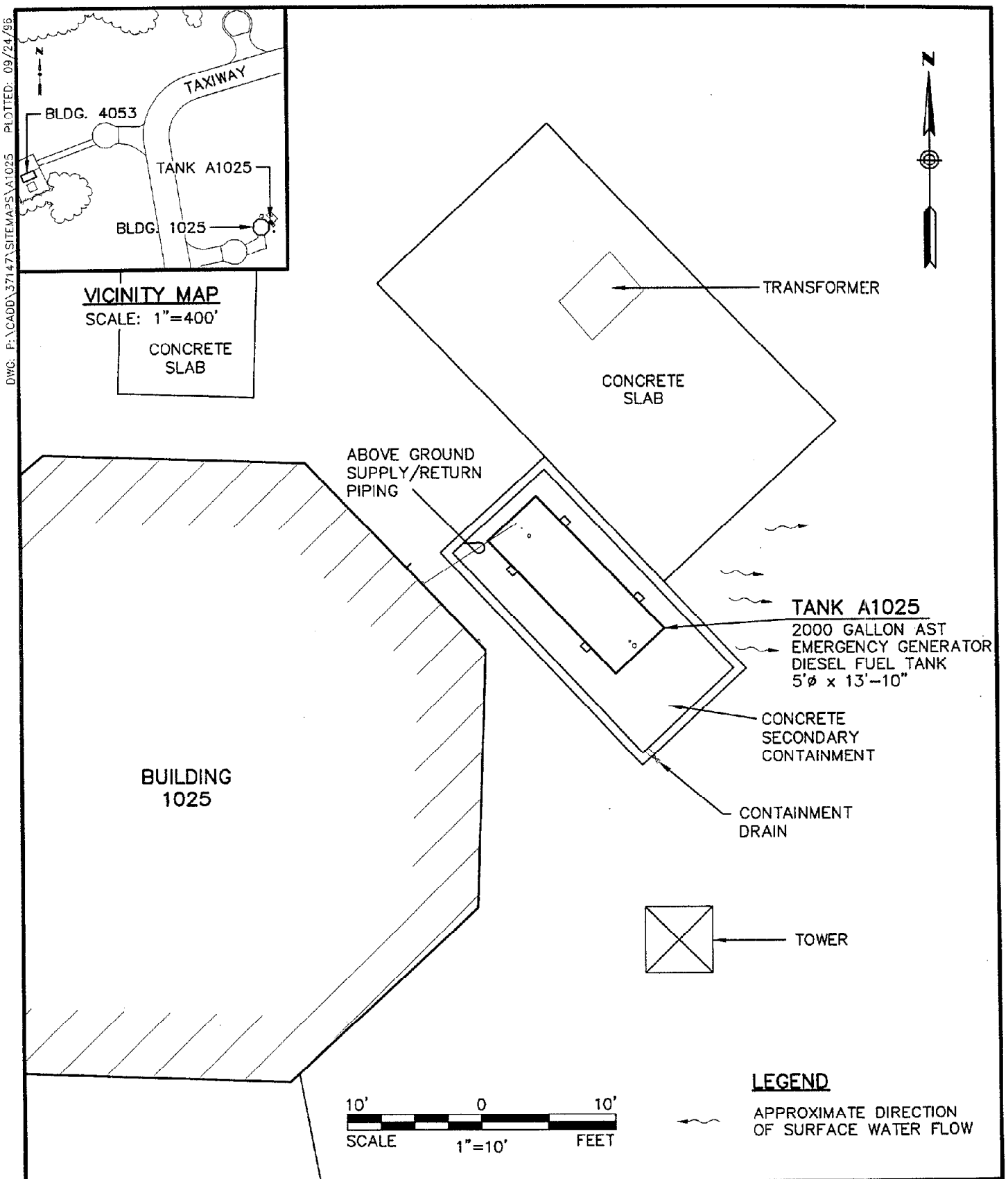
6.14.3 Regulatory Compliance Requirements

Tank A1025

Paint aboveground piping to provide corrosion protection by December 31, 1999. Estimated cost $100.00.

Install anti-syphon valve on all aboveground piping routed outside secondary containment by December 31, 1999. Estimated cost $500.00.

Provide lock for secondary containment by December 31, 1999. Estimated cost $50.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.14

SITE MAP OF TANK A1025
BOCA CHICA FIELD
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.15 Generator Building A1103 (Tank A1103)

6.15.1 General Information

Building A1103 is a generator building located on the southwest side of Boca Chica Field on Midway Avenue. Tank A1103 is found on the south side of building A1103 and provides diesel fuel used as a backup power source for the generators stored in this building. The 1,000-gallon AST occupies a 1'-8" deep valved concrete secondary containment structure.

6.15.2 Specific Tank Information

Tank ID A1103 - AST	
Year of Installation	1965
Size	1,000-gallons
Contents	Emergency Generator Diesel
Throughput	160 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Regulated; FAC 62-762
Florida Registration	Registered
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Single-walled painted steel on supports None; not required Concrete secondary containment; manual gauging; additional required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground unpainted steel None; not required None; required
Leak Detection - Tank - Piping - Site	 SPCC SPCC SPCC
Integrity Testing	Data not available; not required

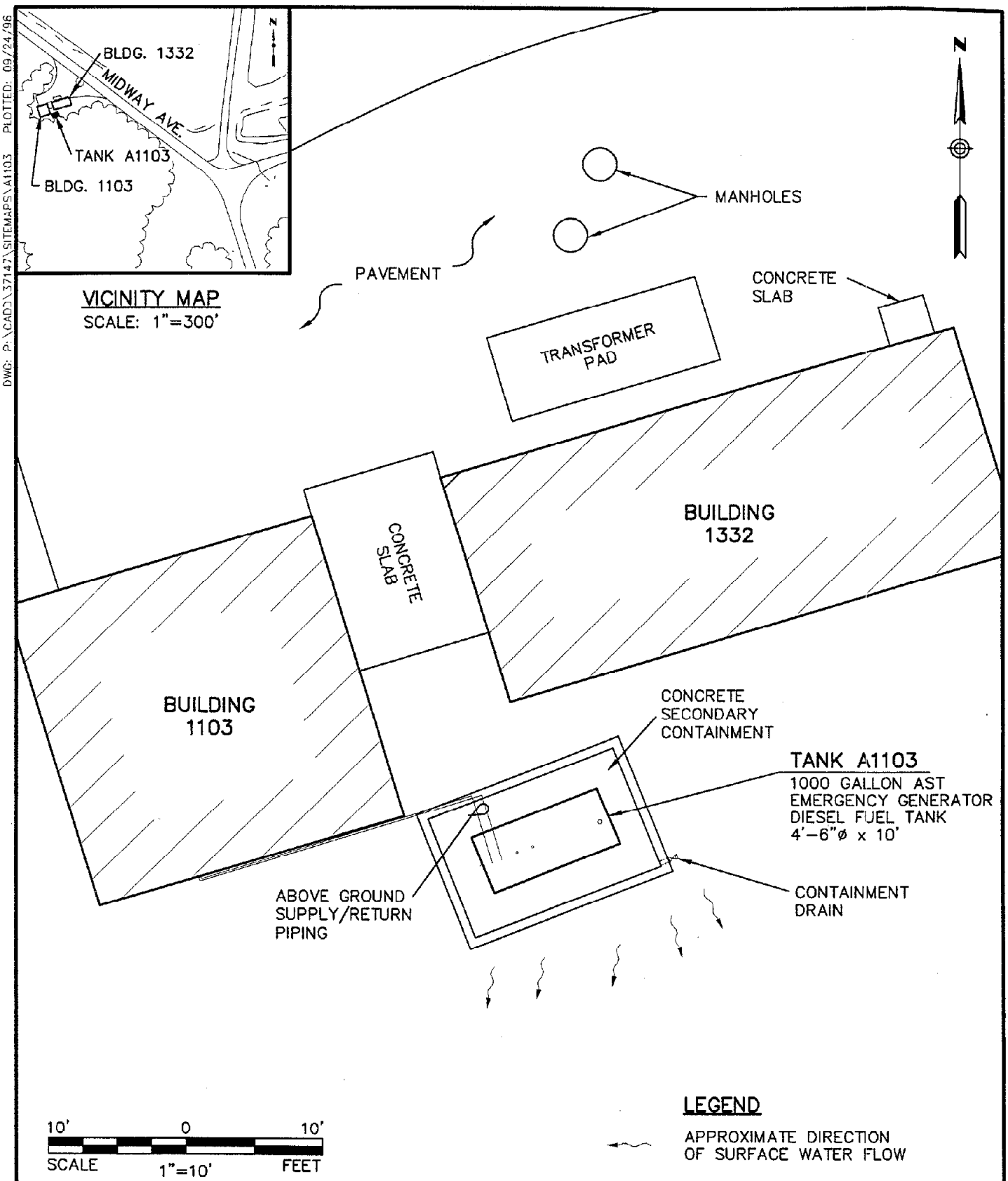
6.15.3 Regulatory Compliance Requirements

Tank A1103

Provide lock for secondary containment by December 31, 1999. Estimated cost $50.00.

Install anti-syphon valve on all aboveground piping routed outside secondary containment by December 31, 1999. Estimated cost $500.00.

Paint aboveground piping to provide corrosion protection by December 31, 1999. Estimated cost $100.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.15

SITE MAP OF TANK A1103
BOCA CHICA FIELD
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.16 Alert Forces - Building A1125 (Tank A1125)

6.16.1 General Information

Tank A1125 is a 300-gallon AST located on the east side of the Alert Forces Building A1125. The Alert Forces building is located east of the Hot Pad and southeast of hangar A936. Tank A1125 is out-of-service but once stored diesel fuel. A 3' deep valved concrete secondary containment is present at this site.

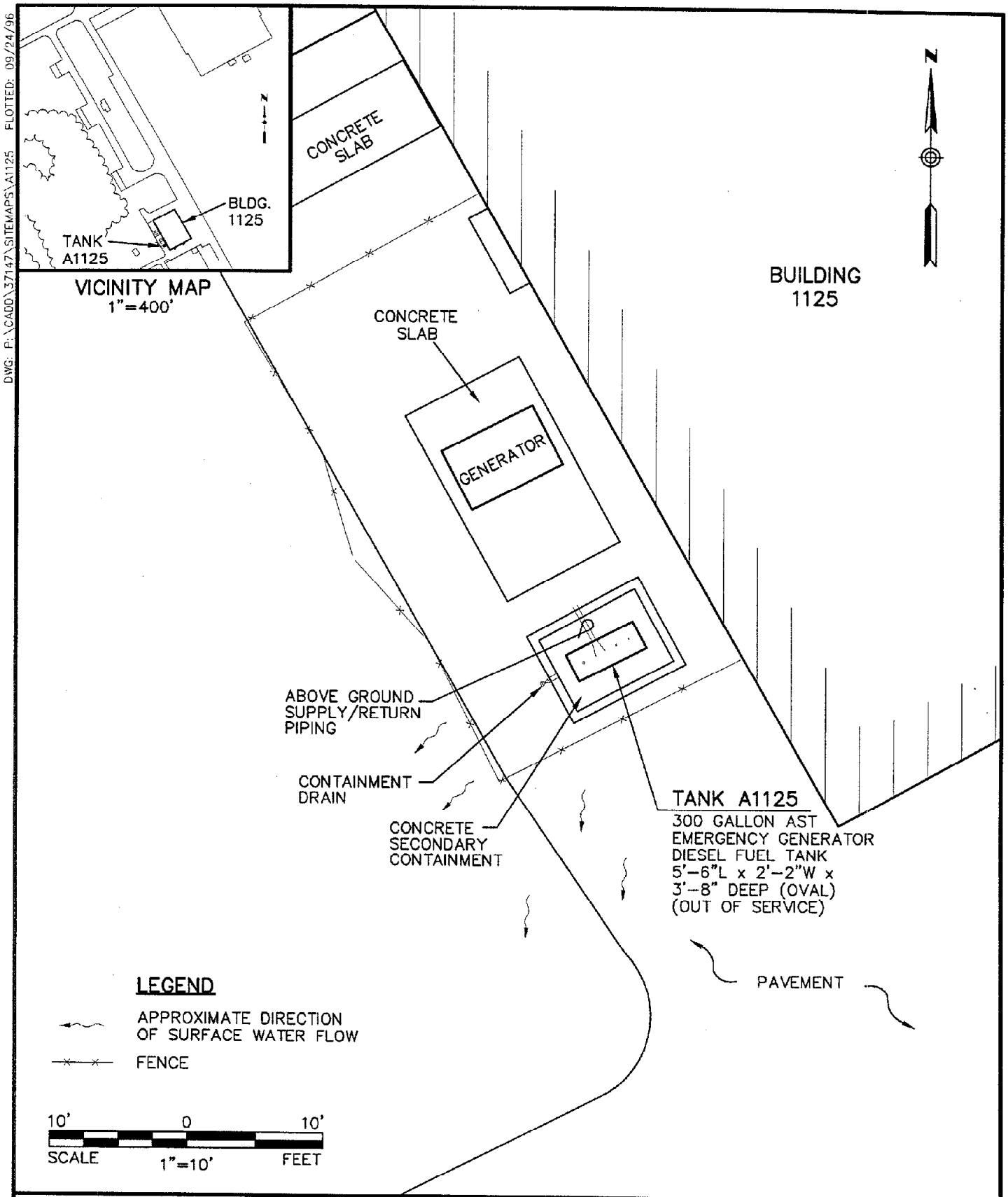
6.16.2 Specific Tank Information

Tank ID A1125 - AST	
Year of Installation	Data not available
Size	300-gallons
Contents	Emergency Generator Diesel
Throughput	0 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	Out-of-Service
Tank Construction	
- Type and Material	Single-walled painted steel on supports
- Cathodic Protection	None; N/A
- Spill/Overfill Prevention	Concrete secondary containment
Piping Construction	
- Type and Material	Aboveground unpainted steel (disconnected)
- Cathodic Protection	None; N/A
- Leak Prevention	None; N/A
Leak Detection	
- Tank	SPCC
- Piping	SPCC
- Site	SPCC
Integrity Testing	Data not available; not required

6.16.3 Regulatory Compliance Requirements

Tank A1125

Recommend closure. Estimated cost $1,500.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.16

SITE MAP OF TANK A1125
BOCA CHICA FIELD
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.17 ASR-8 - Building A4053 (Tank A4053A)

6.17.1 General Information

Building A4053 at the ASR-8 site is located south of Runway 7-25 and east of Runway 13-31. Tank A4053A is located on the east side of the ASR-8 building. This 500-gallon AST contains diesel fuel used to power the site's emergency generator. Tank A4053A occupies a 2'-4" deep valved concrete secondary containment.

6.17.2 Specific Tank Information

Tank ID A4053A - AST	
Year of Installation	Data not available
Size	500-gallons
Contents	Emergency Generator Diesel
Throughput	733 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	Registered
Status	In- Service
Tank Construction	
- Type and Material	Single-walled painted steel on supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Concrete secondary containment
Piping Construction	
- Type and Material	Aboveground unpainted steel
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	None; required
- Piping	None; required
- Site	None; required
Integrity Testing	Data not available; not required

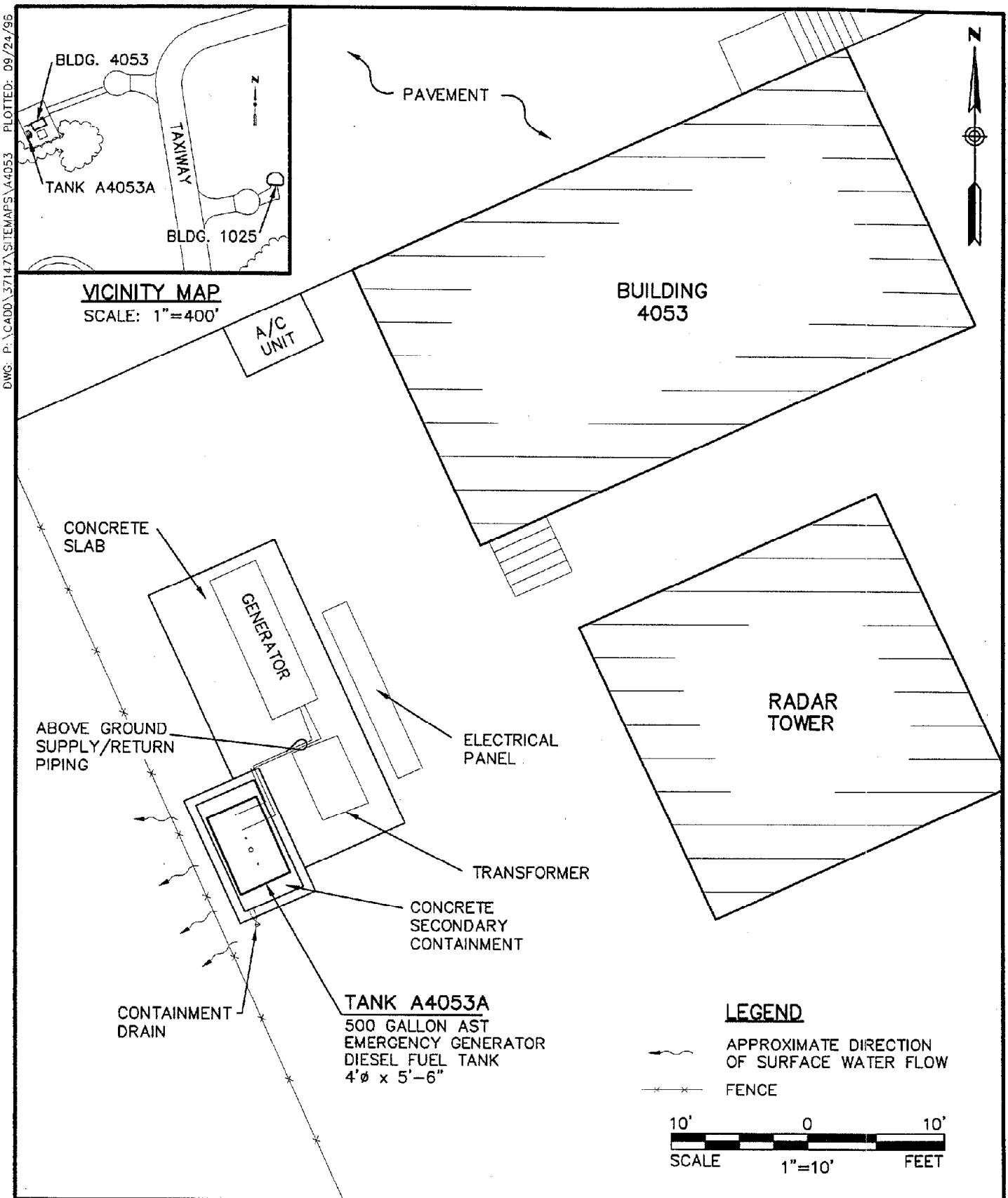
6.17.3 Regulatory Compliance Requirements

Tank A4053A

Inspect tank, piping and site monthly and incorporate into SPCC Plan by January 1, 1998.

Recommend installation of an anti-syphon valve on all aboveground piping routed outside secondary containment. Estimated cost $500.00.

Recommend painting piping to provide corrosion protection. Estimated cost $100.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.17

SITE MAP OF TANK A4053A
BOCA CHICA FIELD
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147

OCTOBER, 1996

6.18 PAR - Building A4054 (Tank A4054)

6.18.1 General Information

Tank A4054 is located on the southeast side of building A4054 at the PAR site. Building A4054 is located southeast of Runway 3-21, northeast of Runway 13-31 and northwest of Runway 7-25. Tank 4054 is a 500-gallon AST in a 2'-3" deep valved concrete secondary containment. Diesel fuel contained in this tank provides fuel to the emergency generator in building A4054.

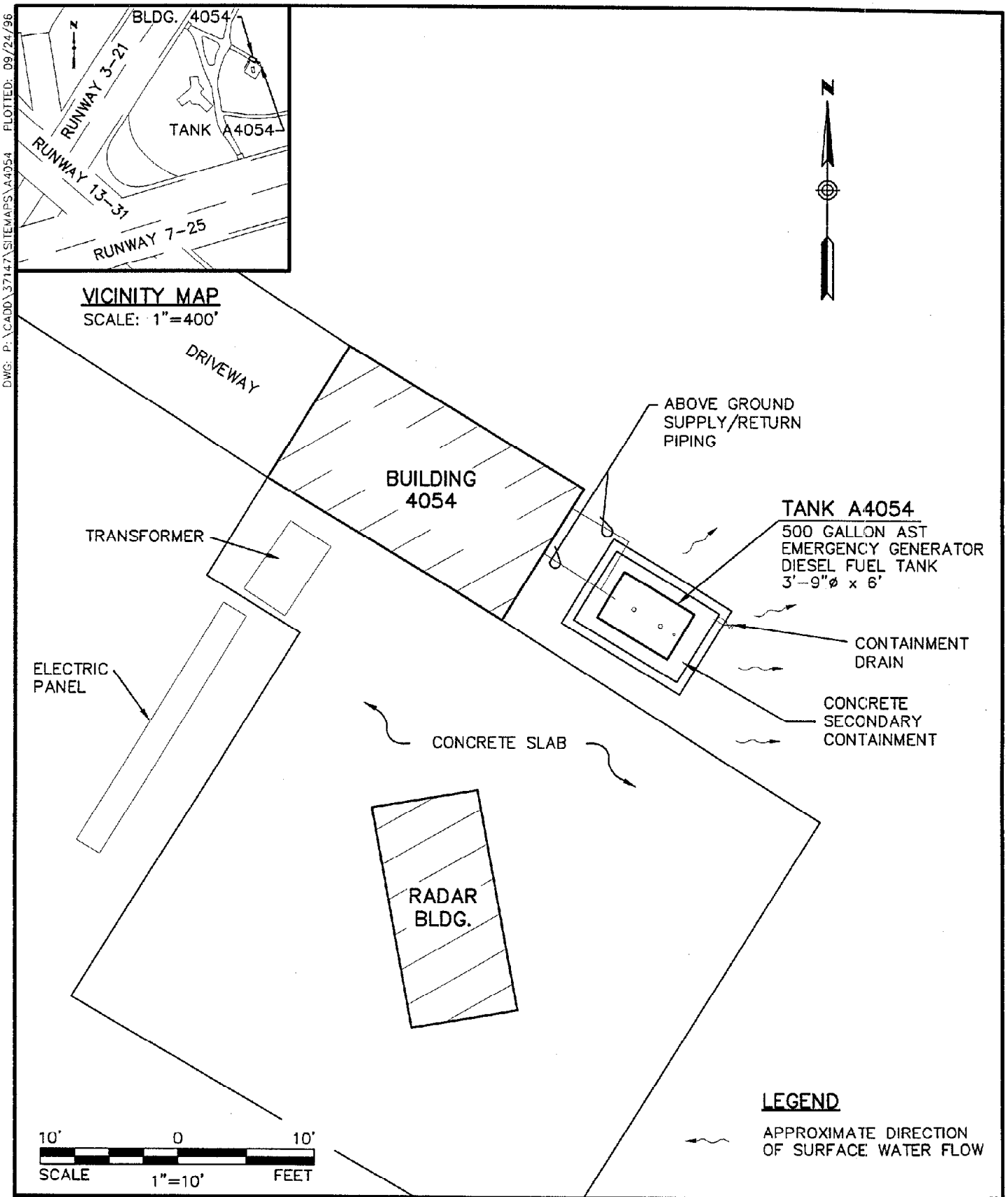
6.18.2 Specific Tank Information

Tank ID A4054 - AST	
Year of Installation	Data not available
Size	500-gallons
Contents	Emergency Generator Diesel
Throughput	94 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In- Service
Tank Construction	
- Type and Material	Single-walled painted steel on supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Concrete secondary containment; manual gauging
Piping Construction	
- Type and Material	Aboveground painted steel
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	SPCC
- Piping	SPCC
- Site	SPCC
Integrity Testing	Data not available; not required

6.18.3 Regulatory Compliance Requirements

Tank A4054

Recommend installation of an anti-syphon valve on all aboveground piping routed outside secondary containment. Estimated cost $500.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.18

SITE MAP OF TANK A4054
BOCA CHICA FIELD
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147

OCTOBER, 1996

6.19 TACTS - Building A4082 (Tank A4082)

6.19.1 General Information

The TACTS facility A4082 is located on Midway Avenue north of Runway 7-25. Tank A4082 is located on an elevated concrete slab on the northwestern side of the building. Diesel fuel from this tank supplies fuel to the facilities emergency generator found west of the AST. Tank A4082 is a 500-gallon double-walled vaulted tank with a fill level gauge.

6.19.2 Specific Tank Information

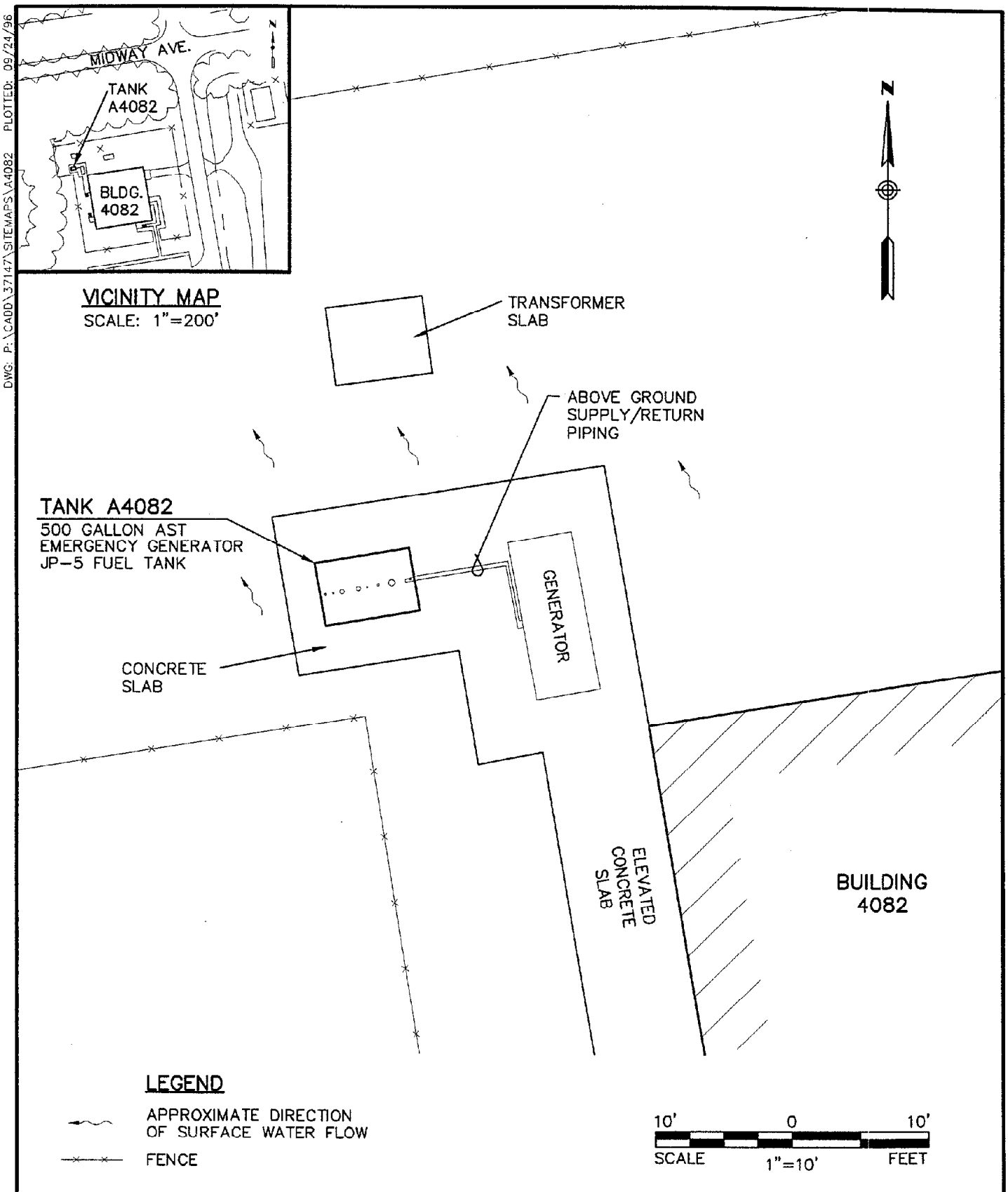
Tank ID A4082 - AST	
Year of Installation	1994
Size	500-gallons
Contents	Emergency Generator Diesel (JP-5)
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In- Service
Tank Construction	
- Type and Material	Vaulted steel
- Cathodic Protection	None; N/A
- Spill/Overfill Prevention	Spill containment; level gauge
Piping Construction	
- Type and Material	Aboveground painted steel
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	None; required
- Piping	None; required
- Site	None; required
Integrity Testing	Data not available; not required

6.19.3 Regulatory Compliance Requirements

Tank A4082

Inspect tank, piping and site monthly and incorporate into SPCC Plan by January 1, 1998.

Recommend installation of an anti-syphon valve on all aboveground piping routed outside secondary containment. Estimated cost $500.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.19

SITE MAP OF TANK A4082
BOCA CHICA FIELD
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.20 Taxiway "A" Compressed Air Station (Tank A4165)

6.20.1 General Information

Tank A4165 is located north of Taxiway "A" and south of hanger A936 and the Hot Pad. Diesel fuel from this 1,000-gallon AST is used to provide fuel to the compressed air station's emergency generator. Leakage or spills from Tank A4165 are contained within a 2' deep concrete secondary containment.

6.20.2 Specific Tank Information

Tank ID A4165 - AST	
Year of Installation	Data not available
Size	1000-gallons
Contents	Emergency Generator Diesel
Throughput	19 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Regulated; FAC 62-762
Florida Registration	None; registration required
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Single-walled painted steel on supports None; not required Concrete secondary containment (no valve) ; additional required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground painted steel None; not required None; required
Leak Detection - Tank - Piping - Site	 None; required None; required None; required
Integrity Testing	Data not available; not required

6.20.3 Regulatory Compliance Requirements

Tank A4165

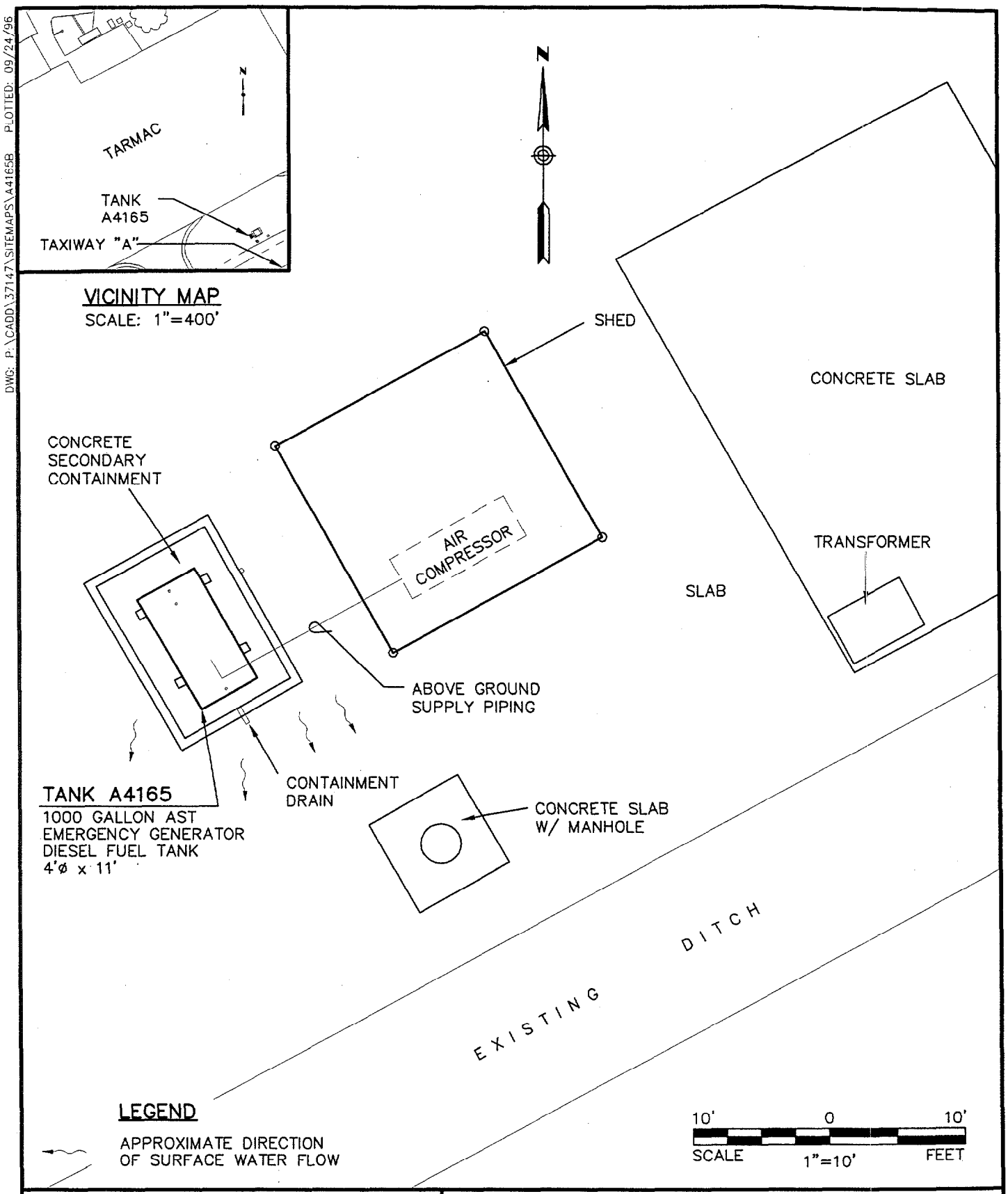
Provide drain valve with lock for secondary containment by January 1, 1998. Estimated cost $550.00.

Inspect tank, piping and site monthly and incorporate into SPCC Plan by January 1, 1998.

Provide manual tank gauging by December 31, 1999.

Install anti-syphon valve on all aboveground piping routed outside secondary containment by December 31, 1999. Estimated cost $500.00.

Register tank with FDEP.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.20

SITE MAP OF TANK A4165
BOCA CHICA FIELD
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.21 Taxiway "A" Compressed Air Station (Tank A4165A)

6.20.1 General Information

Tank A4165A is located north of Taxiway "A" and south of hangar A936 and the Hot Pad. This tank is presently out-of-service but when in use provides diesel fuel for an air compressor used in aircraft maintenance. Tank A4165A is a 560-gallon AST with no secondary containment.

6.21.2 Specific Tank Information

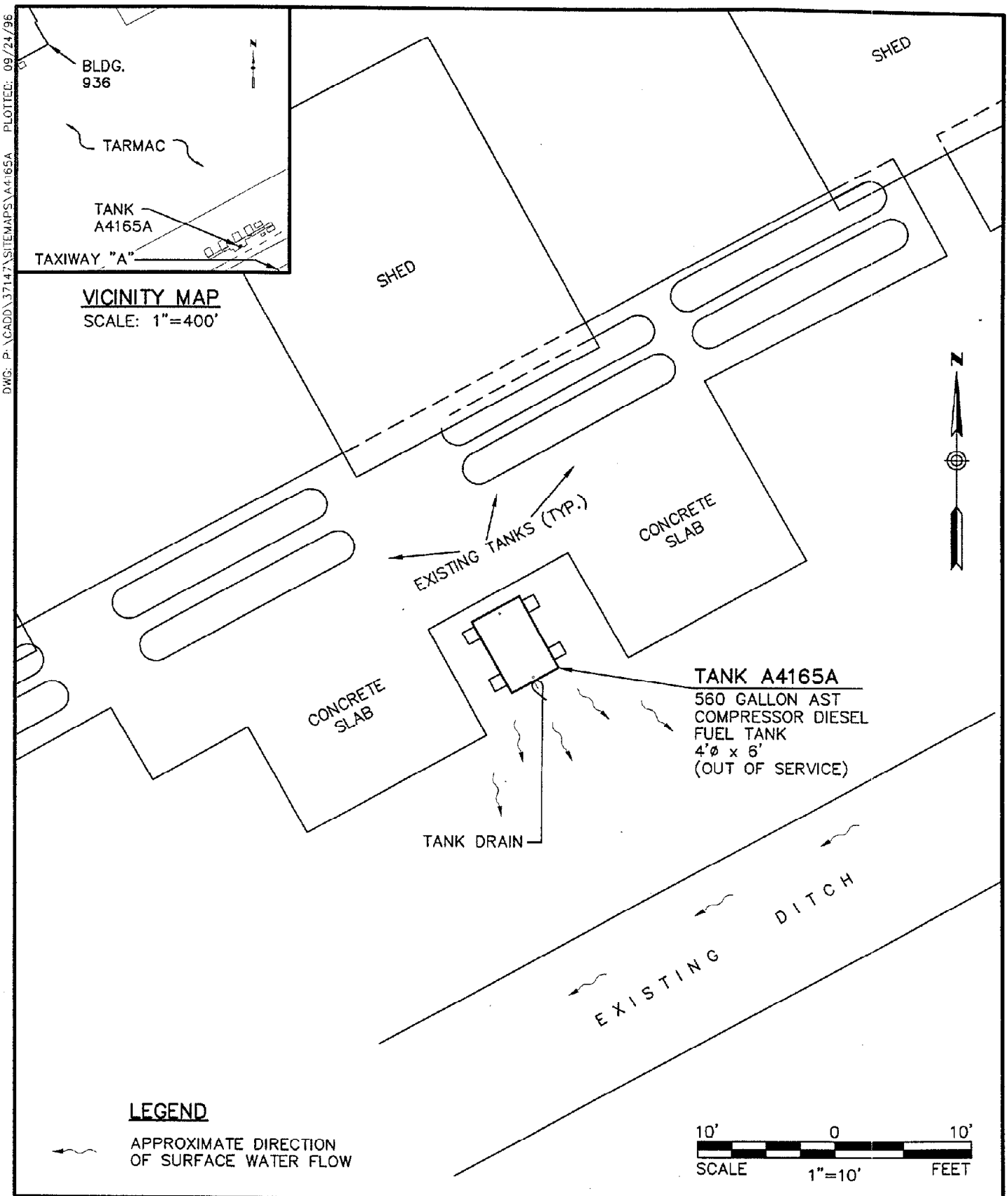
Tank ID A4165A - AST	
Year of Installation	Data not available
Size	560-gallons
Contents	Compressor diesel
Throughput	0 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Regulated; FAC 62-762
Florida Registration	None; registration required
Status	Out-of-Service
Tank Construction	
- Type and Material	Single-walled unpainted steel on supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	None; not required
Piping Construction	
- Type and Material	None
- Cathodic Protection	N/A
- Leak Prevention	N/A
Leak Detection	
- Tank	None; not required
- Piping	N/A
- Site	None; not required
Integrity Testing	Data not available ; not required

6.21.3 Regulatory Compliance Requirements

Tank A4165A

Recommend closure and closure assessment by January 1, 1998. Estimated cost $1,500.00.

Additional upgrades required if tank is returned to service or not closed.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.21

SITE MAP OF TANK A4165A
BOCA CHICA FIELD
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.22 Runway Arresting Gear

6.22.1 General Information

Boca Chica Field has six pairs (12 units) of arresting gear used for carrier landing practice by aircraft training at NAS Key West. To make maintenance on these units efficient, each arresting gear unit is identical to the other. Therefore, for the purpose of this Plan, only one unit of arresting gear tanks will be discussed. Drawing 37147-1 shows the location of each arresting gear unit. A typical arresting gear unit will consist of three tanks, two ASTs and one UST. An identical unit exists on the other side of the runway. The smallest of the ASTs, a 7-gallon gasoline tank, is used in operation of the arresting gear motor. The larger AST, a 250-gallon ethylene glycol tank, is a storage reservoir for the breaking fluid (ethylene glycol). Breaking fluid is transferred via a pump driven by the gear motor to the 300 gallon UST found under the arresting gear. No secondary containment exist at these sites.

6.22.2 Specific Tank Information

Tank ID AG103A, AG104A, AG233A, AG234A, AG263A, AG264A, AG509A, AG510A, AG759A, AG760A, AG837A and AG840A - AST	
Year of Installation	1979
Size	7-gallons
Contents	Unleaded gasoline
Throughput	182 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Single-walled painted steel on supports None; not required Manual gauging; additional required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground rubber None; not required None; not required

Tank ID AG103A, AG104A, AG233A, AG234A, AG263A, AG264A, AG509A, AG510A, AG759A, AG760A, AG837A and AG840A - AST	
Leak Detection - Tank - Piping - Site	 None; required None; required None; required
Integrity Testing	Data not available; not required

6.22.3 Specific Tank Information

Tank ID AG103B, AG104B, AG233B, AG234B, AG263B, AG264B, AG509B, AG510B, AG759B, AG760B, AG837B and AG840B - AST	
Year of Installation	1979
Size	250-gallons
Contents	Arctic type ethylene glycol hydraulic fluid
Throughput	60 gal/yr
Regulated - Federal	Unregulated
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Single-walled painted steel on supports None; N/A None; N/A
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground rubber None; N/A None; N/A
Leak Detection - Tank - Piping - Site	 None; N/A None; N/A None; N/A
Integrity Testing	Data not available; N/A

6.22.4 Specific Tank Information

Tank ID AG103C, AG104C, AG233C, AG234C, AG263C, AG264C, AG509C, AG510C, AG759C, AG760C, AG837C, and AG840C	
Year of Installation	1979
Size	300-gallons
Contents	Arctic type ethylene glycol hydraulic fluid
Throughput	65 gal/yr
Regulated - Federal	Unregulated
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Single-walled steel in concrete None; N/A None; N/A
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Underground None; N/A None; N/A
Leak Detection - Tank - Piping - Site	None; N/A None; N/A None; N/A
Integrity Testing	Data not available; not required

6.22.5 Regulatory Compliance Requirements

Tanks AG103A, AG104A, AG233A, AG234A, AG263A, AG264A, AG509A, AG510A, AG759A, AG760A, AG837A, and AG340A

Due to the location of these tanks in proximity of the runways and aviation activities, structural secondary containments are not suitable. Therefore, these tanks should be incorporated into NAS Key West's SPCC Plan by January 1, 1998 and provided a "Strong"

Oil Spill Contingency Plan for protection of nearby environmentally sensitive areas. Inspect tank, piping and site at least monthly.

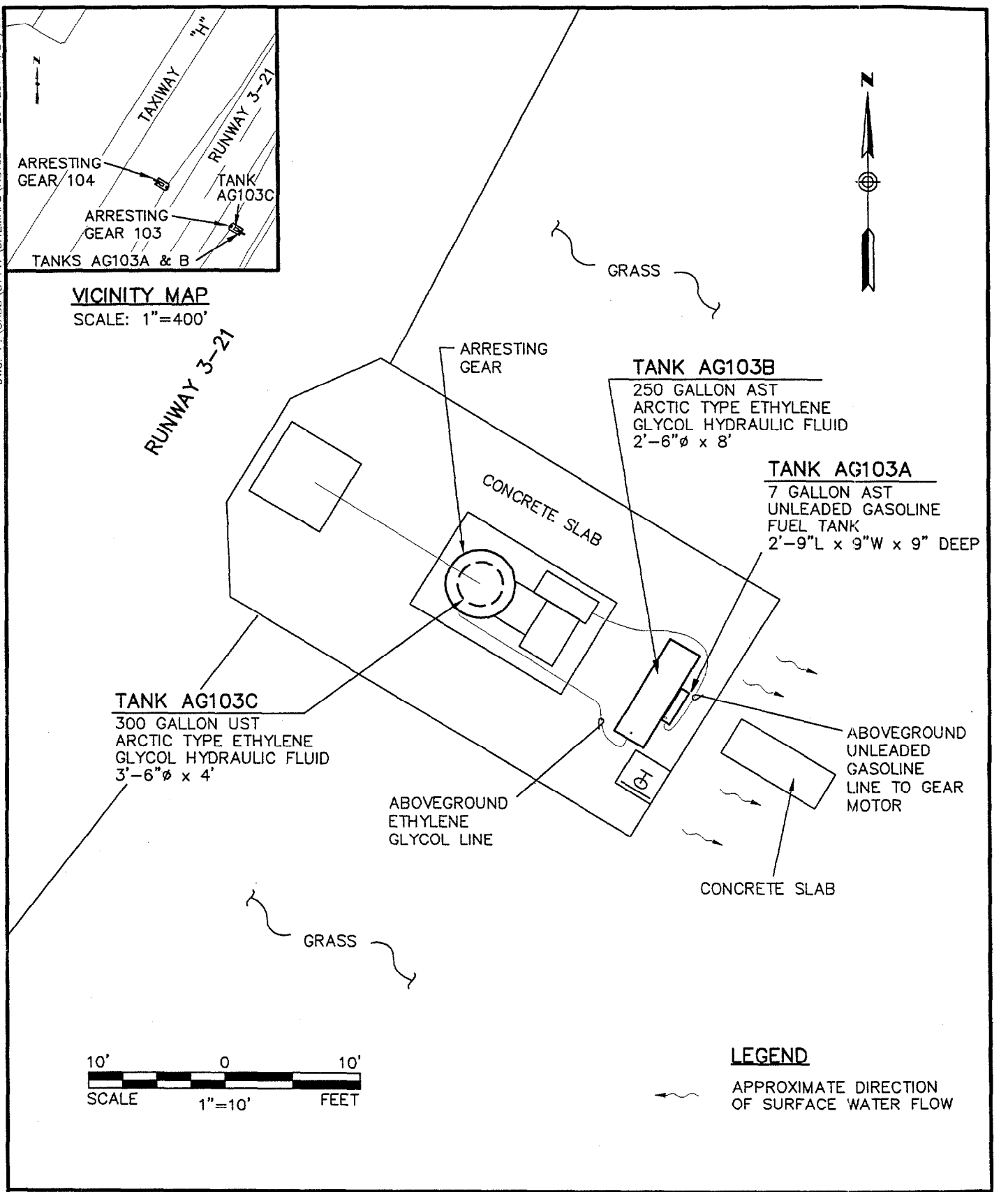
Tanks AG103B, AG104B, AG233B, AG234B, AG263B, AG264B, AG509B, AG510B, AG759B, AG760B, AG837B, and AG340B

These tanks are considered hydraulic fluid tanks and are therefore exempt from state and federal regulation.

Consideration should be given to providing secondary containment with locking drain valve for these tanks.

Tanks AG103C, AG104C, AG233C, AG234C, AG263C, AG264C, AG509C, AG510C, AG759C, AG760C, AG837C, and AG340C

These tanks are considered hydraulic fluid tanks and are therefore exempt from state and federal regulation.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.22

SITE MAP OF TANKS AG103A, B & C
BOCA CHICA FIELD
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

BOCA CHICA FIELD
INDUSTRIAL AREA

6.23 Fire Station - A132 (Tank A132)

6.23.1 General Information

The Boca Chica Fire Station building A132 is located north of Runway 3-21 and east of Saratoga Avenue. Tank A132 is found on the west side of the station in a 2' deep valved concrete secondary containment. The diesel fuel stored in this 300-gallon aboveground tank is used as an alternative fuel source for the fire station's emergency generator.

6.23.2 Specific Tank Information

Tank ID A132 - AST	
Year of Installation	1961
Size	300-gallons
Contents	Emergency Generator Diesel
Throughput	13 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Single-walled unpainted steel on supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Concrete secondary containment and manual gauging
Piping Construction	
- Type and Material	Aboveground unpainted steel
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	SPCC
- Piping	SPCC
- Site	SPCC
Integrity Testing	Data not available; not required

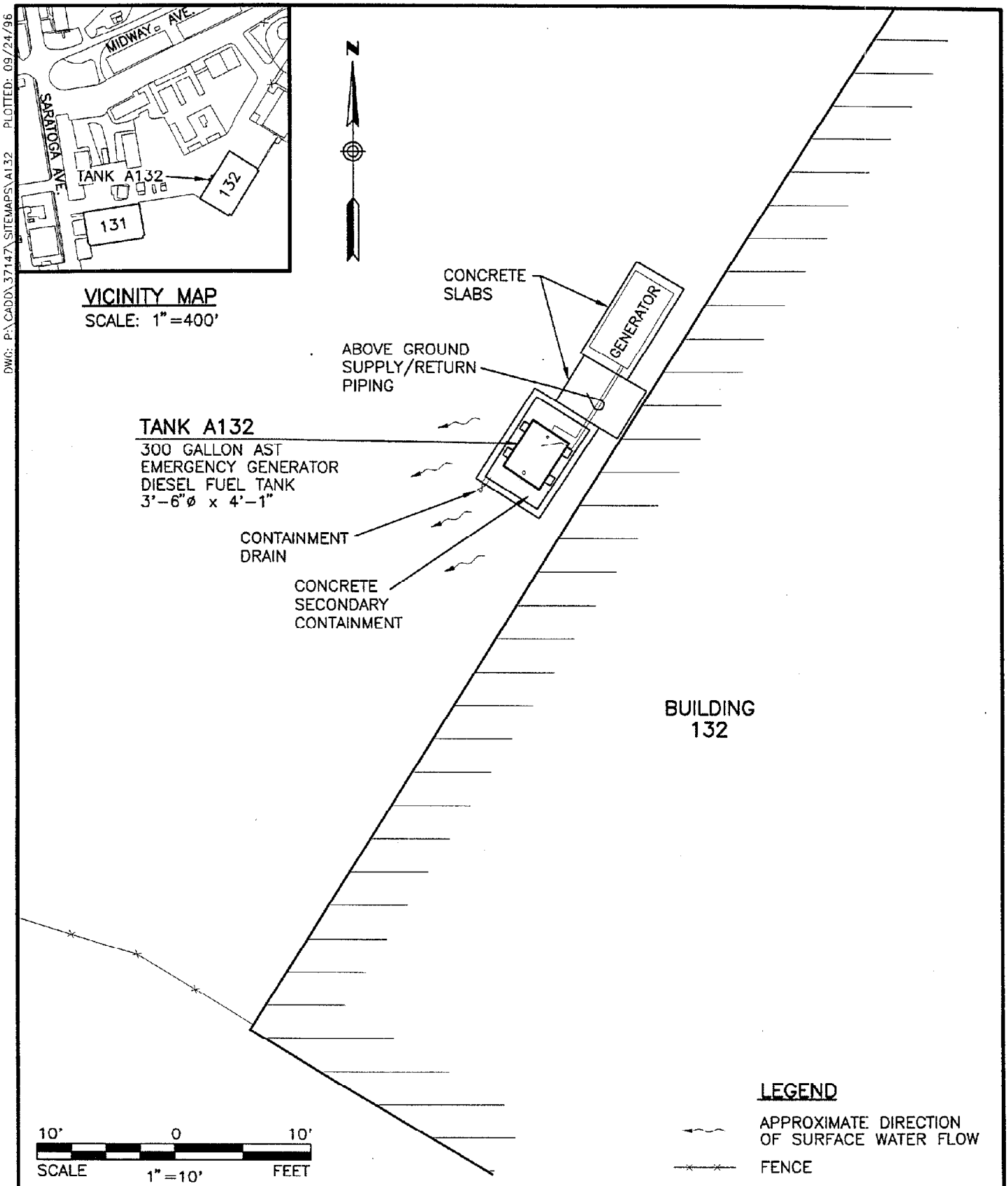
6.23.3 Regulatory Compliance Requirements

Tank A132

Recommend installation of an anti-syphon valve on all aboveground piping routed outside secondary containment. Estimated cost $500.00.

Recommend painting piping to provide corrosion protection. Estimated cost $100.00.

Recommend painting tank to provide corrosion protection. Estimated cost $400.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.23

SITE MAP OF TANK A132
BOCA CHICA FIELD INDUSTRIAL AREA
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.24 Ground Electronic Shop - A225 (Tank A225)

6.24.1 General Information

Building A253 is an emergency generator building located south of the Ground Electronics Facility A225. Building A225 is on the southwest corner of Saratoga and Midway Avenue. Located on the south side of building A253 is tank A225, a 60-gallon diesel fuel tank. Fuel from this tank is used to power the Ground Electronics Facility's emergency generator. No secondary containment is present at this site.

6.24.2 Specific Tank Information

Tank ID A225 - AST	
Year of Installation	1985
Size	60-gallons
Contents	Emergency Generator Diesel
Throughput	64 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Single-walled painted steel on supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Manual gauging; additional required (waived)
Piping Construction	
- Type and Material	Aboveground unpainted steel
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	None; required
- Piping	None; required
- Site	None; required
Integrity Testing	Data not available; not required

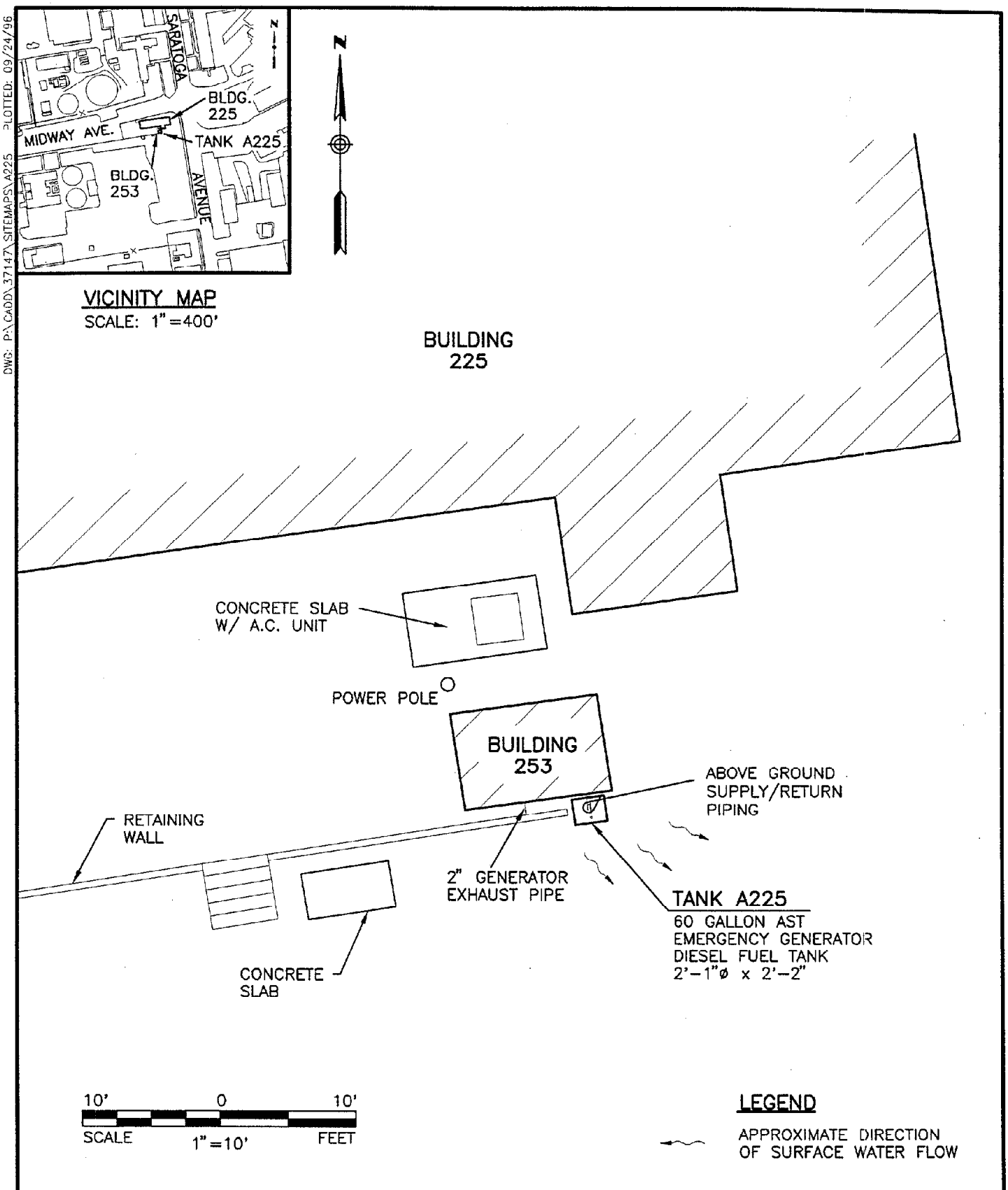
6.24.3 Regulatory Compliance Requirements

Tank A225

40 CFR 112 requires all ASTs to have secondary containment. Due to the location of tank A225, in the event of a release, the likelihood of the spill reaching navigable waters is low. Therefore, no secondary containment is required

Inspect tank, piping and site monthly and incorporate into SPCC Plan by January 1, 1998.

Recommend painting piping to provide corrosion protection. Estimated cost $100.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.24

SITE MAP OF TANK A225
BOCA CHICA FIELD INDUSTRIAL AREA
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.25 Sprinkler System Pump House - A229 (Tank A229A and A229B)

6.25.1 General Information

Building A229 is a Sprinkler System Pump House located west of Saratoga Avenue and south of Midway Avenue. Two 220-gallon ASTs are found on the west side of the pump station. Tanks A229-A and A229-B contain diesel fuel used to power water pumps inside building A229 during electrical outages. No secondary containment is present at this site.

6.25.2 Specific Tank Information

Tank ID A229A - AST	
Year of Installation	Data not available
Size	220-gallons
Contents	Pump Diesel
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Single-walled painted steel on supports None; not required Manual gauging; additional required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground unpainted steel None; not required None; not required
Leak Detection - Tank - Piping - Site	 SPCC SPCC SPCC
Integrity Testing	Data not available; not required

6.25.3 Specific Tank Information

Tank ID A229B - AST	
Year of Installation	Data not available
Size	220-gallons
Contents	Pump Diesel
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Single-walled painted steel on supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Manual gauging; additional required
Piping Construction	
- Type and Material	Aboveground unpainted steel
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	SPCC
- Piping	SPCC
- Site	SPCC
Integrity Testing	Data not available; not required

6.25.4 Regulatory Compliance Requirements

Tanks A229-A and A229-B

Provide secondary containment with locking drain valve by January 1, 1998. Estimated cost $1,500.00.

Recommend painting piping to provide corrosion protection. Estimated cost $100.00.

Recommend installation of an anti-syphon valve on all aboveground piping routed outside secondary containment. Estimated cost $500.00.

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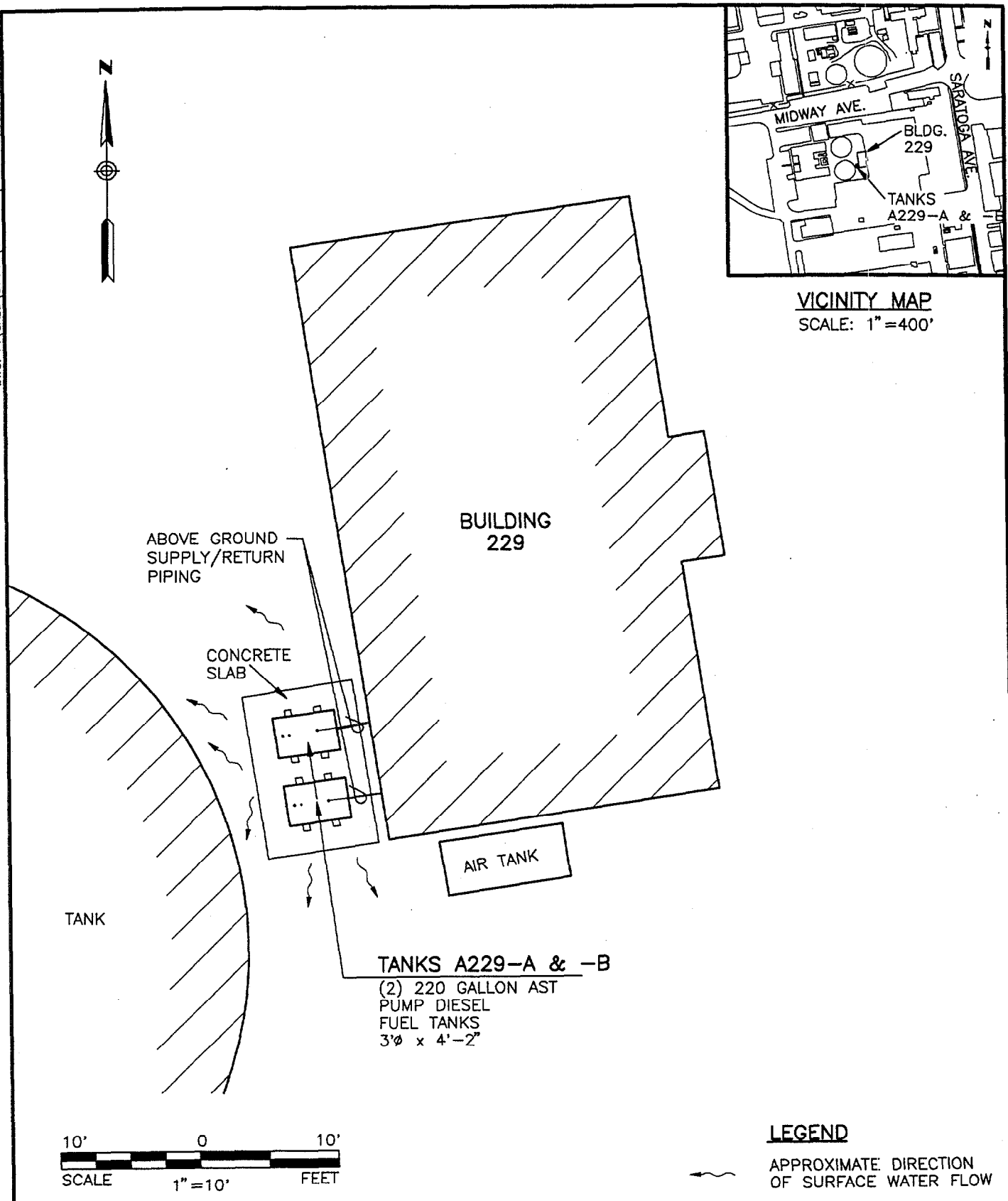


RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.25

SITE MAP OF TANKS A229-A & -B
BOCA CHICA FIELD INDUSTRIAL AREA
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.26 Electrical Distribution Center - Building A230 (Tank A230)

6.26.1 General Information

The Electrical Distribution Center A230 is located north of Runway 3-21 and west of Saratoga Avenue. Tank A230 is found south of building A230 within a 2'-4" deep valved concrete secondary containment. Diesel fuel stored in this 2,000-gallon tank supplies fuel to two emergency generators, one in building A230 and one west of building 4085.

6.26.2 Specific Tank Information

Tank ID A230 - AST	
Year of Installation	1946
Size	2,000-gallons
Contents	Emergency Generator Diesel
Throughput	288 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Regulated; FAC 62-762
Florida Registration	Registered
Status	In-Service
Tank Construction	
- Type and Material	Single-walled painted steel on supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Concrete block secondary containment (not impervious); manual gauging
Piping Construction	
- Type and Material	Aboveground unpainted steel (within secondary containment), underground (to generators)
- Cathodic Protection	None; required
- Leak Prevention	None; required

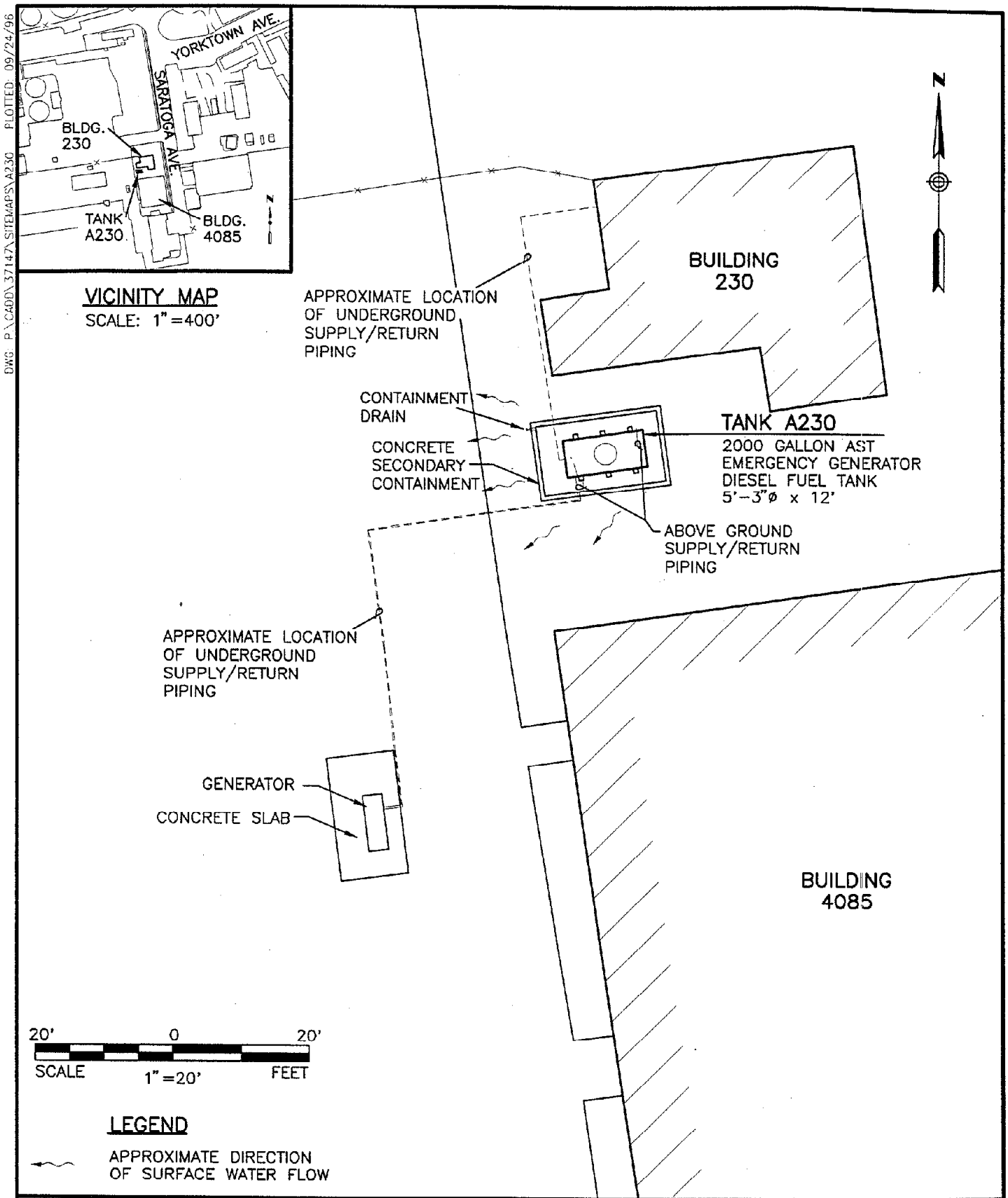
Tank ID A230 - AST	
Leak Detection - Tank - Piping - Site	 SPCC SPCC SPCC
Integrity Testing	Data not available; not required

6.26.3 Regulatory Compliance Requirements

Tank A230

Tank A230 is scheduled for removal and replacement with a vaulted tank under Navy contract no. N62467-96-C-0849. Note: Tank A230 will be replaced with two vaulted tanks (already funded).

Tank closure and removal including assessment must be completed by December 31, 1999. Estimated cost $2,500.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.26

SITE MAP OF TANK A230
BOCA CHICA FIELD INDUSTRIAL AREA
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147

OCTOBER, 1996

6.27 Airfield Control Tower - A244 (Tank A244A)

6.27.1 General Information

Building A244, the Airfield Control Tower, is located north of Runway 3-21 and at the south end of Saratoga Avenue. Located north of building A244 and east of building 4085 is tank A244A. This tank is a 500-gallon aboveground vaulted diesel fuel tank equipped with a high level gauge. Tank A244A provides fuel to the tower's emergency generator during electrical outages.

6.27.2 Specific Tank Information

Tank ID A244A - AST	
Year of Installation	1994
Size	500-gallons
Contents	Emergency Generator Diesel
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Vaulted steel
- Cathodic Protection	None; N/A
- Spill/Overfill Prevention	Level gauge; manual gauging
Piping Construction	
- Type and Material	Aboveground unpainted steel
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	None; required
- Piping	None; required
- Site	None; required
Integrity Testing	Data not available; not required

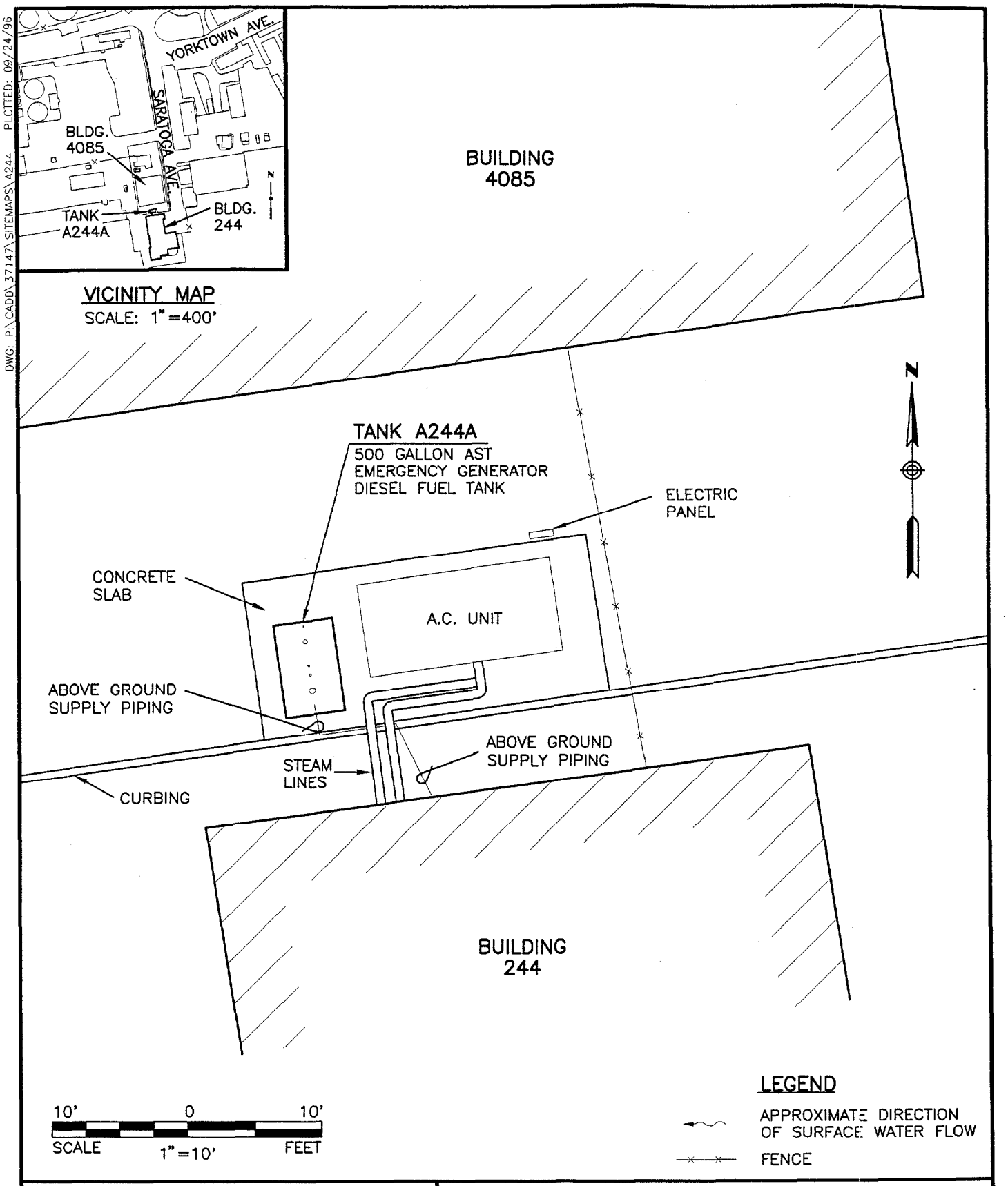
6.27.3 Regulatory Compliance Requirements

Tank A244A

Inspect tank, piping and site monthly and incorporate into SPCC Plan by January 1, 1998.

Recommend installation of an anti-syphon valve on all aboveground piping routed outside secondary containment. Estimated cost $500.00.

Recommend painting piping to provide corrosion protection. Estimated cost $100.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.27

SITE MAP OF TANK A244A
BOCA CHICA FIELD INDUSTRIAL AREA
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.28 Navy Supply Building - A314 (Tank A314)

6.28.1 General Information

The Navy Supply Building A314 is located on the northeast corner of Saratoga and Midway Avenue. Tank A314, a 300-gallon AST, is found on the north side of this facility. Diesel fuel stored in this tank is used as an alternate power source for the building A314 emergency generator during power loss. No secondary containment exists at this site.

6.28.2 Specific Tank Information

Tank ID A314 - AST	
Year of Installation	1980
Size	300-gallons
Contents	Emergency Generator Diesel
Throughput	97 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Single-walled painted steel on supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Manual gauging; additional required
Piping Construction	
- Type and Material	Aboveground unpainted steel
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	SPCC
- Piping	SPCC
- Site	SPCC
Integrity Testing	Data not available, not required

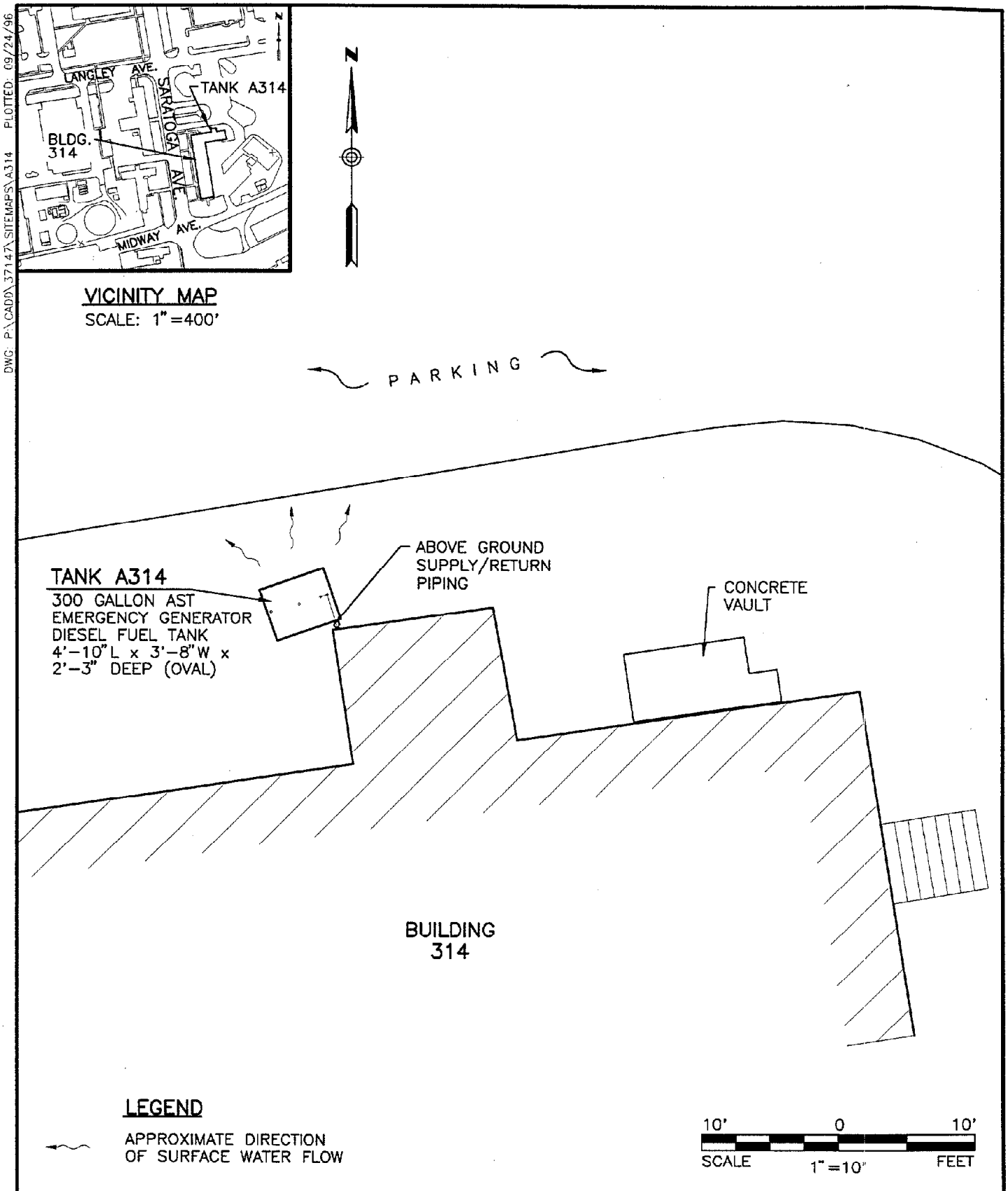
6.28.3 Regulatory Compliance Requirements

Tank A314

Tank A314 is scheduled for removal and replacement with a vaulted tank under Navy contract no. N62467-96-C-0849 (already funded).

Provide secondary containment with locking drain valve or close tank by January 1, 1998. Estimated cost $2,000.00.

Recommend installation of an anti-syphon valve on all aboveground piping routed outside secondary containment if tank not closed. Estimated cost $500.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.28

SITE MAP OF TANK A314
BOCA CHICA FIELD INDUSTRIAL AREA
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147

OCTOBER, 1996

6.29 Boca Chica Service Station - A317 (Tanks A317-G, A317-H, A317-I)

6.29.1 General Information

Building A317 is the Boca Chica Service Station and is located on Langley Avenue south of the Navy Exchange building A322. Tank A317-G is a 6,000-gallon underground vehicular diesel fuel tank located southeast of building A322. Tanks A317-H and 317-I are 6,000-gallon USTs containing vehicular gasoline found east of tank A317-G. Tanks A317-G, A317-H and A317-I are single-walled fiberglass tanks with single-walled fiberglass piping. Tanks A317-H and A317-I are manifolded together. All tanks at this site are equipped with overfill protection. Fuels from these tanks are used to refuel military vehicles and active and retired personnel vehicles. Standard suction dispensing pumps are found to the south.

6.29.2 Specific Tank Information

Tank ID A317-G - UST	
Year of Installation	1974
Size	6000-gallons
Contents	Vehicular Diesel
Throughput	39,220 gal/yr
Regulated - Federal	Regulated; 40 CFR 112; 40 CFR 280
Regulated - Florida	Regulated; FAC 62-761
Florida Registration	Registered
Status	In-Service
Tank Construction	
- Type and Material	Single-walled fiberglass; additional required
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Fill port spill containment; additional required
Piping Construction	
- Type and Material	Underground single-walled fiberglass; additional required
- Cathodic Protection	None; not required
- Leak Prevention	None; not required

Tank ID A317-G - UST	
Leak Detection - Tank - Piping - Site	 Groundwater monitoring; SPCC Groundwater monitoring; SPCC Groundwater monitoring; SPCC
Integrity Testing	February 1996

6.29.3 Specific Tank Information

Tank ID A317-H - UST	
Year of Installation	1974
Size	6000-gallons
Contents	Unleaded gasoline
Throughput	50,650 gal/yr
Regulated - Federal	Regulated; 40 CFR 112; 40 CFR 280
Regulated - Florida	Regulated; FAC 62-761
Florida Registration	Registered
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Single-walled fiberglass; additional required None; not required Fill port spill containment; additional required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Underground single-walled fiberglass; additional required None; not required None; not required
Leak Detection - Tank - Piping - Site	 Groundwater monitoring; SPCC Groundwater monitoring; SPCC Groundwater monitoring; SPCC
Integrity Testing	February 1996

6.29.4 Specific Tank Information

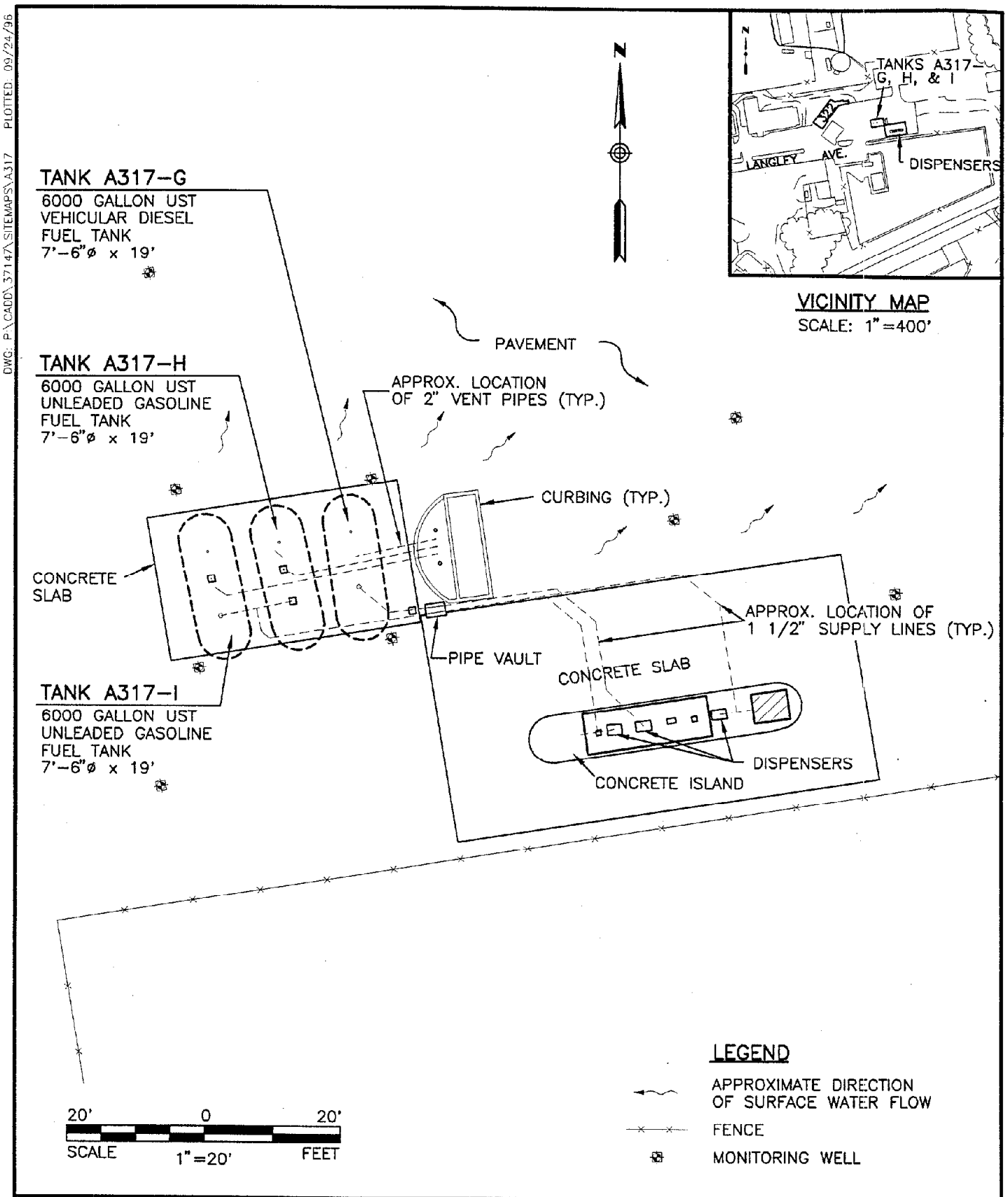
Tank ID A317-I - UST	
Year of Installation	1974
Size	6000-gallons
Contents	Unleaded Gasoline
Throughput	50,650 gal/yr
Regulated - Federal	Regulated; 40 CFR 112; 40 CFR 280
Regulated - Florida	Regulated; FAC 62-761
Florida Registration	Registered
Status	In-Service
Tank Construction	
- Type and Material	Single-walled fiberglass; additional required
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Fill port spill containment; additional required
Piping Construction	
- Type and Material	Underground single-walled fiberglass; additional required
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	Groundwater monitoring; SPCC
- Piping	Groundwater monitoring; SPCC
- Site	Groundwater monitoring; SPCC
Integrity Testing	February 1996

6.29.5 Regulatory Compliance Requirements

Tanks A317-G, A317-H, and A317-I

These tanks are scheduled for removal and replacement with vaulted tanks under Navy contract no. N62467-96-C-0849 (already funded).

Tank closure and removal including closure assessment must be completed by December 31, 2000. Estimated cost per tank $6,000.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.29

SITE MAP OF TANKS A317-G,H AND I
BOCA CHICA FIELD INDUSTRIAL AREA
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147

OCTOBER, 1996

6.30 CARIBROC - A325 (Tanks A325-1 and A325-3)

6.30.1 General Information

Building A325, the CARIBROC facility, is located on Forrestal Street east of Saratoga Avenue. Two ASTs are found on the east side of this building. Tank A325-1 is a 20,000-gallon tank containing diesel fuel. Fuel from this tank feeds tank A325-3 located inside building A325. A325-3 in turn supplies the facility's emergency generators during power loss. A 5' deep valved concrete impoundment provides secondary containment for tank A325-1. Due to tank A325-3 being supported from the ceiling of building A325, no secondary containment exists.

6.30.2 Specific Tank Information

Tank ID A325-1 - AST	
Year of Installation	1963
Size	20,000-gallons
Contents	Emergency Generator Diesel
Throughput	193 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Regulated; FAC 62-762
Florida Registration	Registered
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Single-walled painted steel on supports None; not required Concrete secondary containment; manual gauging; additional required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground unpainted steel None; not required None; not required
Leak Detection - Tank - Piping - Site	 SPCC SPCC SPCC
Integrity Testing	Data not available; not required

6.30.3 Specific Tank Information

Tank ID A325-3 - AST	
Year of Installation	1963
Size	250-gallons
Contents	Emergency Generator Diesel
Throughput	193 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Single-walled painted steel hanging from ceiling of building
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	None; required (waived)
Piping Construction	
- Type and Material	Aboveground painted steel
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	SPCC
- Piping	SPCC
- Site	SPCC
Integrity Testing	Data not available; not required

6.30.4 Regulatory Compliance Requirements

Tank A325-1

Install tank level gauge by December 31, 1999. Estimated cost $2000.00

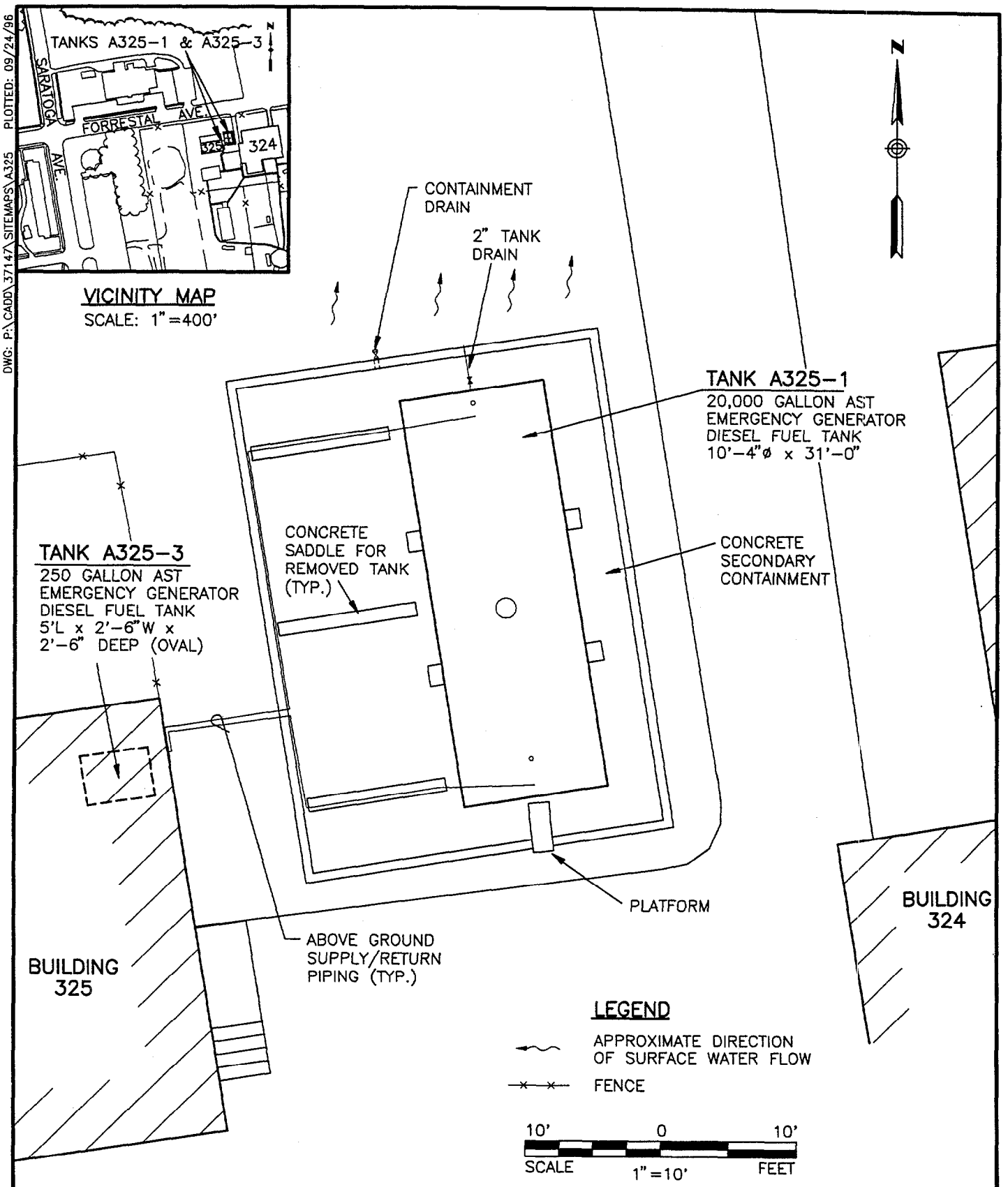
Install anti-syphon valve on all aboveground piping routed outside secondary containment by December 31, 1999. Estimated cost $500.00.

Paint aboveground piping to provide corrosion protection by December 31, 1999. Estimated

cost $100.00.

Tank A325-3

40 CFR 112 requires all ASTs to have secondary containment. Due to the location of tank A325, in the event of a release, the likelihood of the spill reaching navigable waters is low. Therefore, no secondary containment is required.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.30

SITE MAP OF TANKS A325-1 & A325-3
BOCA CHICA FIELD INDUSTRIAL AREA
NAVAL AIR STATION - KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.31 Federal Aviation Administration Radar Facility - A328 (Tank A328)

6.31.1 General Information

The Radar Facility found in building A328 is located east of Saratoga Avenue and south of building A325. Located to the west of the Radar Facility is tank A328. This 2,300-gallon diesel fuel tank is in a 4' deep valved concrete secondary containment. Fuel from tank A328 is used to operate the facility's emergency generator during electrical outages.

6.31.2 Specific Tank Information

Tank ID A328 - AST	
Year of Installation	1968
Size	2,300-gallons
Contents	Emergency Generator Diesel
Throughput	320 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Regulated; FAC 62-762
Florida Registration	Registered
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Single-walled painted steel on supports None; not required Concrete secondary containment; manual gauging; additional required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground painted steel (to 1' outside containment), underground (to generator); additional required None; required (if steel) None; required
Leak Detection - Tank - Piping - Site	 SPCC SPCC; additional required SPCC; additional required
Integrity Testing	Data not available; not required

6.31.3 Regulatory Compliance Requirements

Tank A328

Provide double-walled pipe with interstitial monitoring or monitoring wells by January 1, 1998.

If monitoring wells are installed to satisfy the release detection requirements provide either double-walled fiberglass pipe or cathodically protected steel pipe by December 31, 1999.

Estimated cost (double-walled piping with monitoring) $2,000.00.

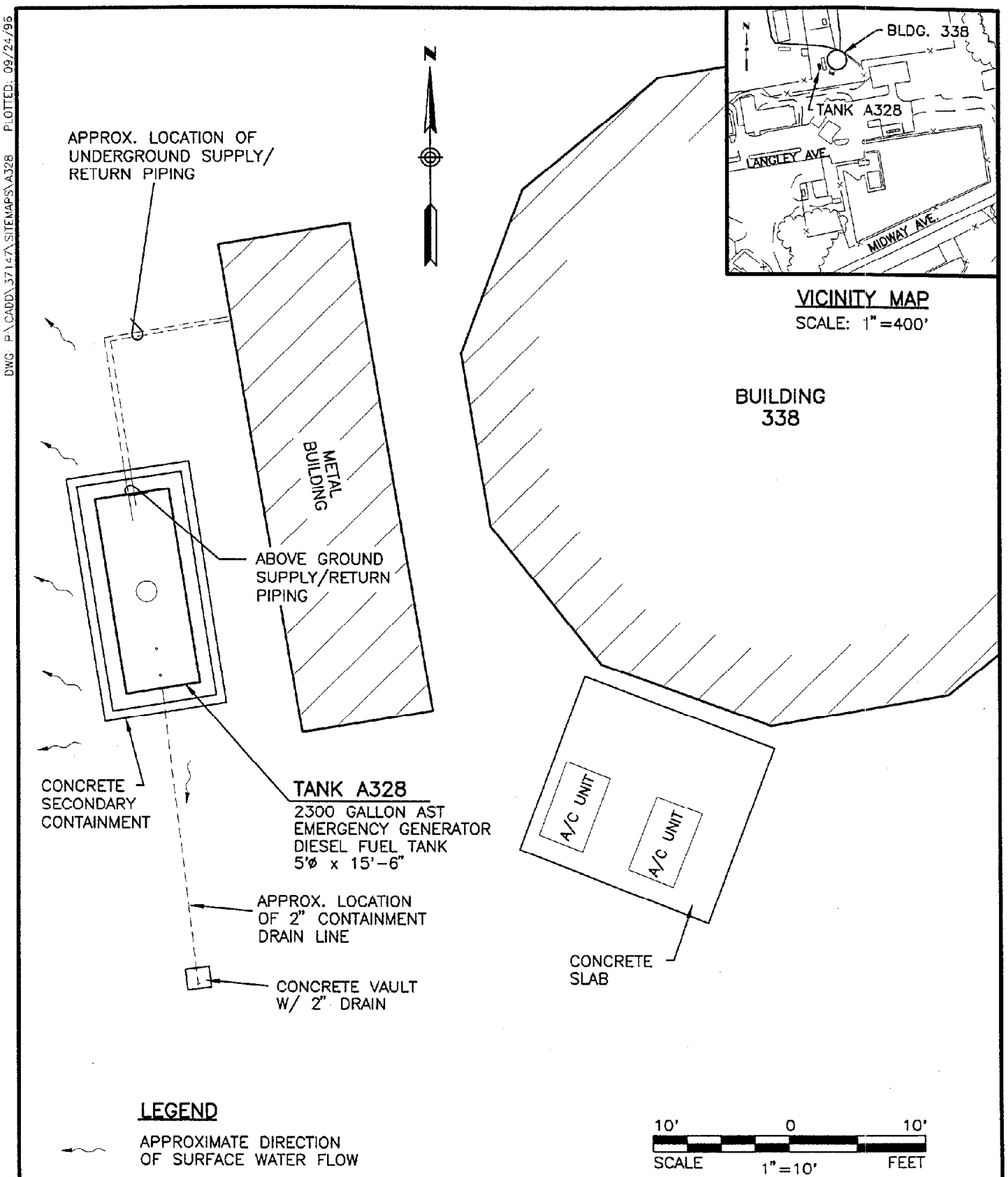
Estimated cost (monitoring wells) $900.00.

Estimated cost (cathodic protected piping) $750.00.

Consider replacing underground piping with aboveground piping by January 1, 1998. Estimated cost $1,200.00.

Provide lock for secondary containment by December 31, 1999. Estimated cost $50.00.

Install anti-syphon valve on all aboveground piping routed outside secondary containment by December 31, 1999. Estimated cost $500.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.31

SITE MAP OF TANK A328
BOCA CHICA FIELD INDUSTRIAL AREA
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.32 Naval Air Station Administration Office Building A418 (Tank A418)

6.32.1 General Information

The Naval Air Station Administration building A418 is found at the intersection of Saratoga and Langley Avenue. Tank A418 is a 500-gallon UST found on the west side of building A418. This tank has been abandoned and the associated piping disconnected. Tank A418 previously contained diesel fuel to operate a nearby emergency generator. The tank presently smells of petroleum product.

6.32.2 Specific Tank Information

Tank ID A418 - UST	
Year of Installation	Data not available
Size	500-gallons
Contents	Emergency Generator Diesel
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112; 40 CFR 280
Regulated - Florida	Regulated; FAC 62-761
Florida Registration	None; Required
Status	Out-of-service
Tank Construction	
- Type and Material	Single -walled steel
- Cathodic Protection	None; N/A
- Spill/Overfill Prevention	None; N/A
Piping Construction	
- Type and Material	Underground single-walled steel
- Cathodic Protection	None; N/A
- Leak Prevention	None; N/A
Leak Detection	
- Tank	None; N/A
- Piping	None; N/A
- Site	None; N/A
Integrity Testing	Data not available; N/A

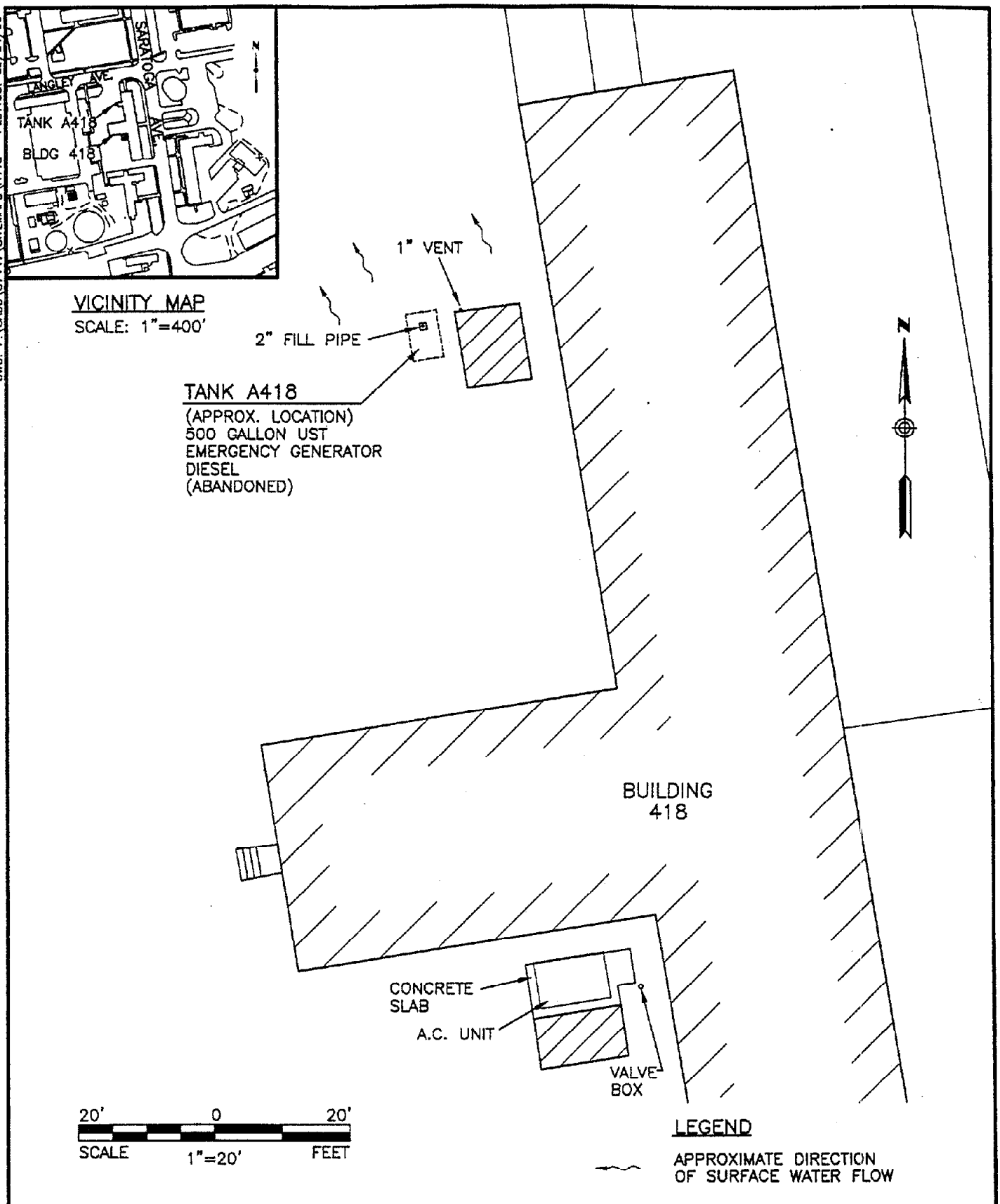
6.32.3 Regulatory Compliance Requirements

Tank A418

Recommend closure and closure assessment by January 1, 1998.

Estimated Cost $3,000.00

Additional upgrades required if tank is returned to service or not closed.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.32

SITE MAP OF TANK A418
BOCA CHICA FIELD INDUSTRIAL AREA
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.33 Power Plant - A419 (Tanks A419-A, A419-B, A419-C, A419-D and A419-E)

6.33.1 General Information

Tanks A419-A, A419-B, A419-C, A419-D and A419-E are found south of Langley Avenue and west of Saratoga Avenue. Tanks A419-A, A419-B and A419-C are 4,000-gallon aboveground diesel fuel tanks found inside a 2'-6" deep valved concrete secondary containment. Fuel from these tanks is transferred to two generator day tanks found southwest of the secondary containment. Tanks A419-D and A419-E, the 300-gallon aboveground generator day tanks, receive fuel from tanks A419-A, -B and -C and transfer fuel to two emergency generators found north and south of these tanks. Tanks A419-D and A419-E are equipped with tank level gauges but have no secondary containment.

6.33.2 Specific Tank Information

Tank ID A419-A - AST	
Year of Installation	1944
Size	4000-gallons
Contents	Emergency Generator Diesel
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Regulated; FAC 62-762
Florida Registration	Registered
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Single-walled unpainted steel on supports None; not required Concrete block secondary containment with earthen base; manual gauging; additional required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground unpainted steel (to 1' outside containment), underground (to day tanks) None; required None; required

Tank ID A419-A - AST	
Leak Detection - Tank - Piping - Site	 SPCC SPCC; additional required SPCC; additional required
Integrity Testing	Data not available; not required

6.33.3 Specific Tank Information

Tank ID A419-B - AST	
Year of Installation	1944
Size	4000-gallons
Contents	Emergency Generator Diesel
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Regulated; FAC 62-762
Florida Registration	Registered
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Single-walled unpainted steel on supports None; not required Concrete block secondary containment with earthen base; manual gauging; additional required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground unpainted steel (to 1' outside containment), underground (to day tanks) None; required None; required
Leak Detection - Tank - Piping - Site	 SPCC SPCC; additional required SPCC; additional required
Integrity Testing	Data not available; not required

6.33.4 Specific Tank Information

Tank ID A419-C - AST	
Year of Installation	1944
Size	4000-gallons
Contents	Emergency Generator Diesel
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Regulated; FAC 62-762
Florida Registration	Registered
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Single-walled unpainted steel on supports None; not required Concrete block secondary containment with earthen base; manual gauging; additional required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground unpainted steel (to 1' outside containment), underground (to day tanks) None; required None; required
Leak Detection - Tank - Piping - Site	SPCC SPCC; additional required SPCC; additional required
Integrity Testing	Data not available; not required

6.33.5 Specific Tank Information

Tank ID A419-D - AST	
Year of Installation	Data not available
Size	300-gallons
Contents	Emergency Generator Diesel
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Single-walled unpainted steel on supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	High level alarm; level gauge; additional required
Piping Construction	
- Type and Material	Aboveground unpainted steel
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	None; required
- Piping	None; required
- Site	None; required
Integrity Testing	Data not available; not required

6.33.6 Specific Tank Information

Tank ID A419-E - AST	
Year of Installation	Data not available
Size	300-gallons
Contents	Emergency Generator Diesel
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Single-walled unpainted steel on supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	High level alarm; level gauge; additional required
Piping Construction	
- Type and Material	Aboveground unpainted steel
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	None; required
- Piping	None; required
- Site	None; required
Integrity Testing	None; not required

6.33.7 Regulatory Compliance Requirements

Tanks A419-A, -B, and -C

These tanks are scheduled for removal and replacement with vaulted tanks under Navy contract no. N62467-96-C-0849 (already funded).

Release detection for underground piping was required by December 31, 1993. Estimated cost $2,000.00.

Recommend tank removal and closure assessment by January 1, 1998. Estimated cost per tank $5,000.00.

Note : One tank will be used to replace the three existing tanks.

Tanks A419-D and -E

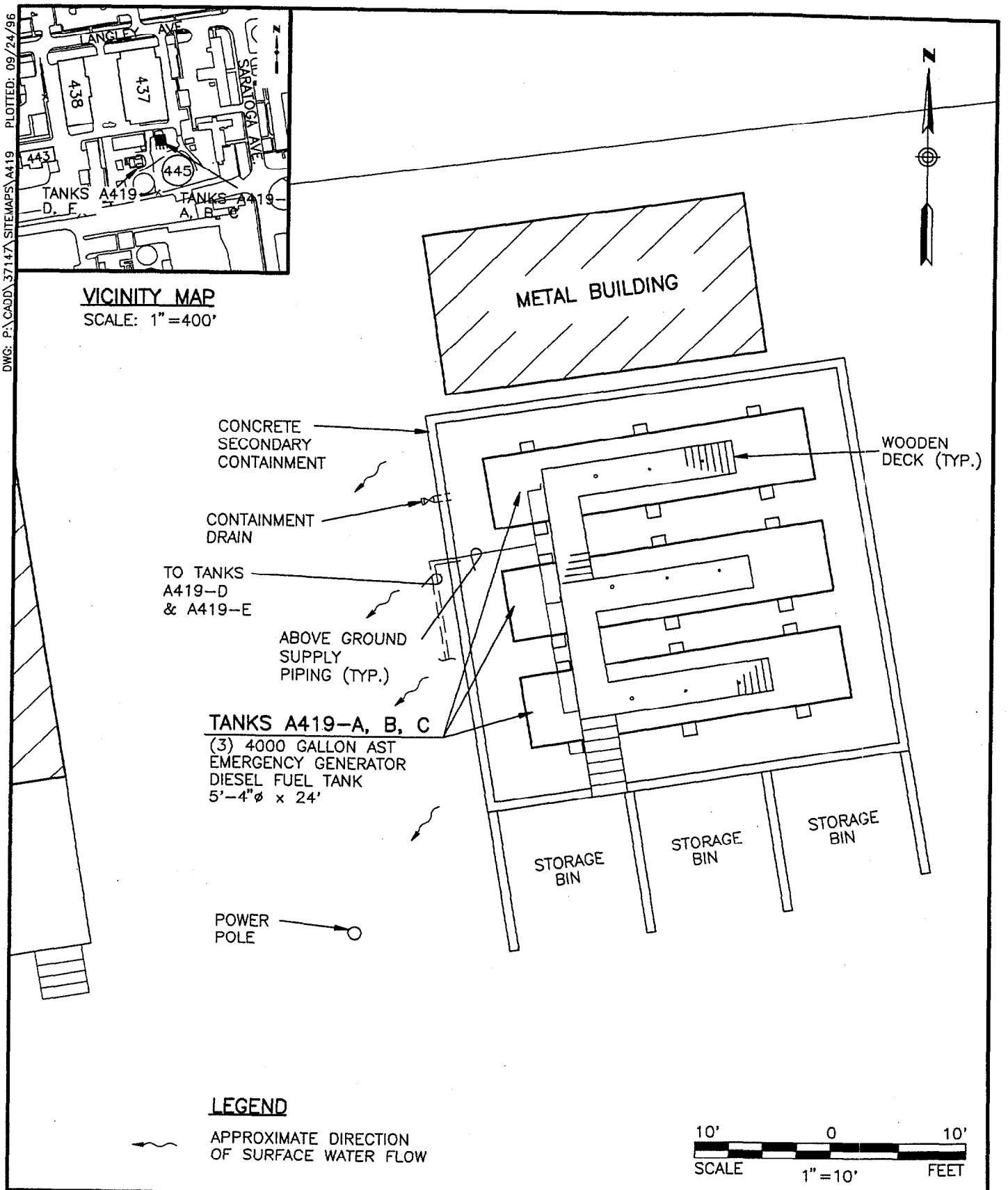
Provide secondary containment with locking drain valve by January 1, 1998. Estimated cost $1,500.00.

Inspect tank, piping and site monthly and incorporate into SPCC Plan by January 1, 1998.

Recommend installation of an anti-syphon valve on all aboveground piping routed outside secondary containment. Estimated cost $500.00.

Recommend painting piping to provide corrosion protection. Estimated cost $100.00.

Recommend painting tank to provide corrosion protection. Estimated cost $400.00.



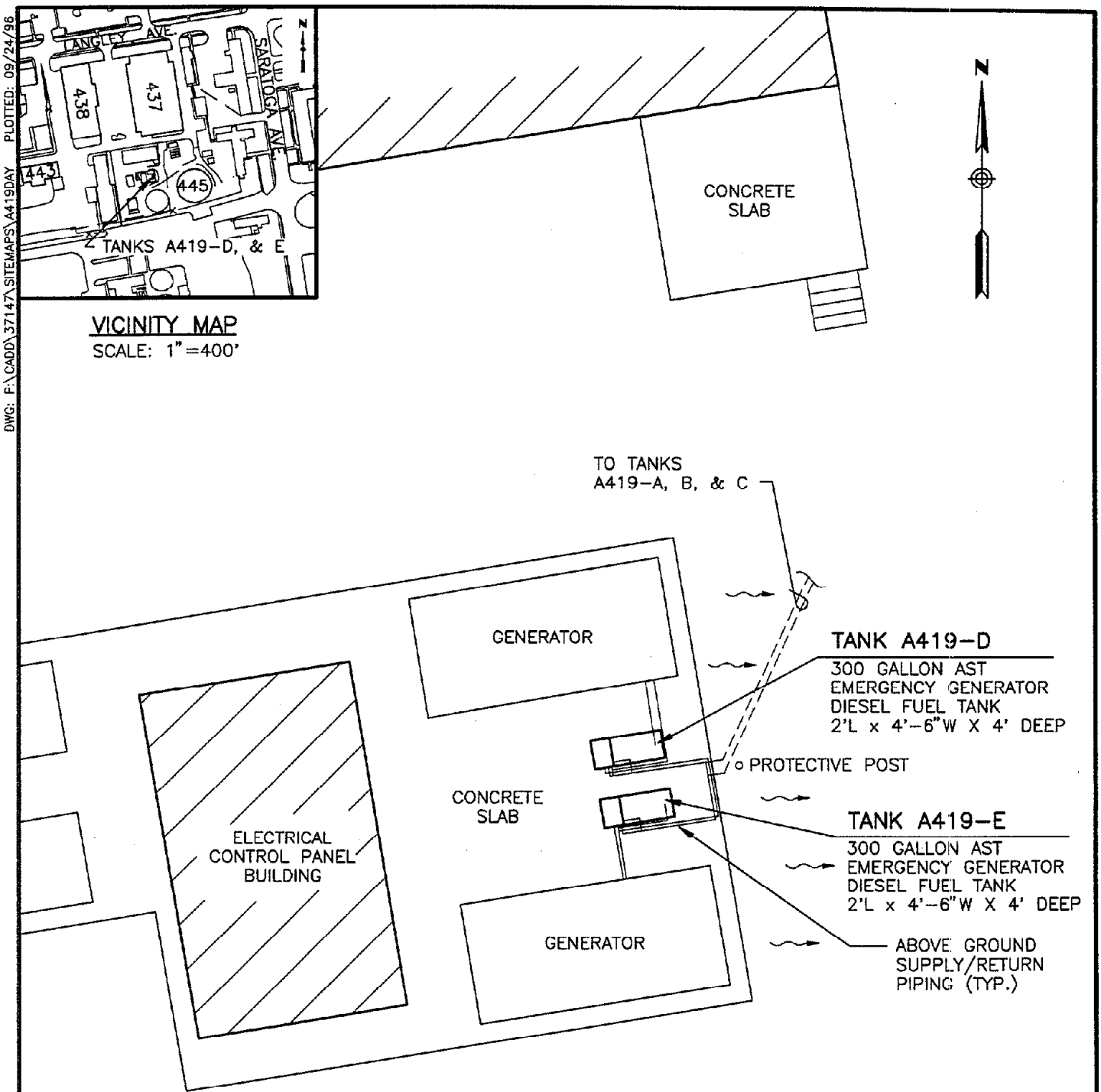
RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.33

SITE MAP OF TANKS A419-A, -B, & -C
BOCA CHICA FIELD INDUSTRIAL AREA
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147

OCTOBER, 1996



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.33A

SITE MAP OF TANKS A419-D, & -E
BOCA CHICA FIELD INDUSTRIAL AREA
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.34 Public Works Automotive Maintenance Shop Building - A443 (Tank A443)

6.34.1 General Information

Building A443 is the Public Works Automotive Maintenance Shop located north of Midway Avenue and south of Langley Avenue. Found on the east side of building A443 is the facility's oil/water separator A443. Oily water generated from maintenance activities is deposited into this separator for segregation and disposal. Segregated water is discharged into the facility's sanitary sewer system while oils are disposed of by NAS Public Works contract. The storage capacity of A443 is approximately 2,000-gallons.

6.34.2 Specific Tank Information

Tank ID A443 - UST	
Year of Installation	Data not available
Size	2000-gallons
Contents	Used oil
Throughput	Data not available
Regulated - Federal	Unregulated
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Field erected concrete vault with unpainted steel removable top None; N/A None; N/A
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground and underground None; N/A None; N/A
Leak Detection - Tank - Piping - Site	 None; N/A None; N/A None; N/A
Integrity Testing	Data not available; N/A

6.34.3 Regulatory Compliance Requirements

Tank A443

Tank A443, an oil/water separator, is considered a process tank and is therefore exempt from state and federal regulation.

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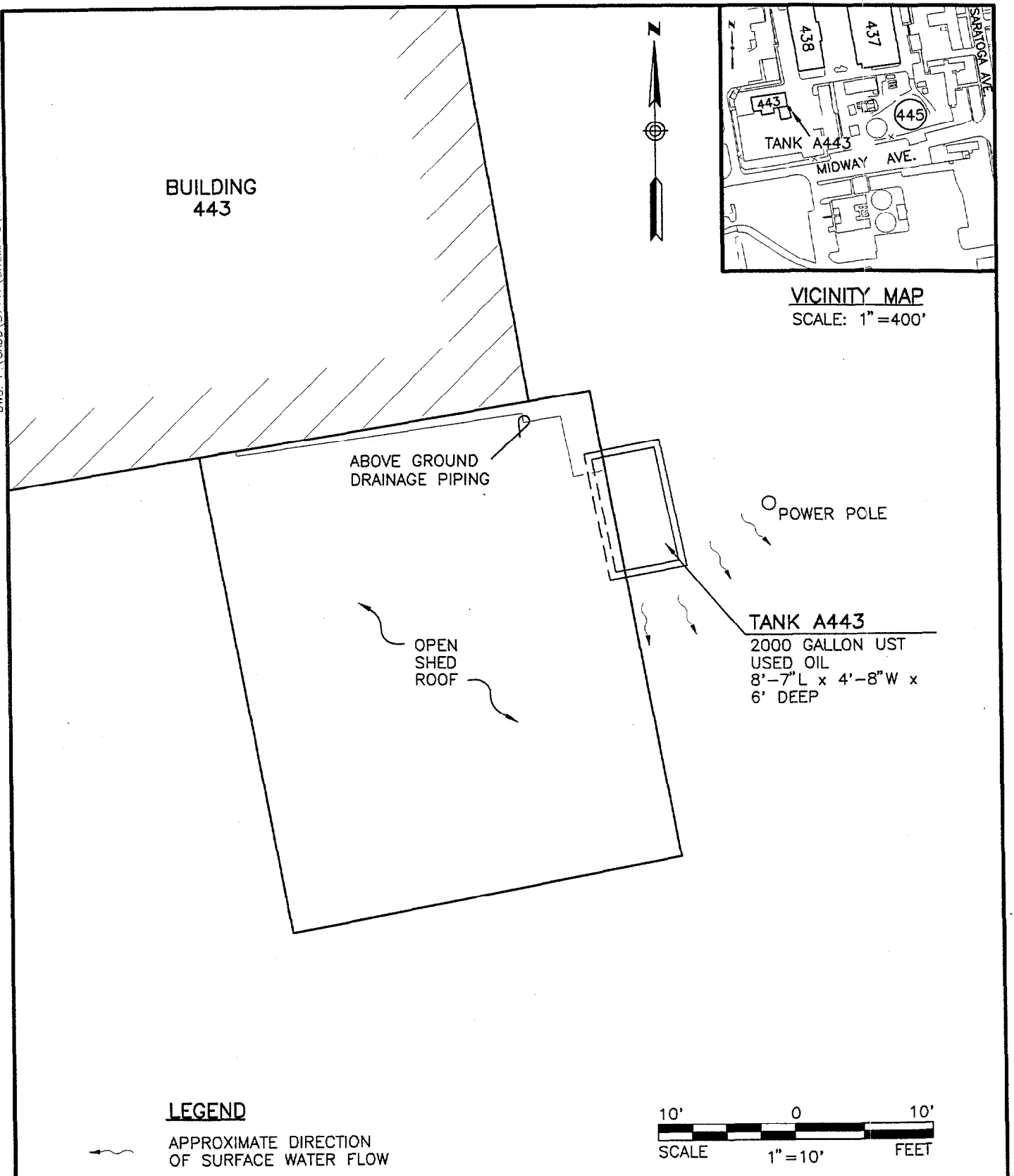

VICINITY MAP
SCALE: 1"=400'

RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.34
SITE MAP OF TANK A443
BOCA CHICA FIELD INDUSTRIAL AREA
NAVAL AIR STATION – KEY WEST, FLORIDA
RUST Project No. 37147
OCTOBER, 1996

6.35 Potable Water Pump Station - A447 (Tank A447)

6.35.1 General Information

The Potable Water Pumping Station found in building A447 is located south of building A443. Found to the south of building A447 is a 300-gallon aboveground diesel fuel storage tank. Fuel from this tank is used to power the station's emergency generator during electrical loss. A 2' deep valved concrete impoundment provides secondary containment, although with an impervious base, for this site.

6.35.2 Specific Tank Information

Tank ID A447 - AST	
Year of Installation	Data not available
Size	300-gallons
Contents	Emergency Generator Diesel
Throughput	97 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Single-walled unpainted steel on supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Concrete block secondary containment; manual gauging
Piping Construction	
- Type and Material	Aboveground unpainted steel
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	None; required
- Piping	None; required
- Site	None; required
Integrity Testing	Data not available; not required

6.35.3 Regulatory Compliance Requirements

Tank A447

Inspect tank, piping and site monthly and incorporate into SPCC Plan by January 1, 1998.

Recommend installation of an anti-syphon valve on all aboveground piping routed outside secondary containment. Estimated cost $500.00.

Recommend painting piping to provide corrosion protection. Estimated cost $100.00.

Recommend painting tank to provide corrosion protection. Estimated cost $400.00.

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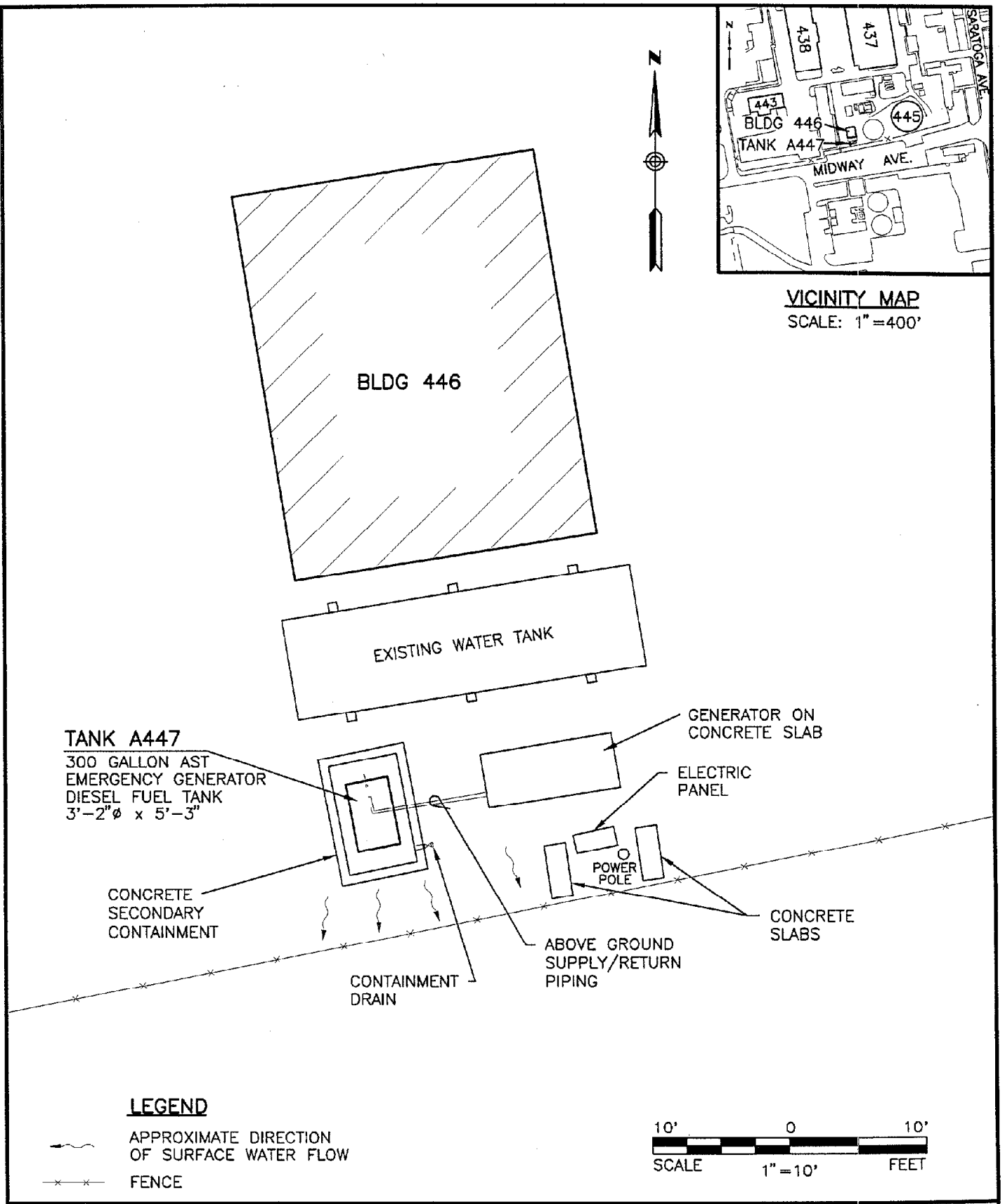


VICINITY MAP
SCALE: 1"=400'

RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.35
SITE MAP OF TANK A447
BOCA CHICA FIELD INDUSTRIAL AREA
NAVAL AIR STATION – KEY WEST, FLORIDA
RUST Project No. 37147 OCTOBER, 1996

6.36 Boiler House-Building A526 (Tank A526A)

6.36.1 General Information

The Boiler House building A526 is located south of the Galley building A522 on Langley Avenue. Tank A526A is found west of the boiler building. This 500-gallon aboveground vaulted tank provides JP-5 fuel to the facility's boiler. Tank A526A is equipped with a tank level gauge and interstitial monitoring.

6.36.2 Specific Tank Information

Tank ID A526A - AST	
Year of Installation	1995
Size	500-gallons
Contents	Heating Fuel (JP-5)
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Vaulted steel
- Cathodic Protection	None; N/A
- Spill/Overfill Prevention	Level gauge; fill port spill containment
Piping Construction	
- Type and Material	Aboveground unpainted steel
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	Interstitial monitoring (double-walled); additional required
- Piping	None; required
- Site	None; required
Integrity Testing	Data not available; not required

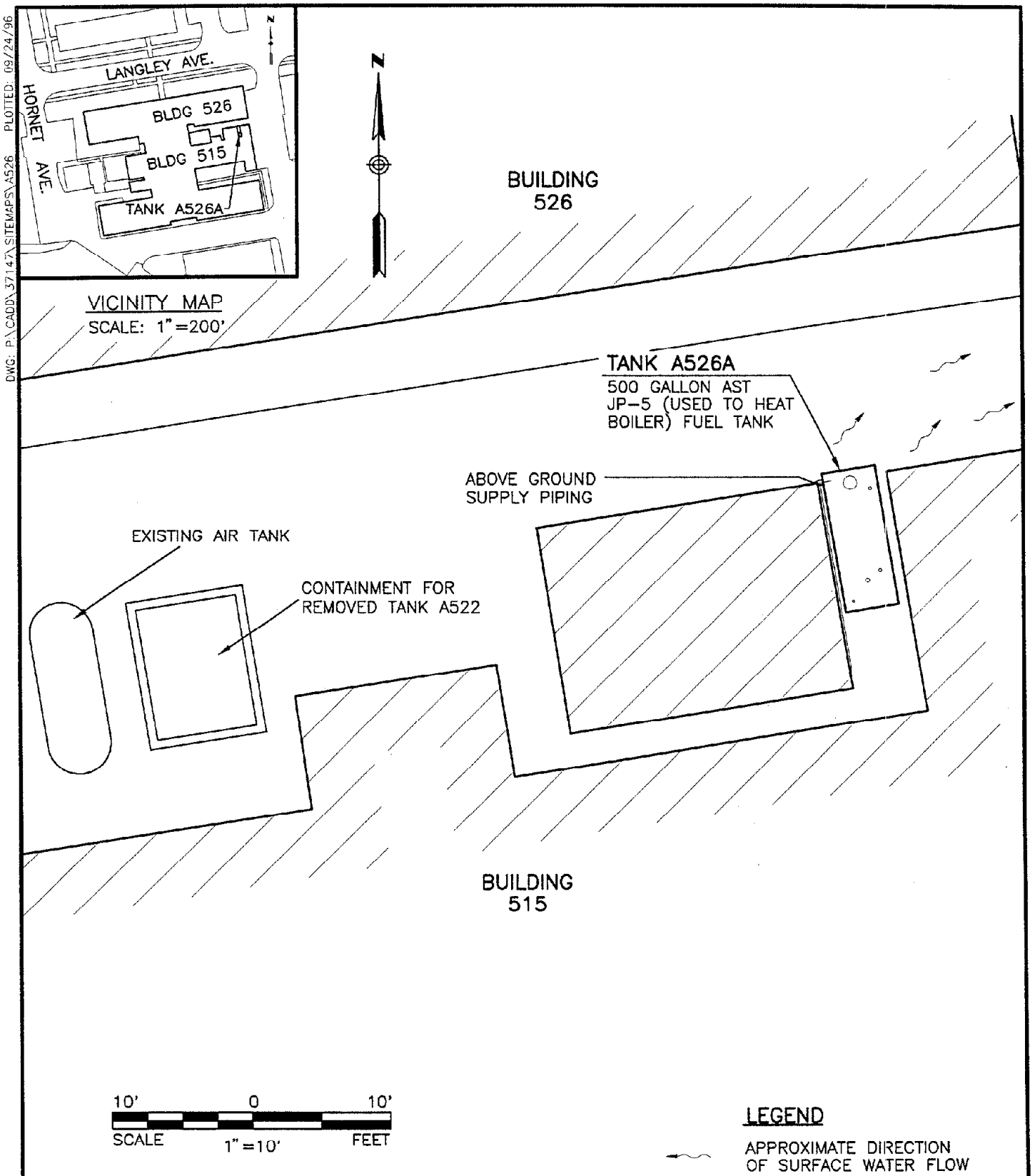
6.36.3 Regulatory Compliance Requirements

Tank A526A

Inspect tank, piping and site monthly and incorporate into SPCC Plan by January 1, 1998.

Recommend installation of an anti-syphon valve on all aboveground piping routed outside secondary containment. Estimated cost $500.00.

Recommend painting piping to provide corrosion protection. Estimated cost $100.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.36

SITE MAP OF TANK A526A
BOCA CHICA FIELD INDUSTRIAL AREA
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.37 Bachelor Enlisted Quarters (BEQ) Building A624 (Tank A624)

6.37.1 General Information

Building A624 is a Bachelor Enlisted Quarters (BEQ) found on Saratoga Avenue. Located on the north side of the BEQ is a 550-gallon aboveground diesel fuel tank. Fuel from tank A624 is used to provide fuel to the BEQ hot water boiler. Secondary containment is supplied by a 1'-8" deep valved concrete impoundment.

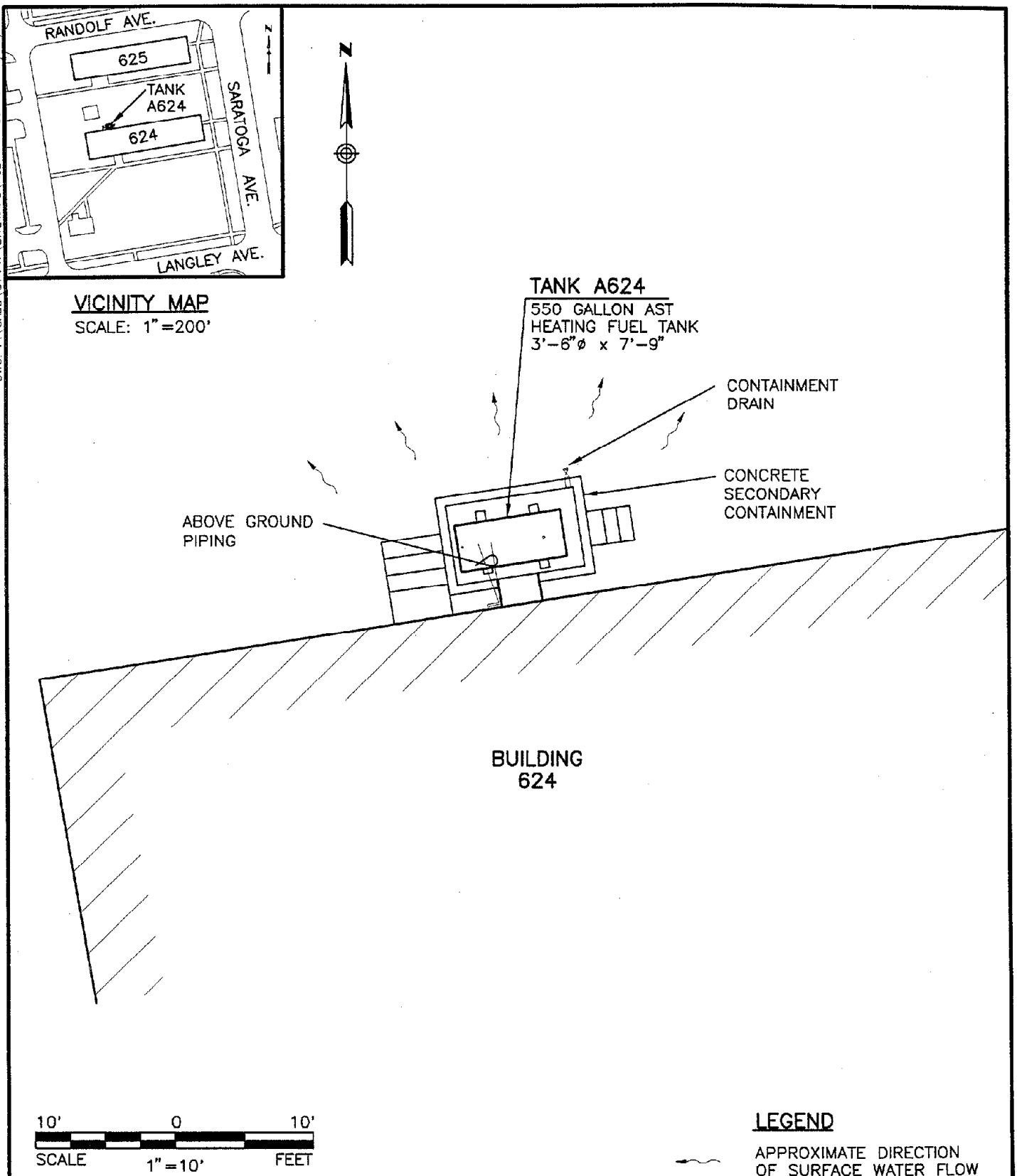
6.37.2 Specific Tank Information

Tank ID A624 - AST	
Year of Installation	1961
Size	550-gallons
Contents	Heating Fuel
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Single-walled painted steel on supports None; not required Concrete secondary containment
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground painted steel None; not required None; not required
Leak Detection - Tank - Piping - Site	 SPCC SPCC SPCC
Integrity Testing	Data not available; not required

6.37.3 Regulatory Compliance Requirements

Tank A624

Recommend installation of an anti-syphon valve on all aboveground piping routed outside secondary containment. Estimated cost $500.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.37

SITE MAP OF TANK A624
BOCA CHICA FIELD INDUSTRIAL AREA
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.38 Bachelor Enlisted Quarters (BEQ) Building A625 (Tanks A625)

6.38.1 General Information

The Bachelor Enlisted Quarters (BEQ) is found in building A625 on the corner of Saratoga and Randolf Avenue. Tank A625 is found on the north side of this facility. Located inside a 1'-8" deep valved concrete secondary containment, tank A625 provides diesel fuel to the BEQ boiler. Tank A625 is a 550-gallon aboveground tank.

6.38.2 Specific Tank Information

Tank ID A625 - AST	
Year of Installation	1961
Size	550-gallons
Contents	Heating Fuel
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Single-walled painted steel on supports None; not required Concrete secondary containment (insufficient capacity); manual gauging; additional required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground unpainted steel None; not required None; not required
Leak Detection - Tank - Piping - Site	 SPCC SPCC SPCC
Integrity Testing	Data not available; not required

6.38.3 Regulatory Compliance Requirements

Tank A625

Provide additional secondary containment volume by January 1, 1998. Estimated cost is $500.00.

Recommend installation of an anti-syphon valve on all aboveground piping routed outside secondary containment. Estimated cost $500.00.

Recommend painting piping to provide corrosion protection. Estimated cost $100.00.

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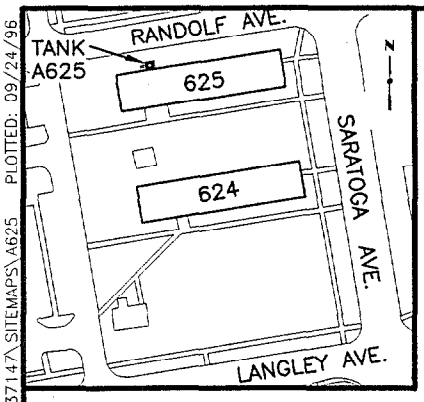
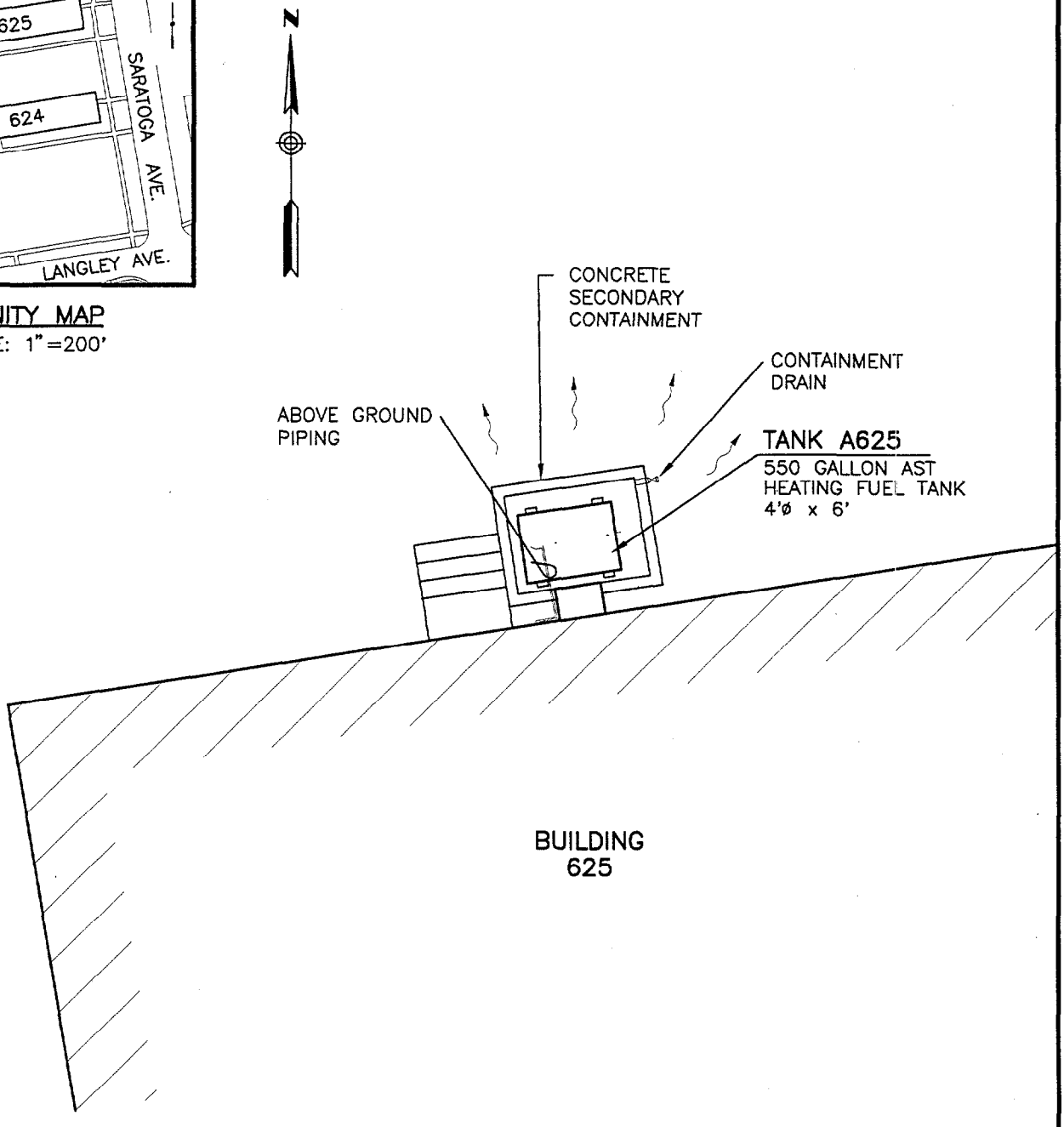


VICINITY MAP
SCALE: 1"=200'



10' 0 10'
SCALE 1"=10' FEET

LEGEND
APPROXIMATE DIRECTION OF SURFACE WATER FLOW

RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.38
SITE MAP OF TANK A625
BOCA CHICA FIELD INDUSTRIAL AREA
NAVAL AIR STATION – KEY WEST, FLORIDA
RUST Project No. 37147
OCTOBER, 1996

6.39 Bachelor Enlisted Quarters (BEQ) Building A630 (Tank A630)

6.39.1 General Information

Building A630 is a Bachelor Enlisted Quarters (BEQ) found on the corner of Langley and Hornet Avenue. Located on the north side of the BEQ is a 550-gallon aboveground diesel fuel tank. Fuel from tank A630 is used to provide fuel to the BEQ hot water boiler. Secondary containment is supplied by a 2' deep valved concrete impoundment.

6.39.2 Specific Tank Information

Tank ID A630 - AST	
Year of Installation	1964
Size	550-gallons
Contents	Heating Fuel
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Single-walled unpainted steel on supports None; not required Concrete secondary containment; manual gauging
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground unpainted steel None; not required None; not required
Leak Detection - Tank - Piping - Site	 SPCC SPCC SPCC
Integrity Testing	Data not available; not required

6.39.3 Regulatory Compliance Requirements

Tank A630

Recommend painting piping to provide corrosion protection. Estimated cost $100.00.

Recommend painting tank to provide corrosion protection. Estimated cost $400.00.

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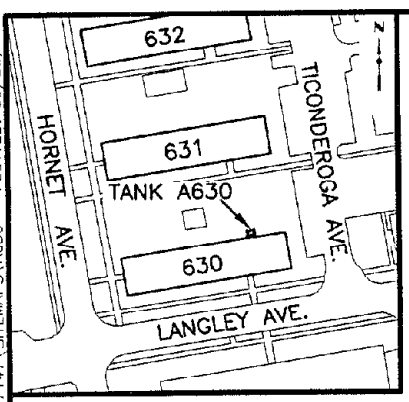
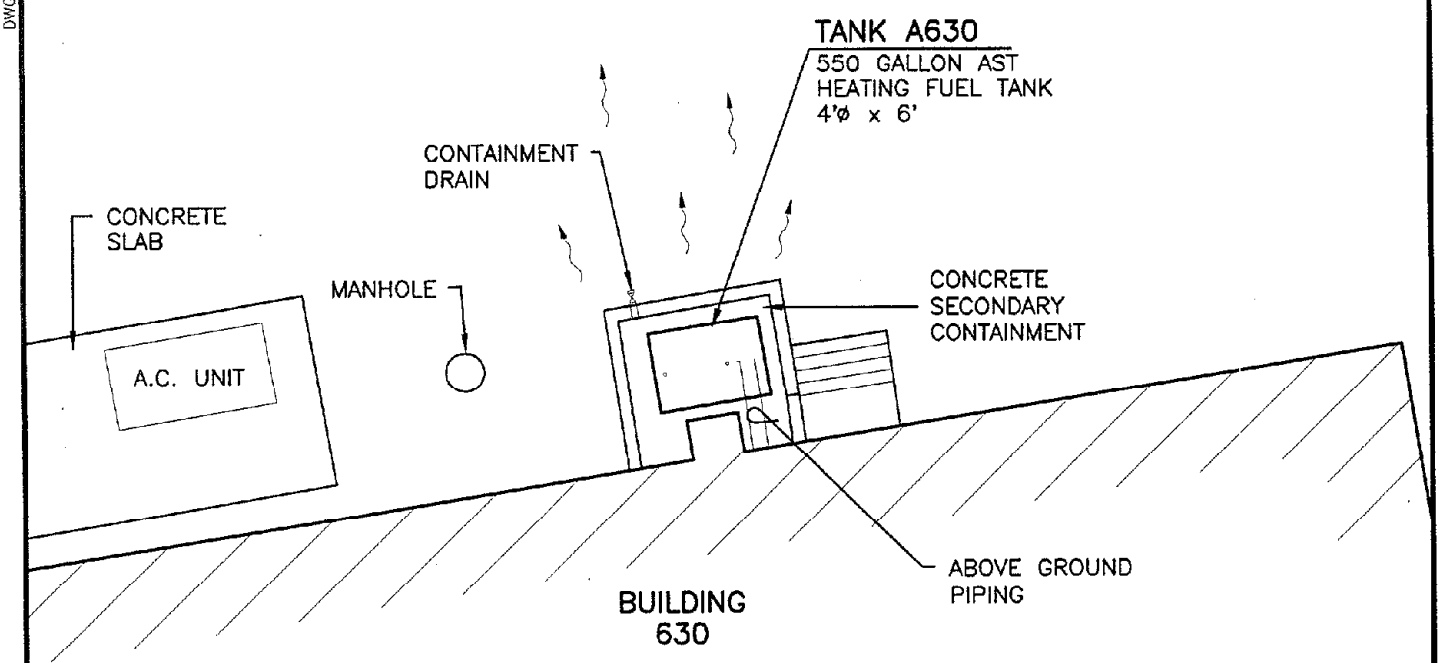


VICINITY MAP
SCALE: 1" =200'



LEGEND

APPROXIMATE DIRECTION OF SURFACE WATER FLOW

10' 0 10'
SCALE 1" =10' FEET

RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.39
SITE MAP OF TANK A630
BOCA CHICA FIELD INDUSTRIAL AREA
NAVAL AIR STATION – KEY WEST, FLORIDA
RUST Project No. 37147 OCTOBER, 1996

6.40 Bachelor Enlisted Quarters (BEQ) Building A631 (Tank A631)

6.40.1 General Information

The Bachelor Enlisted Quarters (BEQ) is found in building A631 on Hornet Avenue, north of Building A630. Tank A631 is found on the north side of this facility. Located inside a 1'-8" deep valved concrete secondary containment, tank A631 provides diesel fuel to the BEQ boiler. Tank A631 is a 550-gallon aboveground tank.

6.40.2 Specific Tank Information

Tank ID A631 - AST	
Year of Installation	1953
Size	550-gallons
Contents	Heating Fuel
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Single-walled painted steel on supports None; not required Concrete secondary containment; manual gauging
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground unpainted steel None; not required None; not required
Leak Detection - Tank - Piping - Site	 SPCC SPCC SPCC
Integrity Testing	Data not available; not required

6.40.3 Regulatory Compliance Requirements

Tank A631

Recommend installation of an anti-syphon valve on all aboveground piping routed outside secondary containment. Estimated cost $500.00.

Recommend painting piping to provide corrosion protection. Estimated cost $100.00.

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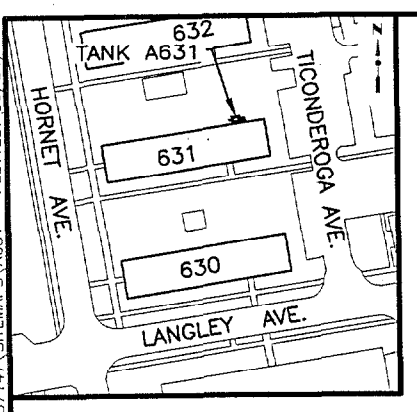
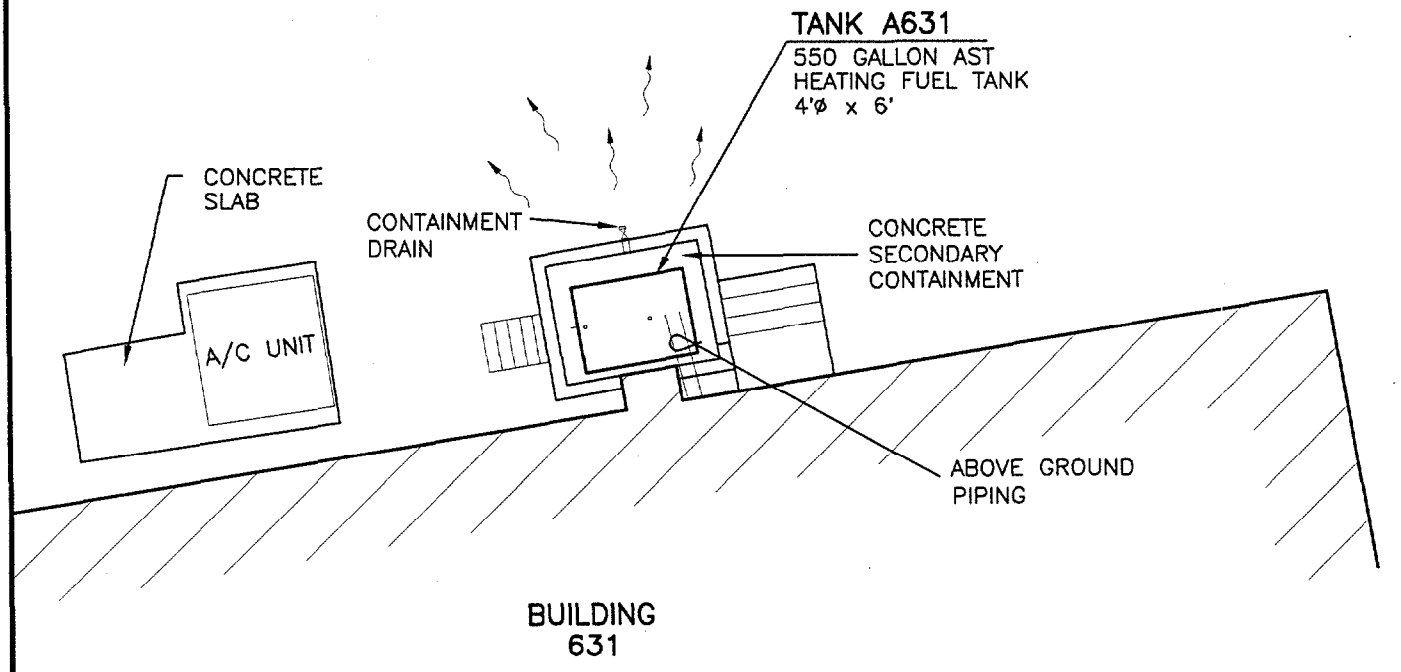


VICINITY MAP
SCALE: 1"=200'



LEGEND

APPROXIMATE DIRECTION OF SURFACE WATER FLOW

10' 0 10'
SCALE 1"=10' FEET

RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.40
SITE MAP OF TANK A631
BOCA CHICA FIELD INDUSTRIAL AREA
NAVAL AIR STATION – KEY WEST, FLORIDA
RUST Project No. 37147 OCTOBER, 1996

6.41 Bachelor Enlisted Quarters (BEQ) Building A632 (Tank A632)

6.41.1 General Information

Building A632 is a Bachelor Enlisted Quarters (BEQ) found on Hornet Avenue north of Building A631. Located on the north side of the BEQ is a 550-gallon aboveground diesel fuel tank. Fuel from tank A632 is used to provide fuel to the BEQ hot water boiler. Secondary containment is supplied by a 1'-8" deep valved concrete impoundment.

6.41.2 Specific Tank Information

Tank ID A632 - AST	
Year of Installation	1964
Size	550-gallons
Contents	Heating Fuel
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-service
Tank Construction	
- Type and Material	Single-walled painted steel on supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Concrete secondary containment; manual gauging
Piping Construction	
- Type and Material	Aboveground unpainted steel
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	SPCC
- Piping	SPCC
- Site	SPCC
Integrity Testing	Data not available; not required

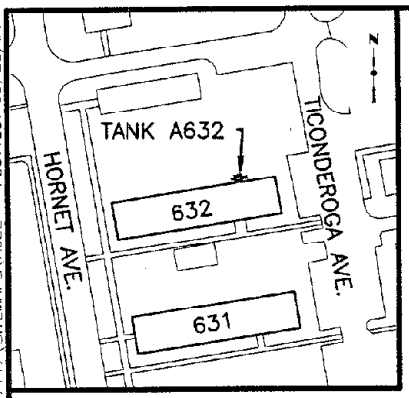
6.41.3 Regulatory Compliance Requirements

Tank A632

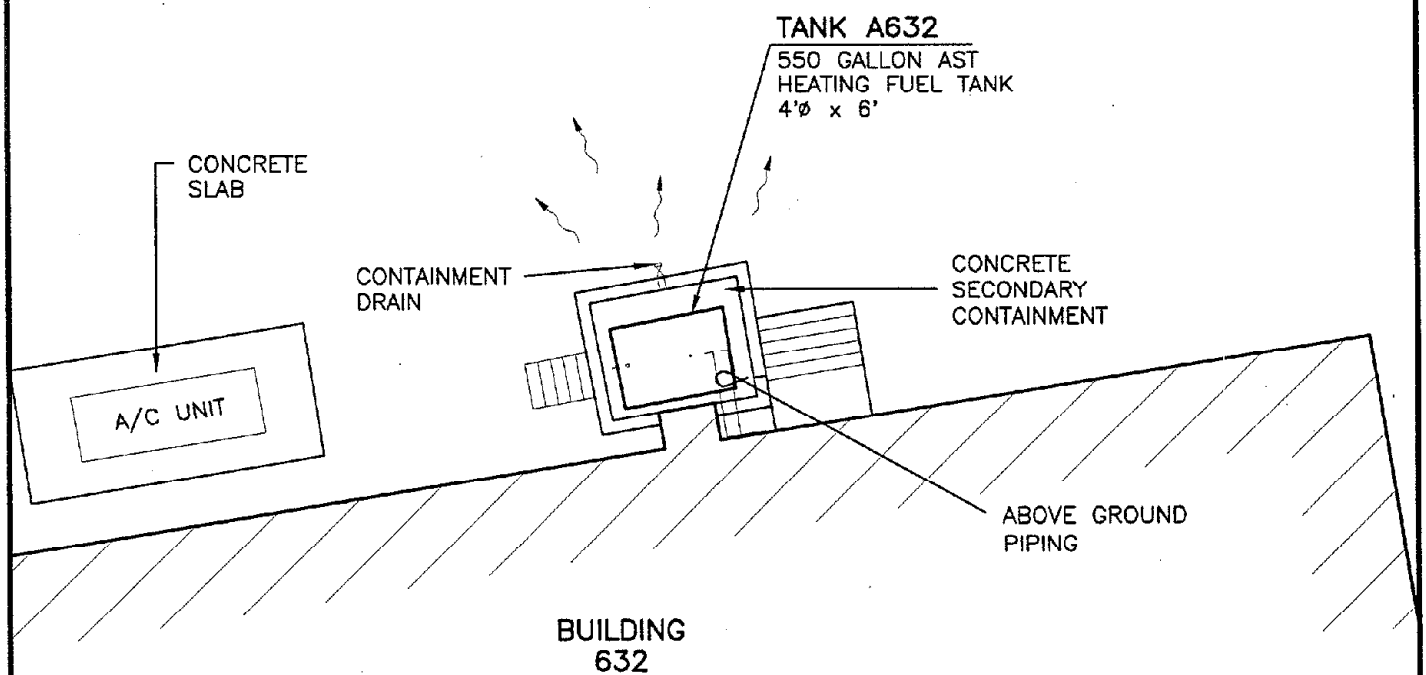
Recommend installation of an anti-syphon valve on all aboveground piping routed outside secondary containment. Estimated cost $500.00.

Recommend painting piping to provide corrosion protection. Estimated cost $100.00.

DWG: P:\CADD\37147\SITEMAPS\A632 PLOTTED: 09/25/96



VICINITY MAP
SCALE: 1"=200'



LEGEND

APPROXIMATE DIRECTION OF SURFACE WATER FLOW

10' 0 10'
SCALE 1"=10' FEET

RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.41
SITE MAP OF TANK A632
BOCA CHICA FIELD INDUSTRIAL AREA
NAVAL AIR STATION – KEY WEST, FLORIDA
RUST Project No. 37147 OCTOBER, 1996

6.42 Island Clipper Club Building A634 (Tank A634)

6.42.1 General Information

The Island Clipper Club is located on the corner of Hornet and Randolf Avenue. Found on the north side of the club is tank A634. This tank is a 300-gallon diesel fuel tank used to fuel a boiler inside the club. No secondary containment exists at this site.

6.42.2 Specific Tank Information

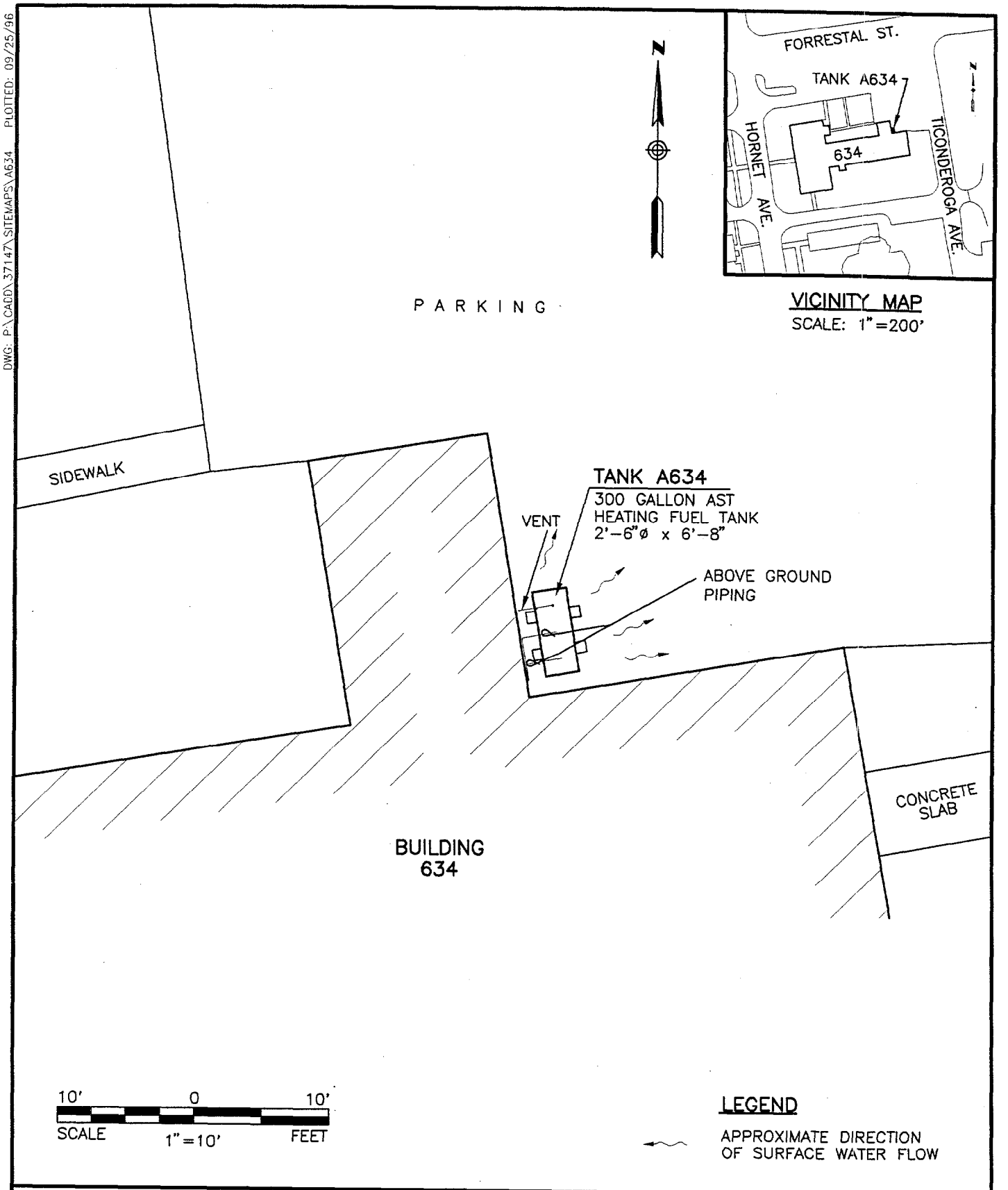
Tank ID A634 - AST	
Year of Installation	1964
Size	300-gallons
Contents	Heating Fuel
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Single-walled unpainted steel on supports None; not required Manual gauging; additional required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground painted steel None; not required None; not required
Leak Detection - Tank - Piping - Site	 SPCC SPCC SPCC
Integrity Testing	Data not available; not required

6.42.3 Regulatory Compliance Requirements

Tank A634

Tank is scheduled for removal and replacement with a vaulted tank under Navy contract no. N62467-96-C-0849 (already funded).

Remove tank or provide secondary containment with locking drain valve by January 1, 1998.
Estimated cost for tank removal $1,500.00.
Estimated cost for secondary containment $2,500.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.42

SITE MAP OF TANK A634
BOCA CHICA FIELD INDUSTRIAL AREA
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147

OCTOBER, 1996

6.43 Bachelor Enlisted Quarters (BEQ) Building A638 (Tank A638)

6.43.1 General Information

The Bachelor Enlisted Quarters (BEQ) is found in building A638 on the corner of Coral Sea and Randolf Avenue. Tank A638 is found on the east side of this facility. Located inside a 2'-5" deep valved concrete secondary containment, tank A638 provides diesel fuel to the BEQ boiler. Tank A638 is a 1,000-gallon aboveground tank.

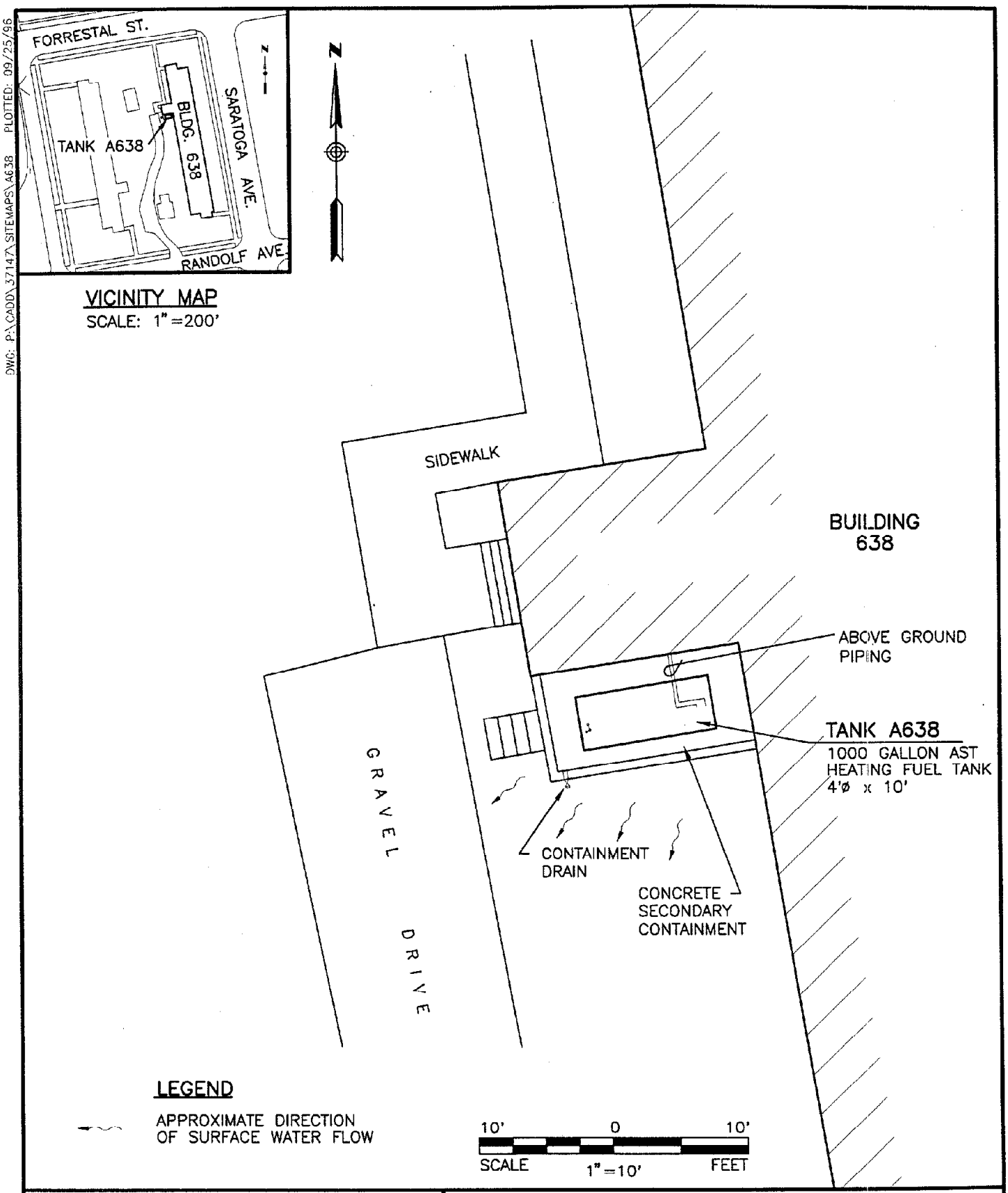
6.43.2 Specific Tank Information

Tank ID A638 - AST	
Year of Installation	1953
Size	1000-gallons
Contents	Heating Fuel
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-service
Tank Construction	
- Type and Material	Single-walled unpainted steel on supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Concrete secondary containment; manual gauging
Piping Construction	
- Type and Material	Aboveground unpainted steel
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	SPCC
- Piping	SPCC
- Site	SPCC
Integrity Testing	Data not available; not required

6.43.3 Regulatory Compliance Requirements

Tank A638

Tank A638 is scheduled for removal under Navy contract no. N62467-96-C-0849 (already funded).



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.43

SITE MAP OF TANK A638
BOCA CHICA FIELD INDUSTRIAL AREA
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 3/147 OCTOBER, 1996

6.44 Bachelor Enlisted Quarters (BEQ) Building A639 (Tank A639)

6.44.1 General Information

Building A639 is a Bachelor Enlisted Quarters (BEQ) found on the corner of Randolf and Saratoga Avenue. Located on the west side of the BEQ is a 1000-gallon aboveground diesel fuel tank. Fuel from tank A639 is used to provide fuel to the BEQ hot water boiler. No secondary containment exists at this site.

6.44.2 Specific Tank Information

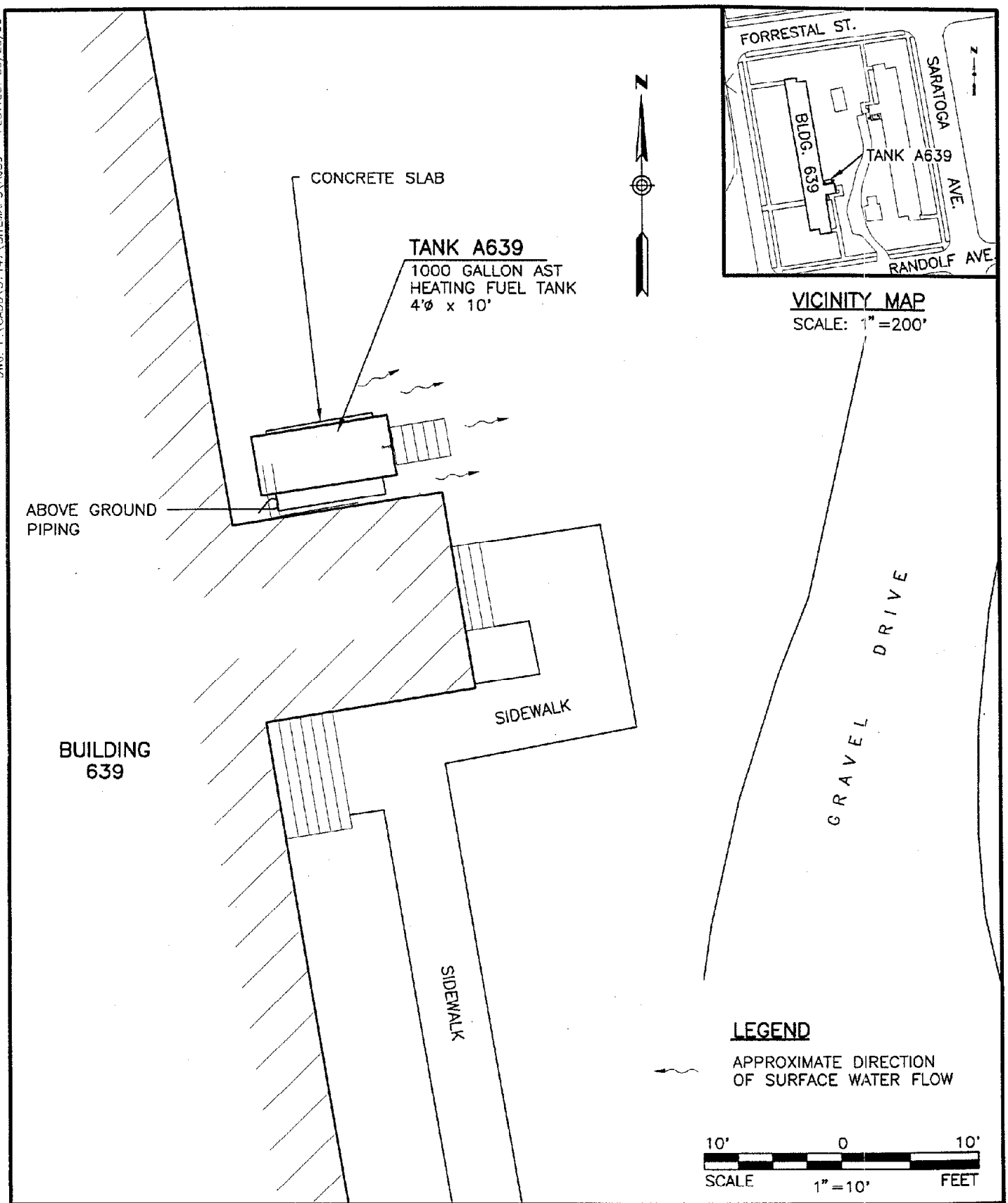
Tank ID A639 - AST	
Year of Installation	1953
Size	1000-gallons
Contents	Heating Fuel
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Single-walled painted steel on supports None; not required Manual gauging; additional required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground unpainted steel None; not required None; not required
Leak Detection - Tank - Piping - Site	 SPCC SPCC SPCC
Integrity Testing	Data not available; not required

6.44.3 Regulatory Compliance Requirements

Tank A639

Tank A639 is scheduled for removal under Navy contract no. N62467-96-C-0849 (already funded).

Remove tank or provide secondary containment with locking valve by January 1, 1998. Estimated cost of tank removal $2,000.00. Estimated cost of secondary containment $2,500.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.44

SITE MAP OF TANK A639
BOCA CHICA FIELD INDUSTRIAL AREA
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.45 Bachelor Enlisted Quarters (BEQ) Building A727 (Tank A727)

6.45.1 General Information

Building A727 is a Bachelor Enlisted Quarters (BEQ) found on the Forrestal Street. Tank A727 is found on the north side of this facility. Located inside a 3'-6" deep valved concrete secondary containment, tank A627 provides diesel fuel to the BEQ boiler. Tank A727 is a 1500-gallon aboveground tank.

6.45.2 Specific Tank Information

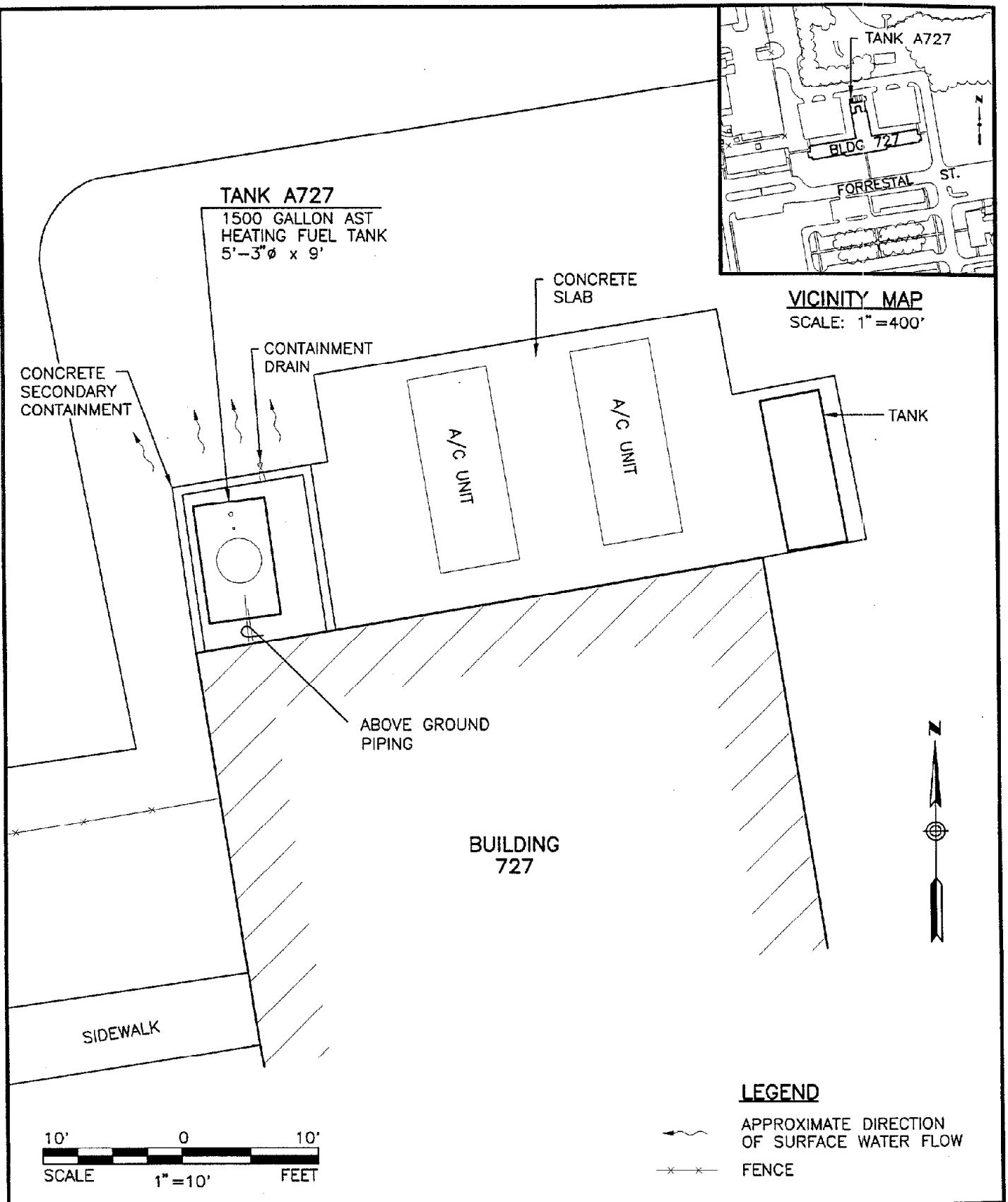
Tank ID A727 - AST	
Year of Installation	1953
Size	1500-gallons
Contents	Heating Fuel
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In- Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Single-walled unpainted steel on supports None; not required Concrete secondary containment; manual gauging
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground unpainted steel None; not required None; not required
Leak Detection - Tank - Piping - Site	 SPCC SPCC SPCC
Integrity Testing	Data not available; not required

6.45.3 Regulatory Compliance Requirements

Tank A727

Recommend painting piping to provide corrosion protection. Estimated cost $100.00.

Recommend painting tank to provide corrosion protection. Estimated cost $400.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.45

SITE MAP OF TANK A727
BOCA CHICA FIELD INDUSTRIAL AREA
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.46 Naval Medical/Dental Clinic Building A4011 (Tank A4011)

6.46.1 General Information

The Naval Medical/Dental Clinic building A4011 is located on Saratoga Avenue north of building A325. Found west of the clinic within a chain link fence is the facility's transformer and emergency generator. Tank A4011 is a 300-gallon diesel fuel tank found west of the clinic's generator. Diesel fuel from this tank is used to power the generator during electrical outages. Secondary containment is supplied by a 2'-6" deep valved secondary containment.

6.46.2 Specific Tank Information

Tank ID A4011 - AST	
Year of Installation	1987
Size	300-gallons
Contents	Emergency Generator Diesel
Throughput	188 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	Registered
Status	In-service
Tank Construction	
- Type and Material	Single-walled painted steel on supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Concrete secondary containment; manual gauging
Piping Construction	
- Type and Material	Aboveground painted steel
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	SPCC
- Piping	SPCC
- Site	SPCC
Integrity Testing	Data not available; not required

6.46.3 Regulatory Compliance Requirements

Tank A4011

Recommend installation of an anti-syphon valve on all aboveground piping routed outside secondary containment. Estimated cost $500.00.

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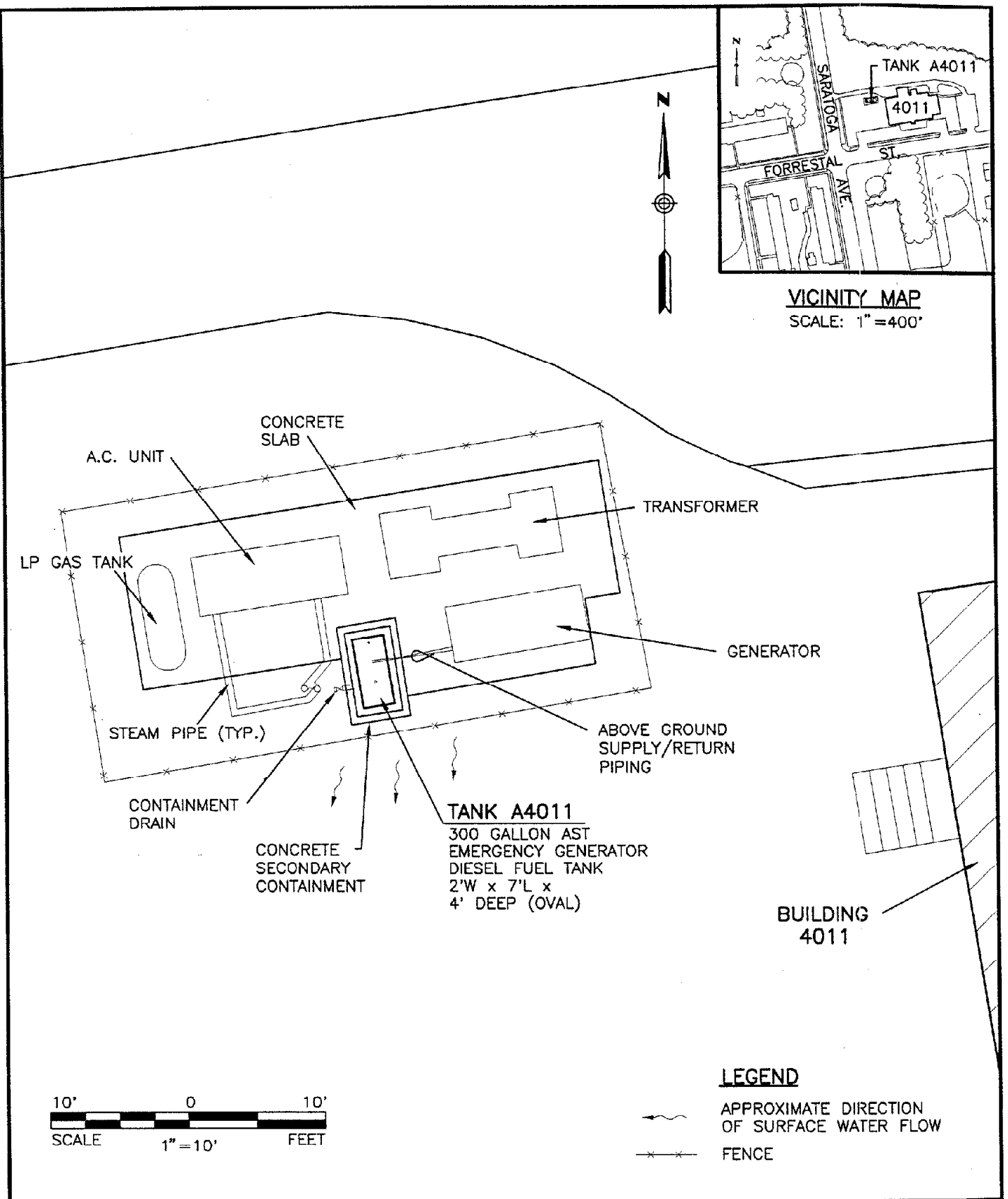


RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.46

SITE MAP OF TANK A4011
BOCA CHICA FIELD INDUSTRIAL AREA
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.47 Boca Chica Flying Club (Tank A4115)

6.47.1 General Information

The Boca Chica Flying Club has an aboveground storage tank located north of the fire station building A132. Tank A4115 is a 2,000-gallon tank used to store aviation gasoline (AVGAS). Fuel from this tank is dispensed via a standard dispensing unit located west of building A132. A 2'-8" deep valved concrete secondary containment is present at this site.

6.47.2 Specific Tank Information

Tank ID A4115 - AST	
Year of Installation	1992
Size	2000-gallons
Contents	AVGAS
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Regulated; FAC 62-762
Florida Registration	Registered
Status	In-Service
Tank Construction	
- Type and Material	Single-walled painted steel on supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Concrete secondary containment; manual gauging
Piping Construction	
- Type and Material	Aboveground unpainted steel (to 1' outside containment), underground (to dispensers on tarmac); additional required
- Cathodic Protection	None; required (if steel)
- Leak Prevention	None; required
Leak Detection	
- Tank	SPCC
- Piping	SPCC; additional required
- Site	SPCC; additional required
Integrity Testing	August 1996

6.47.3 Regulatory Compliance Requirements

Tank A4115

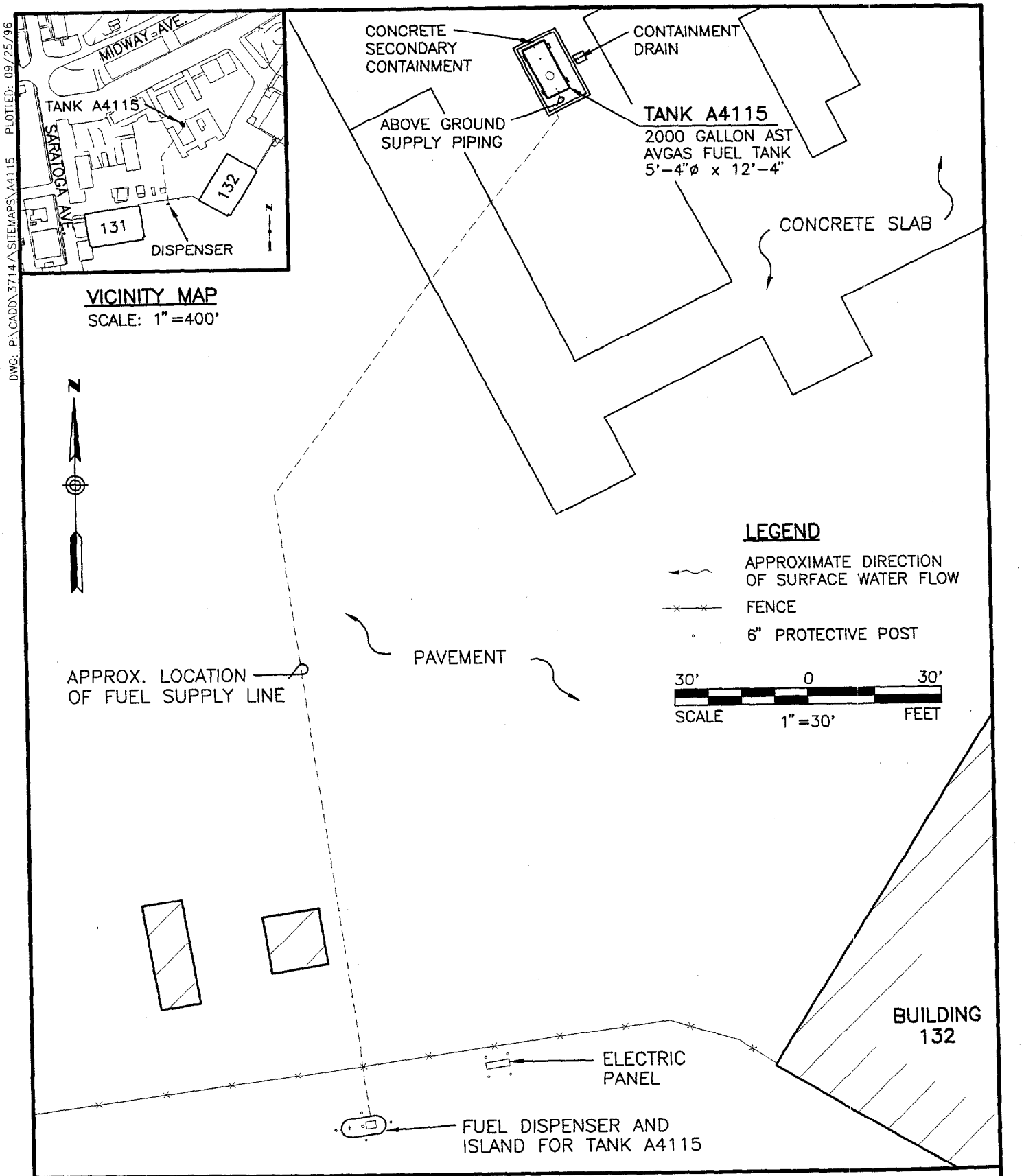
Provide double-walled pipe with interstitial monitoring or monitoring wells by January 1, 1998.

If monitoring wells are installed to satisfy the release detection requirement provide either double-wall fiberglass pipe or cathodically protected steel pipe by December 31, 1999.
Estimated cost (double-walled piping with monitoring) $8,550.00.
Estimated cost (monitoring wells) $1,800.00.
Estimated cost (cathodic protected piping) $6,500.00.

Consider relocating tank closer to dispenser and install aboveground piping by January 1, 1998. Estimated cost $15,000.00.

Install anti-syphon valve on all aboveground piping routed outside secondary containment by December 31, 1999. Estimated cost $500.00.

Install impervious liner for secondary containment by January 1, 1998. Estimated cost $1,000.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.47

SITE MAP OF TANK A4115 & DISPENSER
BOCA CHICA FIELD INDUSTRIAL AREA
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

TRUMBO POINT ANNEX

6.48 Gasoline Pumping Station Building B14 (Tank B14-A and B14-B)

6.48.1 General Information

Building B14, a closed gasoline pumping station, is found on Pier D-3 at the Trumbo Point Annex. The Gulf of Mexico surrounds Pier D-3 to the north, south and west. The Trumbo Point Tank Farm is found to the east. Two closed USTs are present at this site. Closure of these tanks was achieved by removing a section of the tank's top, cleaning the tanks, and filling the tanks with an inert material. Tank B14-A is a 25,000-gallon tank previously used for the storage of vehicular gasoline. Tank B14-B is a 10,000-gallon tank that previously contained vehicular diesel.

6.48.2 Specific Tank Information

Tank ID B14-A - UST	
Year of Installation	1942
Size	25,000-gallons
Contents	Filled with inert material (previously contained unleaded gasoline)
Throughput	N/A
Regulated - Federal	Regulated; 40 CFR 112; 40 CFR 280
Regulated - Florida	Regulated; FAC 62-761
Florida Registration	Registered
Status	Closed-in-place
Tank Construction	
- Type and Material	Steel
- Cathodic Protection	None; N/A
- Spill/Overfill Prevention	None; N/A
Piping Construction	
- Type and Material	Underground
- Cathodic Protection	None; N/A
- Leak Prevention	None; N/A

Tank ID B14-A - UST	
Leak Detection - Tank - Piping - Site	 None; N/A None; N/A None; N/A
Integrity Testing	Data not available; N/A

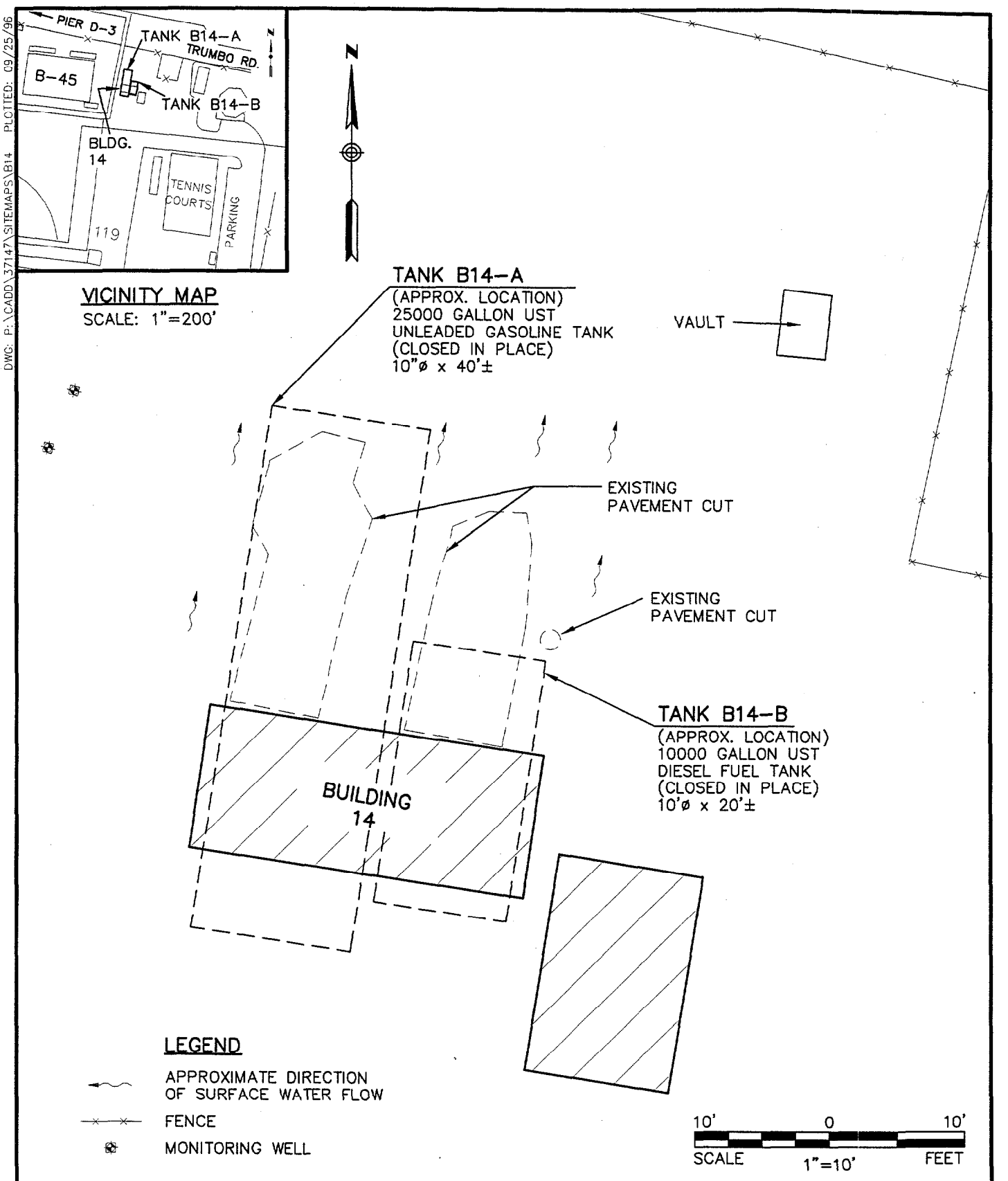
6.48.3 Specific Tank Information

Tank ID B14-B - UST	
Year of Installation	1942
Size	10,000-gallons
Contents	Filled with inert material (previously contained vehicular diesel)
Throughput	N/A
Regulated - Federal	Regulated; 40 CFR 112; 40 CFR 280
Regulated - Florida	Regulated; FAC 62-761
Florida Registration	Registered
Status	Closed-in-place
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Steel None; N/A None; N/A
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Underground None; N/A None; N/A
Leak Detection - Tank - Piping - Site	 None; N/A None; N/A None; N/A
Integrity Testing	Data not available; N/A

6.48.4 Regulatory Compliance Requirements

Tanks B14-A, and B14-B

These tanks have been closed-in-place. Assumed that underground associated piping was emptied at the time of tank closure.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.48

SITE MAP OF TANKS B14-A & B14-B
TRUMBO POINT ANNEX
NAVAL AIR STATION - KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.49 Ordnance Research/Development Building B27 (Tank B27)

6.49.1 General Information

Tank B27 is a 150-gallon diesel generator fuel tank mounted in the base of the emergency generator for building B27. The generator is used as a backup power source in case of an electrical outage. No secondary containment exists for this tank. Building B27, the Ordnance Research/Development building, is located on Pier D-1. Pier D-1 extends westerly into the Gulf of Mexico and abuts Trumbo Point Annex to the east.

6.49.2 Specific Tank Information

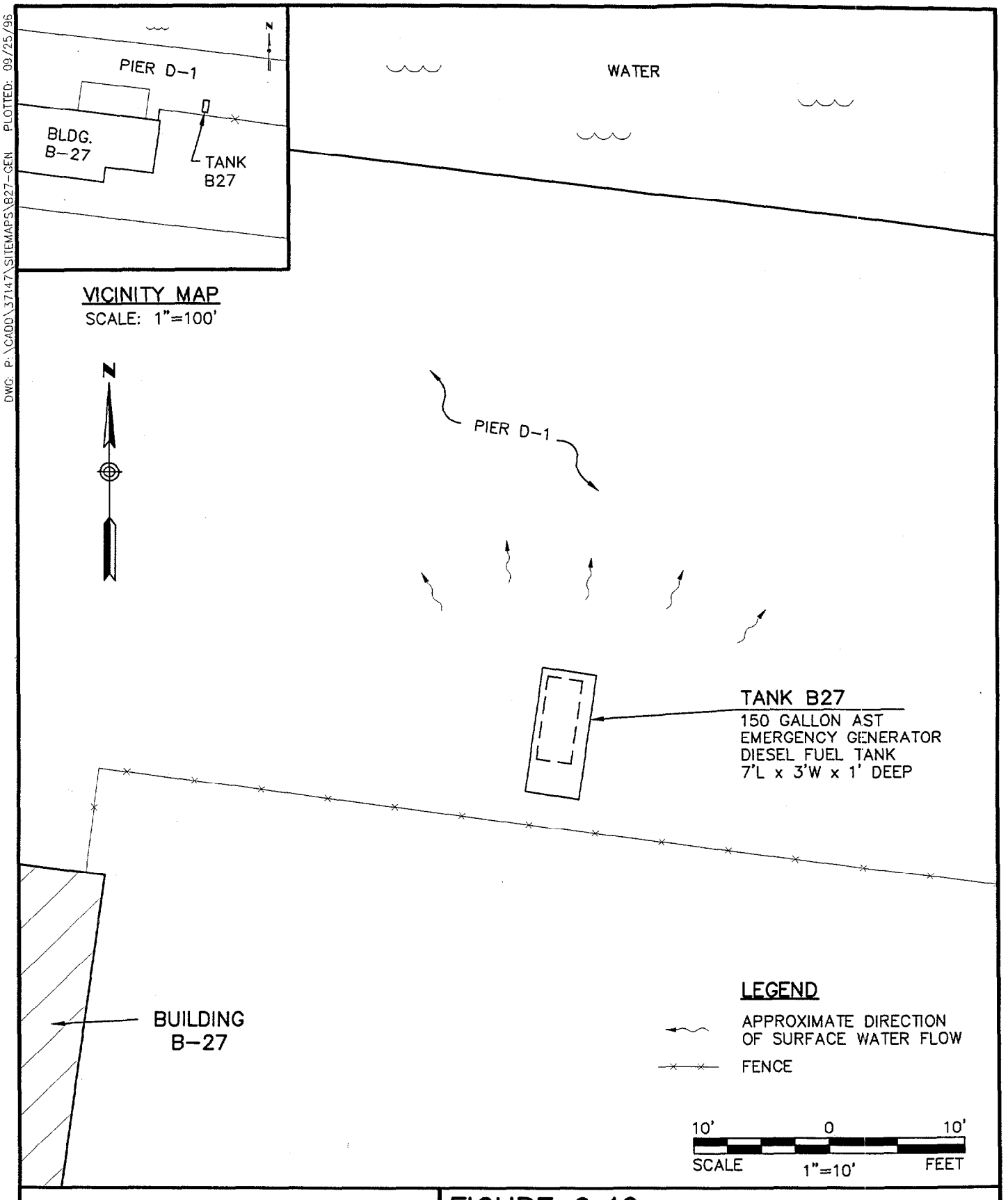
Tank ID B27 - AST	
Year of Installation	1975
Size	150-gallons
Contents	Emergency Generator Diesel
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Single-walled painted steel
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	None; required
Piping Construction	
- Type and Material	N/A
- Cathodic Protection	N/A
- Leak Prevention	N/A
Leak Detection	
- Tank	None; required
- Piping	N/A
- Site	None; required
Integrity Testing	Data not available; not required

6.49.3 Regulatory Compliance Requirements

Tank B27

Provide secondary containment with locking valve by January 1, 1998. Estimated cost is $1,500.00.

Inspect tank and site monthly and incorporate into SPCC Plan by January 1, 1998.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.49

SITE MAP OF TANK B27
TRUMBO POINT ANNEX
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.50 Ordnance Research/Development Building 28 (Tank B28)

6.50.1 General Information

Building B28 the Ordnance Research/Development building is located on Pier D-1. Pier D-1 extends westerly into the Gulf of Mexico and abuts Trumbo Point Annex to the east. Tank B28 is a 250-gallon aboveground vehicular gasoline fuel tank mounted within a aluminum valved secondary containment. Fuel from tank B28 is used for refueling of naval marine vehicles via an electrically powered dispenser.

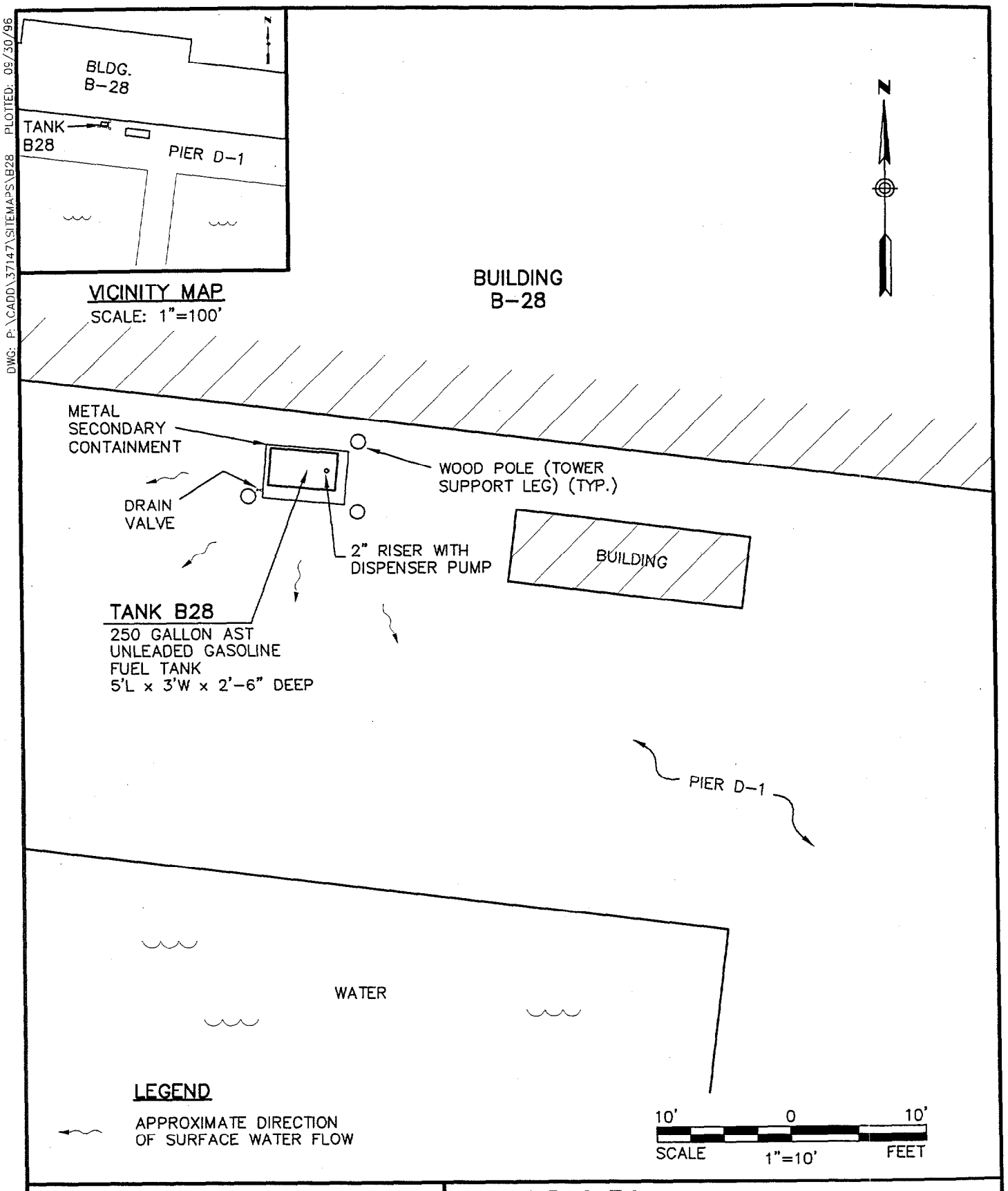
6.50.2 Specific Tank Information

Tank ID B28 - AST	
Year of Installation	1994
Size	250-gallons
Contents	Unleaded Gasoline
Throughput	640 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Single-walled aluminum on supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Aluminum secondary containment
Piping Construction	
- Type and Material	Aboveground rubber
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	None; required
- Piping	None; required
- Site	None; required
Integrity Testing	Data not available; not required

6.50.3 Regulatory Compliance Requirements

Tank B28

Inspect tank, piping and site monthly and incorporate into SPCC Plan by January 1, 1998.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.50

SITE MAP OF TANK B28
TRUMBO POINT ANNEX
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.51 Ordnance Research/Development Building 28 (Tank B28A)

6.51.1 General Information

Tank B28A is a 150-gallon diesel generator fuel tank mounted in the base of the emergency generator for building B28. The generator is used as a backup power source in the case of electrical outages. No secondary containment exists for this tank. Building B28, the Ordnance Research/Development building, is located on Pier D-1. Pier D-1 extends westerly into the Gulf of Mexico and abuts Trumbo Point Annex to the east.

6.51.2 Specific Tank Information

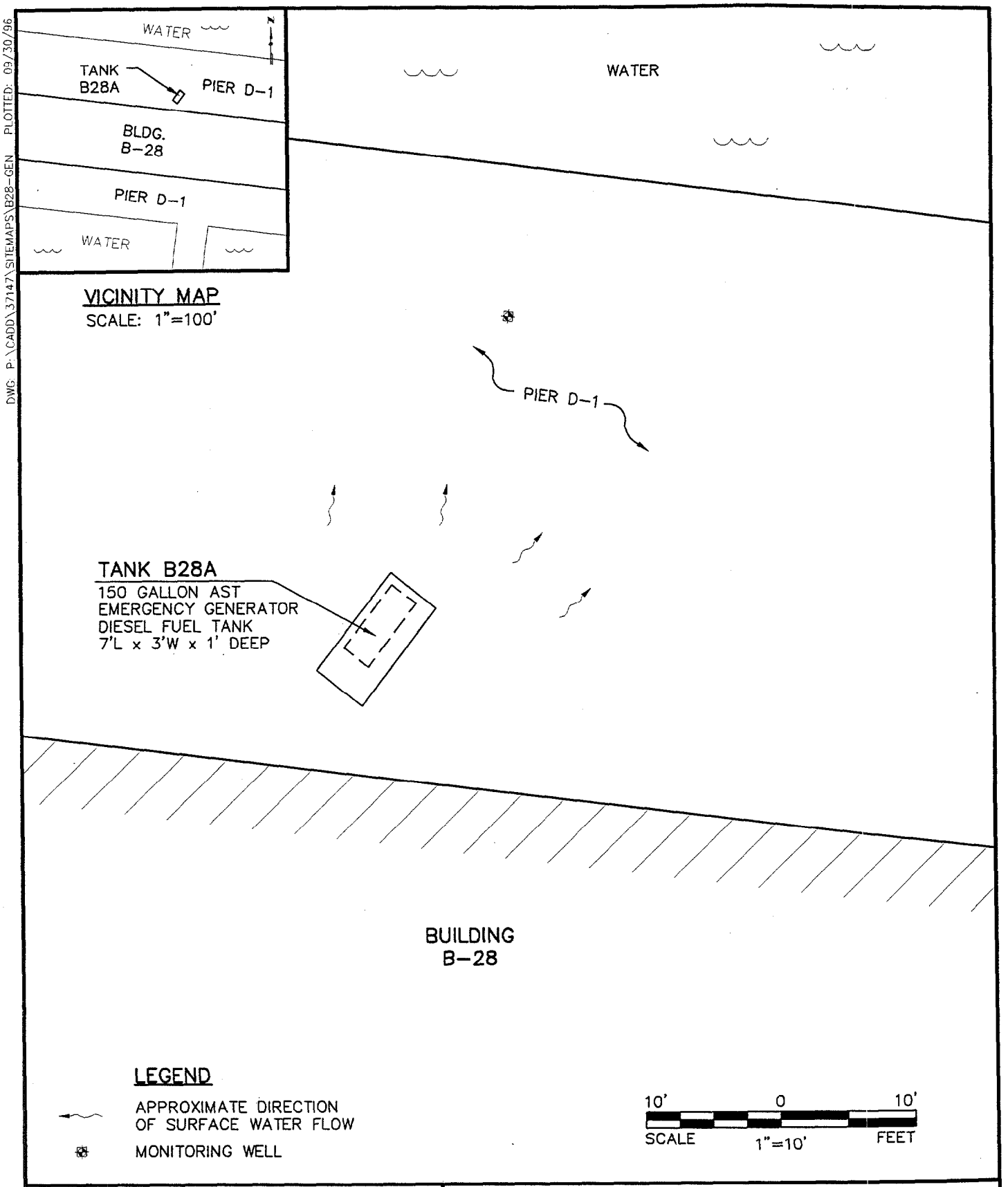
Tank ID B28A - AST	
Year of Installation	1975
Size	150-gallons
Contents	Emergency Generator Diesel
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Single-walled painted steel
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	None; required
Piping Construction	
- Type and Material	N/A
- Cathodic Protection	N/A
- Leak Prevention	N/A
Leak Detection	
- Tank	None; required
- Piping	N/A
- Site	None; required
Integrity Testing	Data not available; not required

6.51.3 Regulatory Compliance Requirements

Tank B28A

Provide secondary containment with locking valve by January 1, 1998. Estimated cost $1500.00.

Inspect tank and site monthly and incorporate into SPCC Plan by January 1, 1998.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.51

SITE MAP OF TANK B28A
TRUMBO POINT ANNEX
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.52 Pier D1 (Tank PD1A and PD1B)

6.52.1 General Information

Pier D1 extends westerly into the Gulf of Mexico and abuts Trumbo Point Annex to the east. A used oil sump is found on the east end of the pier next to Trumbo Road. Tank PD1A is a 4,800- gallon sump that receives used oil and oily water generated by maintenance activities performed on naval marine vehicles. As used oil and oily water levels increase, float activated pumps transfer the liquid to an oil/water separator. The oil/water separator, PD1B is located on Trumbo Road north of building B48 and south of the Trumbo Point Tank Farm. The oil/water separator PD1B has a used oil storage capacity of 650-gallons. Segregated water from this separator discharges to the facility's sanitary sewer system. The used oil is collected and disposed of by a NAS Key West Public Works contract.

6.52.2 Specific Tank Information

Tank ID PD1A - UST	
Year of Installation	1980
Size	4,800-gallons
Contents	Used Oil
Throughput	Data not available
Regulated - Federal	Unregulated
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Concrete None; N/A Pumps on float controls; high level alarm
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Underground ductile iron None; not required None; not required

Tank ID PD1A - UST	
Leak Detection - Tank - Piping - Site	 None; N/A None; N/A None; N/A
Integrity Testing	Data not available; not required

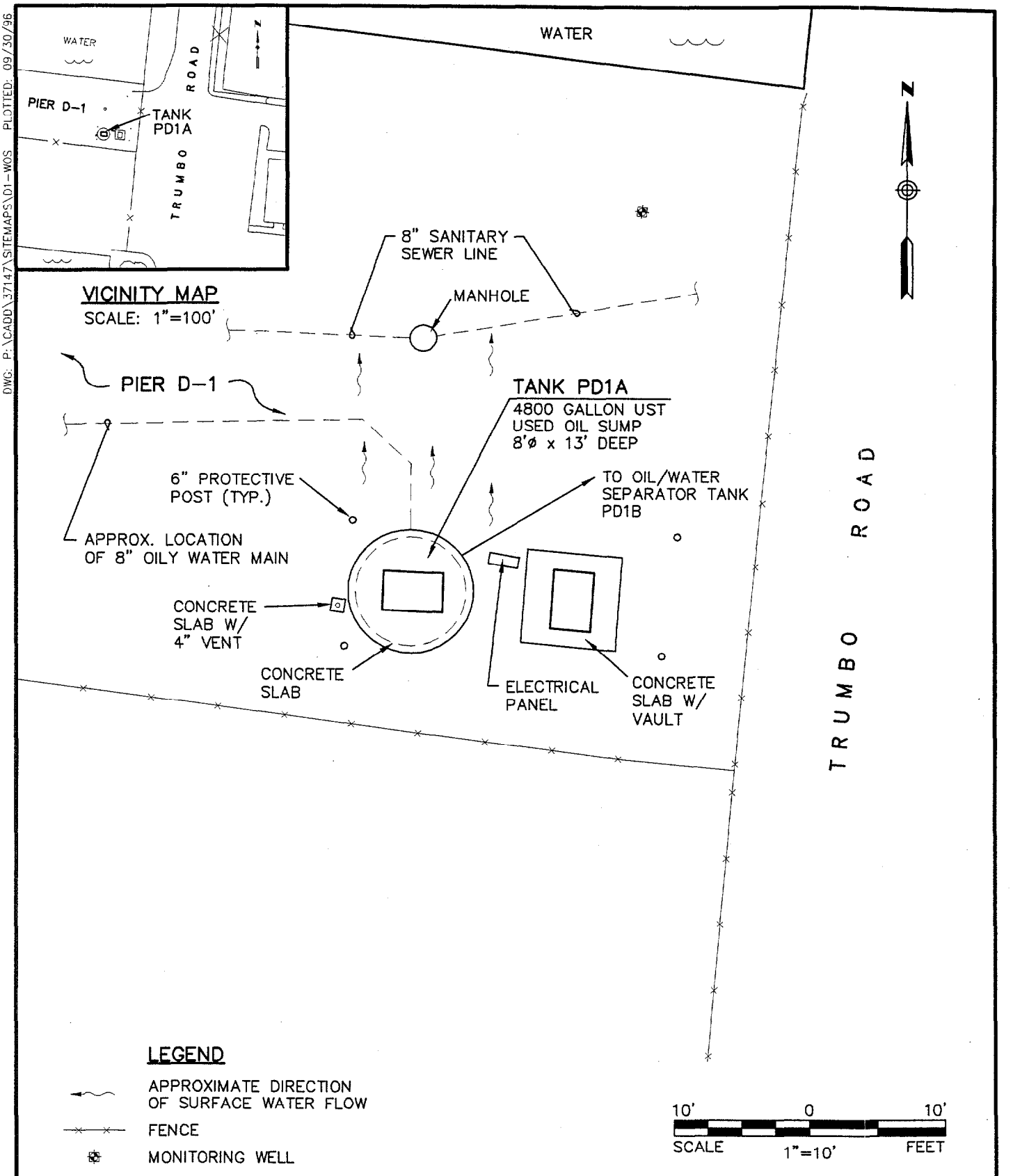
6.52.3 Specific Tank Information

Tank ID PD1B - UST	
Year of Installation	1985
Size	650-gallons
Contents	Used Oil
Throughput	Data not available
Regulated - Federal	Unregulated
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Double-walled fiberglass None; N/A None; N/A
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Underground ductile iron None; N/A None; N/A
Leak Detection - Tank - Piping - Site	 None; N/A None; N/A None; N/A
Integrity Testing	Data not available; N/A

6.52.4 Regulatory Compliance Requirements

Tank PD1A and PD1B

These tanks are considered process tanks and are therefore exempt from state and federal regulation.



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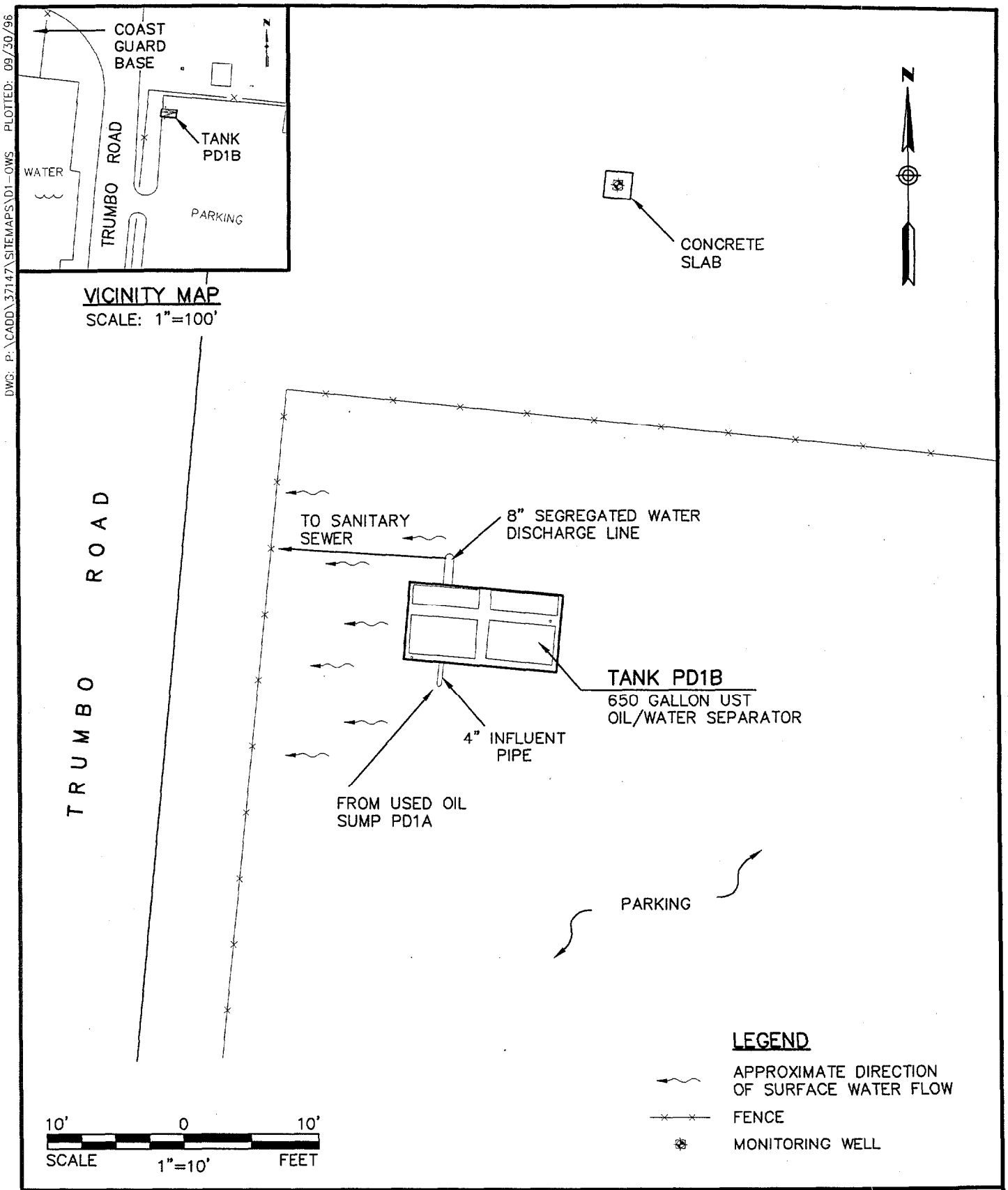
RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.52

SITE MAP OF TANK PD1A
TRUMBO POINT ANNEX
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.52A

SITE MAP OF TANK PD1B
TRUMBO POINT ANNEX
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.53 Potable Water Pump Station Building B43 (Tanks B43 and B43A)

6.53.1 General Information

The potable water pump station B43 is located on Trumbo Road west of the Trumbo Point Tank Farm. Two fuel storage tanks reside on this site, one AST and one UST. Tank B43, a 280-gallon UST, is located west of building B43 and is out-of-service. Leaded gasoline fuel was stored in this tank and was used as a backup power source for the station's water pumps. Tank B43A is a 60-gallon AST mounted to the southwest wall of building B43. This tank is also out-of-service and has no secondary containment. Data on tank B43A's content or use was not available.

6.53.2 Specific Tank Information

Tank ID B43 - UST	
Year of Installation	1954
Size	280-gallons
Contents	Leaded Gasoline
Throughput	0 gal/yr
Regulated - Federal	Regulated; 40 CFR 112; 40 CFR 280
Regulated - Florida	Regulated; FAC 62-761
Florida Registration	Registered
Status	Out-of-service
Tank Construction	
- Type and Material	Steel
- Cathodic Protection	None; required
- Spill/Overfill Prevention	None; required
Piping Construction	
- Type and Material	Underground steel
- Cathodic Protection	None; required
- Leak Prevention	None; required
Leak Detection	
- Tank	SPCC
- Piping	SPCC
- Site	SPCC
Integrity Testing	Data not available; required

6.53.3 Specific Tank Information

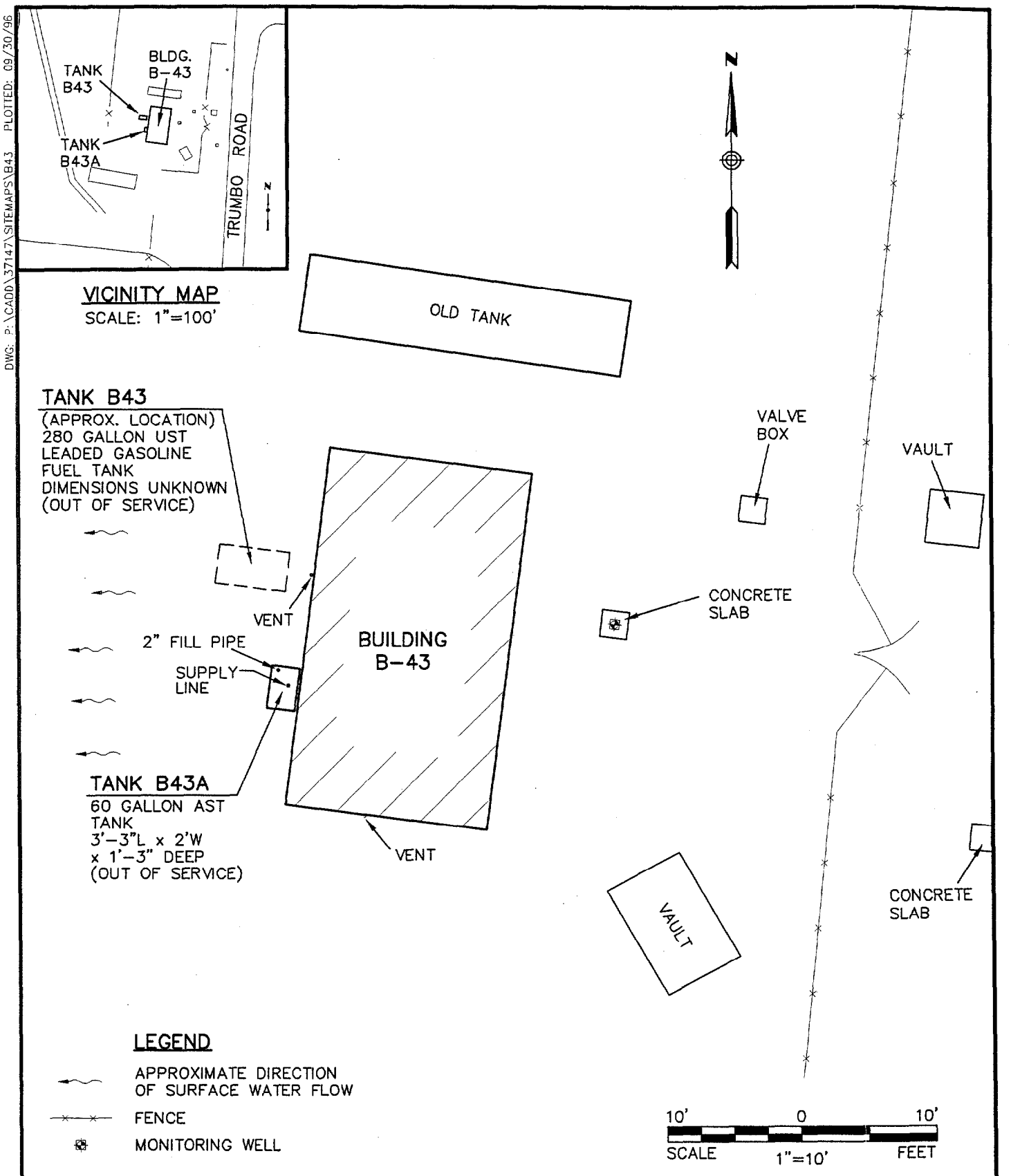
Tank ID B43A - AST	
Year of Installation	Data Not Available
Size	60-gallons
Contents	Data Not Available
Throughput	0 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	Out-of-service
Tank Construction	
- Type and Material	Unpainted steel on supports
- Cathodic Protection	None; N/A
- Spill/Overfill Prevention	None; required (waived)
Piping Construction	
- Type and Material	Aboveground unpainted copper
- Cathodic Protection	None; N/A
- Leak Prevention	None; N/A
Leak Detection	
- Tank	None; N/A
- Piping	None; N/A
- Site	None; N/A
Integrity Testing	Data not available; not required

6.53.4 Regulatory Compliance Requirements

Tanks B43 and B43A

These tanks are scheduled for removal under Navy contract no. N62467-96-C-0793 (already funded).

Tank closure and removal including assessment for B43 must be completed by December 31, 2000. Estimated cost $2,000.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.53

SITE MAP OF TANKS B43 & B43A
TRUMBO POINT ANNEX
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.54 CAAC and Photo Lab/Hurricane Shelter Building B48 (Tank B48 and B48A)

6.54.1 General Information

The CAAC and Photo Lab, B48, is located on the corner of Trumbo Road and Whiting Avenue. The Trumbo Point Tank Farm is found to the north of building B48. Tank B48, a 550-gallon AST, is located on the east side of this facility. Diesel fuel stored in tank B48 is used to fuel an emergency generator found inside this building. Tank B48A is a 150-gallon diesel generator fuel tank mounted in the base of the emergency generator for building B48. The generator is used as a backup power source in the case of electrical outages. No secondary containment exists at this site.

6.54.2 Specific Tank Information

Tank ID B48 - AST	
Year of Installation	1969
Size	550-gallons
Contents	Emergency Generator Diesel
Throughput	48 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Single-walled painted steel on supports None; not required None; required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground copper None; not required None; not required
Leak Detection - Tank - Piping - Site	 None; required None; required None; required
Integrity Testing	Data not available; not required

6.54.3 Specific Tank Information

Tank ID B48A - AST	
Year of Installation	Data not available
Size	150-gallons
Contents	Emergency Generator Diesel
Throughput	48 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Single-walled steel
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	None; required (waived)
Piping Construction	
- Type and Material	N/A
- Cathodic Protection	N/A
- Leak Prevention	N/A
Leak Detection	
- Tank	None; required
- Piping	N/A
- Site	None; required
Integrity Testing	Data not available; not required

6.54.4 Regulatory Compliance Requirements

Tank B48

Provide secondary containment by January 1, 1998. Estimated cost $1,500.00.

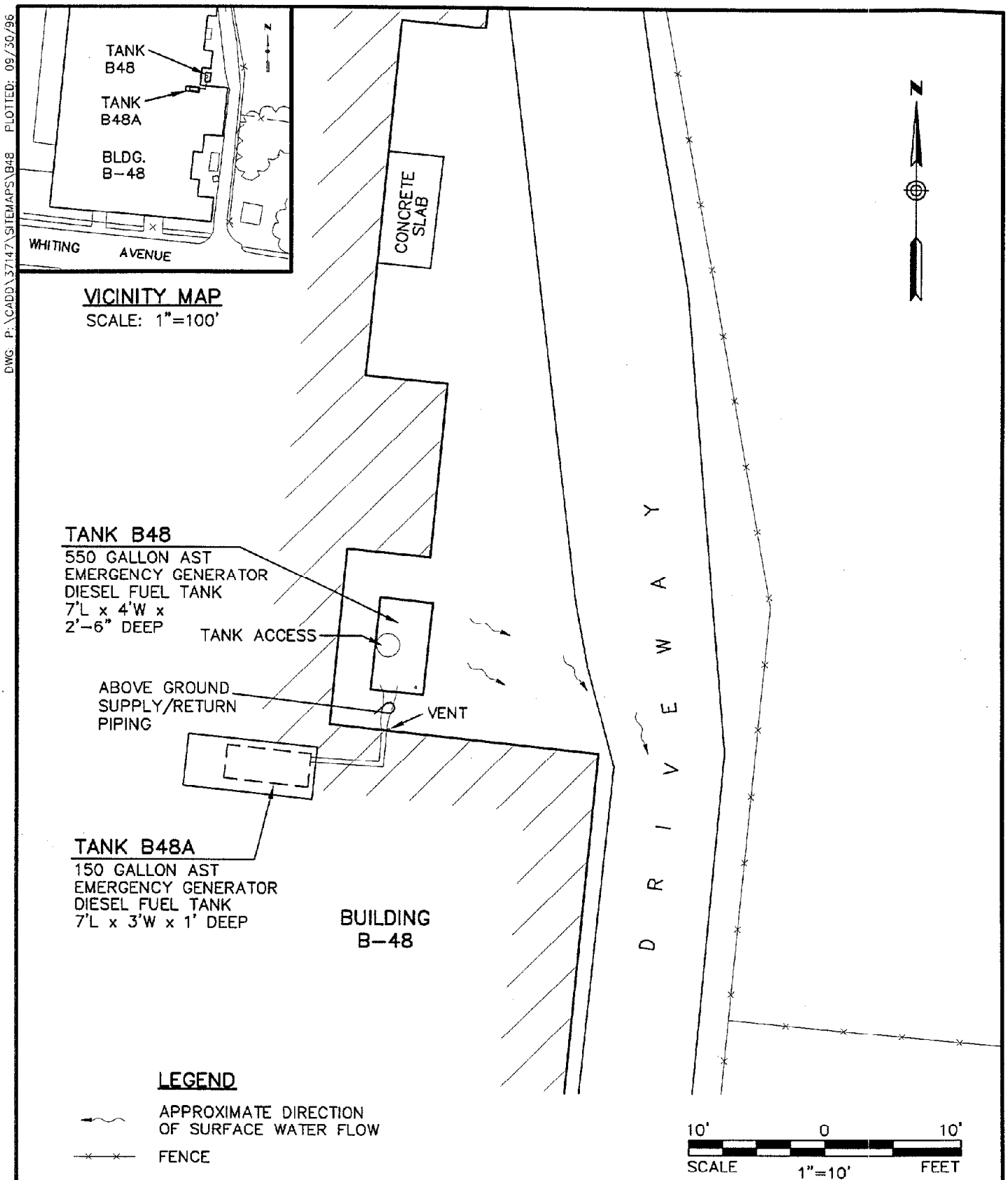
Inspect tank, piping and site monthly and incorporate into SPCC Plan by January 1, 1998.

Recommend installation of an anti-syphon valve on all aboveground piping routed outside secondary containment. Estimated cost $500.00.

Tank B48A

40 CFR 112 requires all ASTs to have secondary containment. Due to the location of this tank, in the event of a release, the likelihood of the spill reaching navigable water is low. Therefore, no secondary containment is required.

Inspect tank and site monthly and incorporate into the SPCC Plan by January 1, 1998.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.54

SITE MAP OF TANKS B48 & B48A
TRUMBO POINT ANNEX
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.55 Trumbo Point Annex Fire Station Building C5 (Tank C5)

6.55.1 General Information

The Trumbo Point Annex Fire Station, building C5, is located on Chevalier Avenue. This facility provides fire protection for Trumbo Point Annex. Tank C5 is a 30-gallon diesel fuel tank mounted to the base of the fire station's emergency generator. The generator is currently out-of-service but when in operation supplied backup power for building C5. Tank C5 does not have secondary containment.

6.55.2 Specific Tank Information

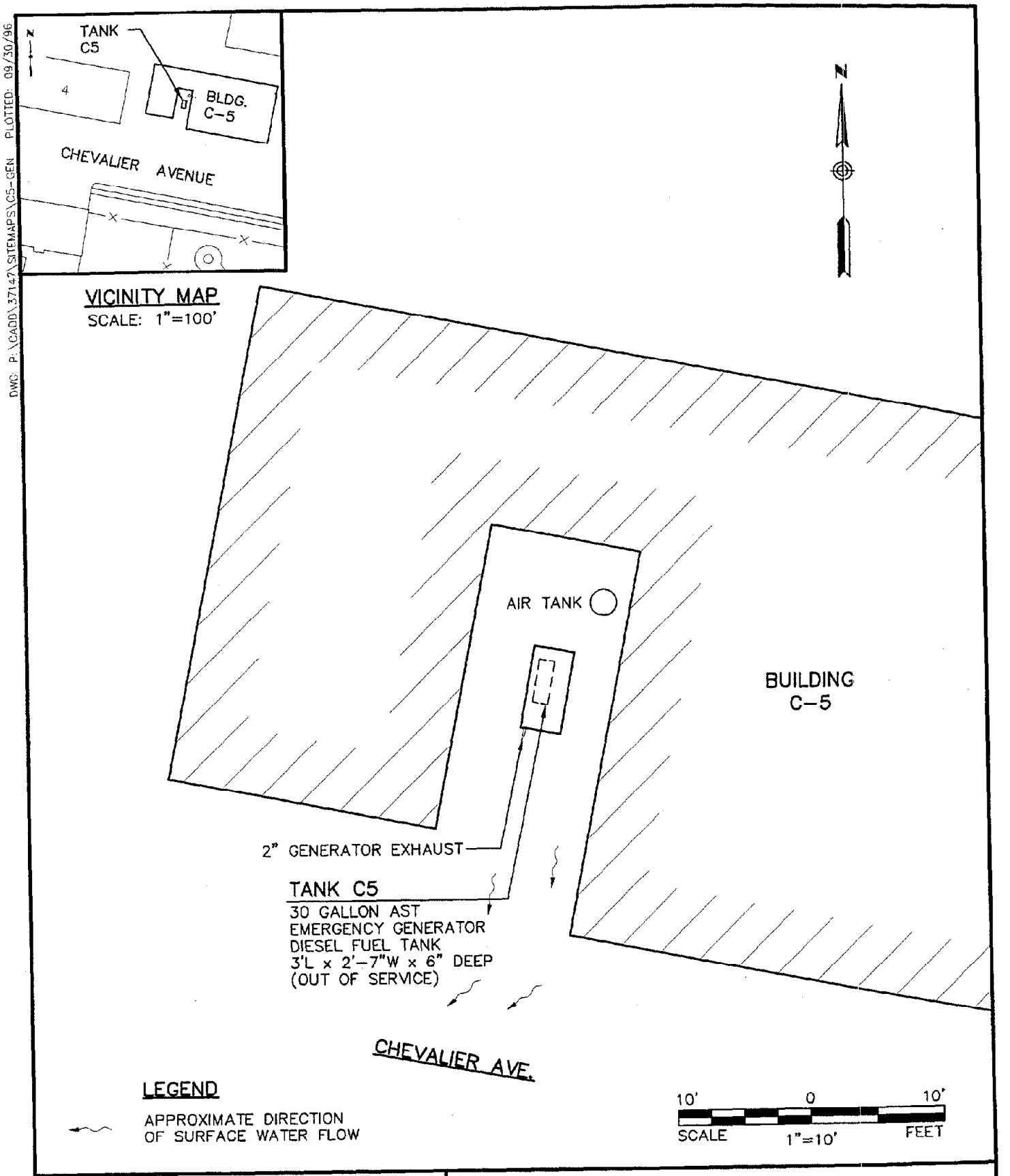
Tank ID C5 - AST	
Year of Installation	1976
Size	30-gallons
Contents	Emergency Generator Diesel
Throughput	0 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	Out-of-service
Tank Construction	
- Type and Material	Single-walled steel
- Cathodic Protection	None; N/A
- Spill/Overfill Prevention	None; required (waived)
Piping Construction	
- Type and Material	N/A
- Cathodic Protection	N/A
- Leak Prevention	N/A
Leak Detection	
- Tank	None; required
- Piping	N/A
- Site	None; required
Integrity Testing	Data not available; not required

6.55.4 Regulatory Compliance Requirements

Tank C5

40 CFR 112 requires all ASTs to have secondary containment. Due to the location of tank C5, in the event of a release, the likelihood of the spill reaching navigable waters is low. Therefore, no secondary containment is required.

If tank C5 is returned to service, inspect tank and site monthly and incorporate into SPCC Plan, otherwise close.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.55

SITE MAP OF TANK C5
TRUMBO POINT ANNEX
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.56 Trumbo Point Annex Naval Exchange Service Station (C12-A, B, C and D)

6.56.1 General Information

The Trumbo Point Annex NEX Service Station has been demolished, but four abandoned USTs still exist on the site. The former service station site is located west of the Trumbo Point Annex main entrance guard house. A paved parking lot covers the abandoned tanks and a large portion of the service station site. Tanks C12-A and C12-B are 10,000-gallon tanks that previously contained vehicular gasoline. Tanks C12-C and C12-D are 6,000-gallon tanks that also contained vehicular gasoline. No release detection is present at this site.

6.56.2 Specific Tank Information

Tank ID C12-A - UST	
Year of Installation	1976
Size	10,000-gallons
Contents	Unleaded gasoline
Throughput	0 gal/yr
Regulated - Federal	Regulated; 40 CFR 112; 40 CFR 280
Regulated - Florida	Regulated; FAC 62-761
Florida Registration	Registered
Status	Out-of-service (abandoned)
Tank Construction	
- Type and Material	Fiberglass
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Fill port has spill containment
Piping Construction	
- Type and Material	Underground fiberglass
- Cathodic Protection	None; not required
- Leak Prevention	None; required
Leak Detection	
- Tank	None; required
- Piping	None; required
- Site	None; required
Integrity Testing	Data not available

6.56.3 Specific Tank Information

Tank ID C12-B - UST	
Year of Installation	1976
Size	10,000-gallons
Contents	Unleaded gasoline
Throughput	0 gal/yr
Regulated - Federal	Regulated; 40 CFR 112; 40 CFR 280
Regulated - Florida	Regulated;
Florida Registration	Registered
Status	Out-of-service (abandoned)
Tank Construction	
- Type and Material	Fiberglass
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Fill port has spill containment
Piping Construction	
- Type and Material	Underground fiberglass
- Cathodic Protection	None; not required
- Leak Prevention	None; required
Leak Detection	
- Tank	None; required
- Piping	None; required
- Site	None; required
Integrity Testing	Data not available

6.56.4 Specific Tank Information

Tank ID C12-C - UST	
Year of Installation	1976
Size	6,000-gallons
Contents	Unleaded gasoline
Throughput	0 gal/yr
Regulated - Federal	Regulated; 40 CFR 112; 40 CFR 280
Regulated - Florida	Regulated; 62-761
Florida Registration	Registered
Status	Out-of-service (abandoned)
Tank Construction	
- Type and Material	Fiberglass
- Cathodic Protection	Data not available
- Spill/Overfill Prevention	Data not available
Piping Construction	
- Type and Material	Data not available
- Cathodic Protection	Data not available
- Leak Prevention	Data not available
Leak Detection	
- Tank	Data not available
- Piping	Data not available
- Site	Data not available
Integrity Testing	Data not available

6.56.5 Specific Tank Information

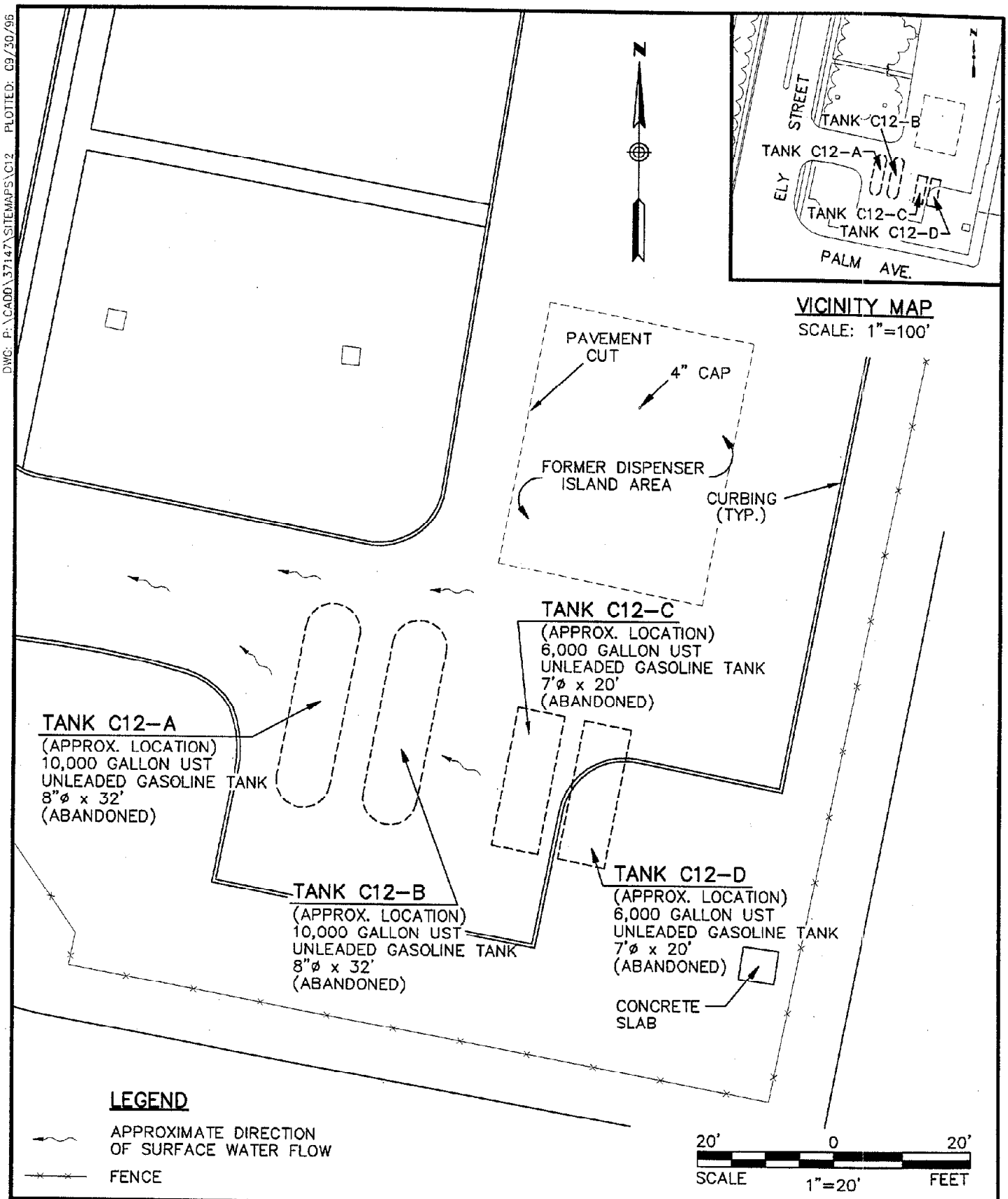
Tank ID C12-D - UST	
Year of Installation	1976
Size	10,000-gallons
Contents	Unleaded gasoline
Throughput	0 gal/yr
Regulated - Federal	Regulated; 40 CFR 112; 40 CFR 280
Regulated - Florida	Regulated; FAC 62-761
Florida Registration	Registered
Status	Abandoned
Tank Construction	
- Type and Material	Fiberglass
- Cathodic Protection	Data not available
- Spill/Overfill Prevention	Data not available
Piping Construction	
- Type and Material	Data not available
- Cathodic Protection	Data not available
- Leak Prevention	Data not available
Leak Detection	
- Tank	Data not available
- Piping	Data not available
- Site	Data not available
Integrity Testing	Data not available

6.56.6 Regulatory Compliance Requirements

Tanks C12-A, 12-B, 12-C and 12-D

These tanks are scheduled for removal under current Navy contracts in FY96 (already funded).

Tank closure and removal including assessment must be completed by December 31, 2000. Estimated cost per tank $10,000.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.56

SITE MAP OF TANKS C12-A, B, C, & D
TRUMBO POINT ANNEX
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147

OCTOBER, 1996

6.57 Special Forces Barracks Building C59 (Tank C59 and C59A)

6.57.1 General Information

The Special Forces Barracks found in building C59 is located on Mustin Street south of the Fleming Key Bridge and east of the Trumbo Point Tank Farm. This building is currently used as a Special Forces equipment storage and repair facility. Military personnel are no longer housed in this building. Tanks C59 and C59A exist at this site.

6.57.2 Specific Tank Information

Tank C59, found east of building C59, is a 300-gallon aboveground vehicular gasoline storage tank. Fuel from this tank is used to fuel Special Forces marine vehicles via polyethylene hose with a shut-off valve. Tank C59 is found within a 1'-4" deep concrete block secondary containment.

Tank ID C59 - AST	
Year of Installation	Data not available
Size	300-gallons
Contents	Unleaded gasoline
Throughput	300 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Single-walled aluminum on supports None; not required Concrete block secondary containment with concrete base; required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground rubber None; not required None; not required

Tank ID C59 - AST	
Leak Detection - Tank - Piping - Site	 None; required None; required None; required
Integrity Testing	Data not available; not required

6.57.3 Specific Tank Information

Tank C59A is a 50-gallon diesel fuel tank mounted to the base of an emergency generator located west of building C59. This generator is used to supply power to Building C59 during electrical outages. No secondary containment was found for tank C59A.

Tank ID C59A - AST	
Year of Installation	1983
Size	50-gallons
Contents	Emergency Generator Diesel
Throughput	99 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Single-walled steel None; not required None; required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 N/A N/A N/A

Tank ID C59A - AST	
Leak Detection - Tank - Piping - Site	 None; required N/A None; required
Integrity Testing	Data not available; not required

6.57.7 Regulatory Compliance Requirements

Tank C59

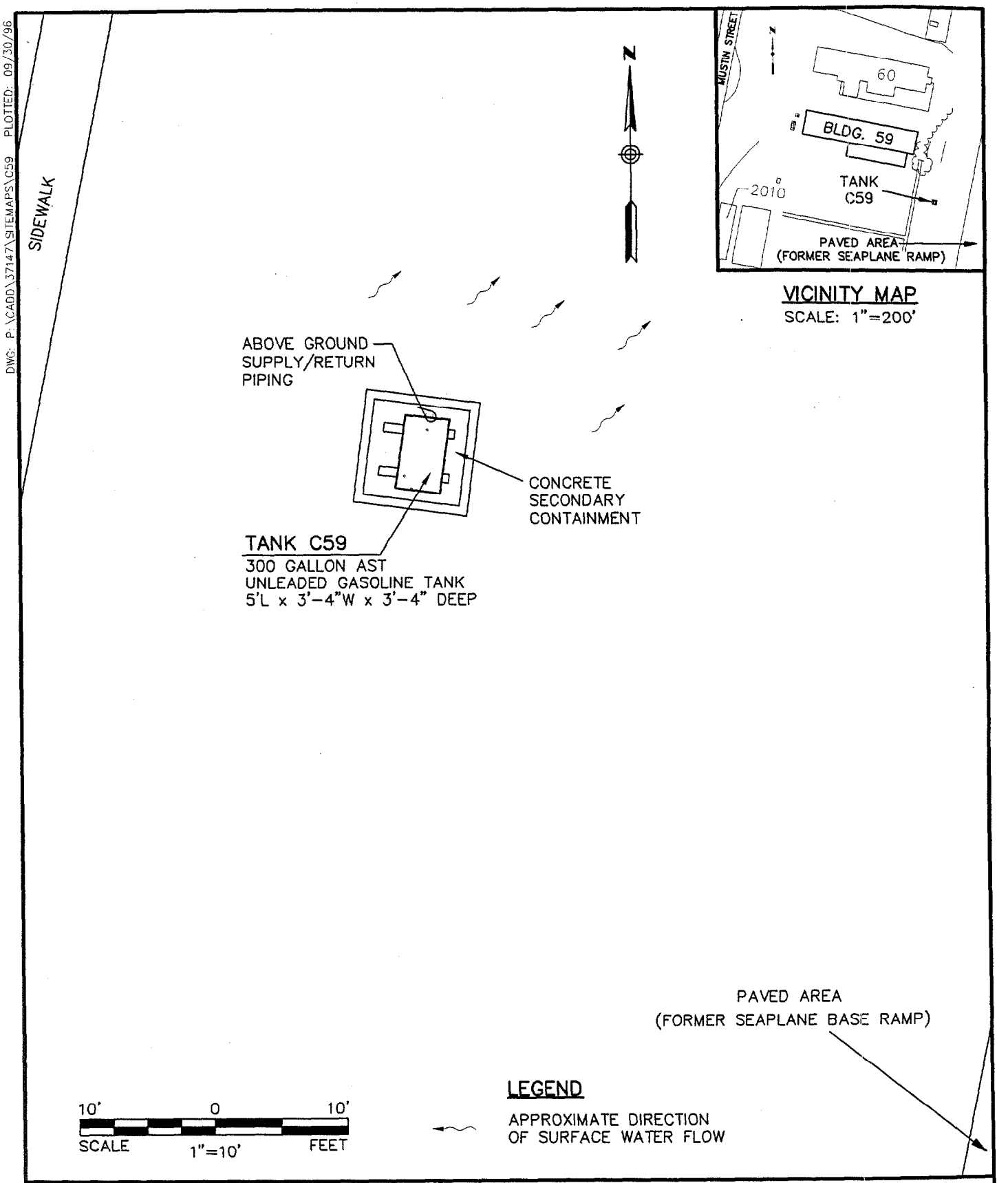
Provide secondary containment and locking valve by January 1, 1998. Estimated cost is $1,500.00.

Inspect tank, piping and site monthly and incorporate into SPCC Plan by January 1, 1998.

Tank C59A

Provide secondary containment and locking valve by January 1, 1998. Estimated cost is $1,500.00.

Inspect tank, piping and site monthly and incorporate into SPCC Plan by January 1, 1998.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.57

SITE MAP OF TANK C59
TRUMBO POINT ANNEX
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

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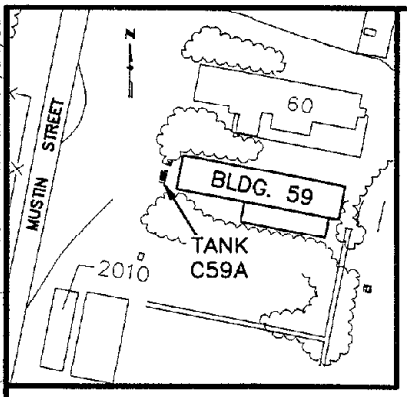
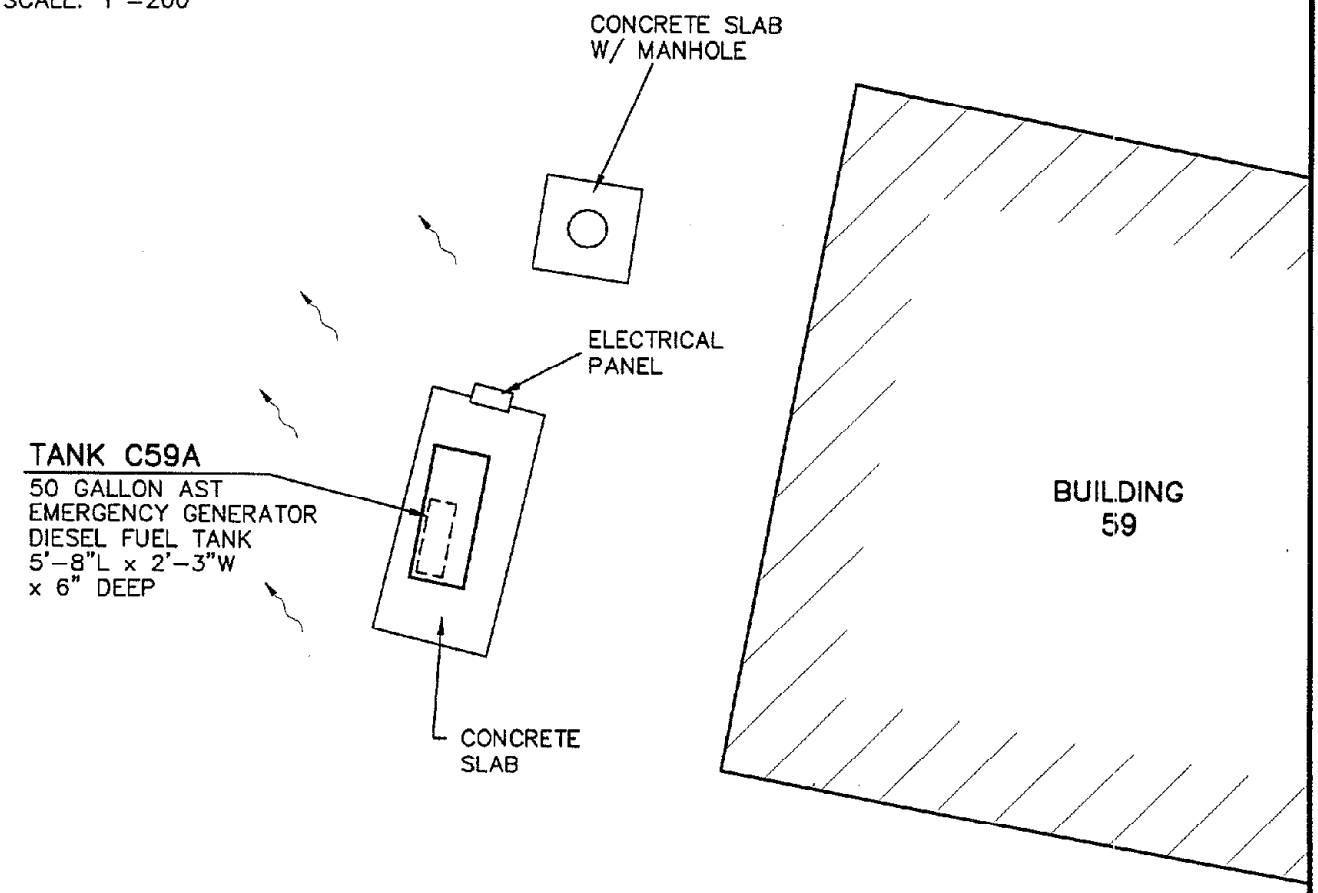


VICINITY MAP
SCALE: 1"=200'



LEGEND

APPROXIMATE DIRECTION
OF SURFACE WATER FLOW

10' 0 10'
SCALE 1"=10' FEET

RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.57A
SITE MAP OF TANK C59A
TRUMBO POINT ANNEX
NAVAL AIR STATION – KEY WEST, FLORIDA
RUST Project No. 37147
OCTOBER, 1996

6.58 Gymnasium - Building C83 (Tank C83)

6.58.1 General Information

A potable water pump station is located south of Building C83 on Mustin Street. One 275-gallon AST resides at this site. Tank C83 is located east of the pump station and contains diesel fuel. The fuel stored in this tank supplies the facility's pumps with an alternative fuel source if there is a power loss. No secondary containment is present at this site.

6.58.2 Specific Tank Information

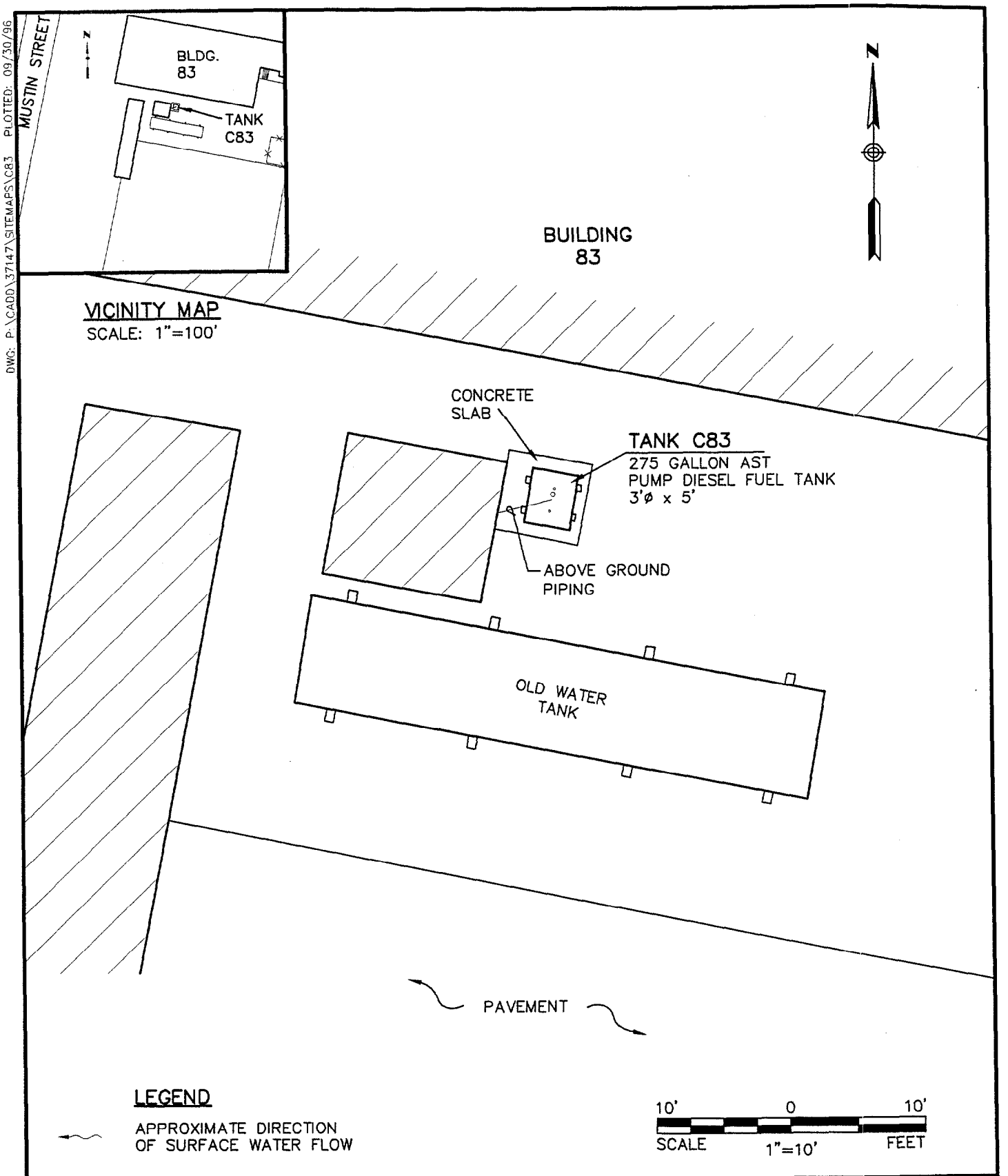
Tank ID C83 - AST	
Year of Installation	1942
Size	275-gallons
Contents	Pump Diesel
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Single-walled painted steel on supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Manual gauging; additional required
Piping Construction	
- Type and Material	Aboveground copper
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	SPCC
- Piping	SPCC
- Site	SPCC
Integrity Testing	Data not available; not required

6.58.3 Regulatory Compliance Requirements

Tank C83

Provide secondary containment by January 1, 1998. Estimated cost $1,500.00.

Recommend installation of an anti-syphon valve on all aboveground piping routed outside secondary containment. Estimated cost $500.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.58

SITE MAP OF TANK C83
TRUMBO POINT ANNEX
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.59 Barracks - Building C2076 (Tank C2076)

6.59.1 General Information

The Bachelor Officer Quarters (BOQ) and the Trumbo Palms Club is located on the corner of Chevalier Avenue and Chambers Street in building C2076. Tank C2076 is located on the southwest side of the BOQ and is used to fuel the building's hot water heaters. This tank is a 1,000-gallon AST containing diesel fuel situated inside a 1'-10" deep valved concrete secondary containment with impervious base.

6.59.2 Specific Tank Information

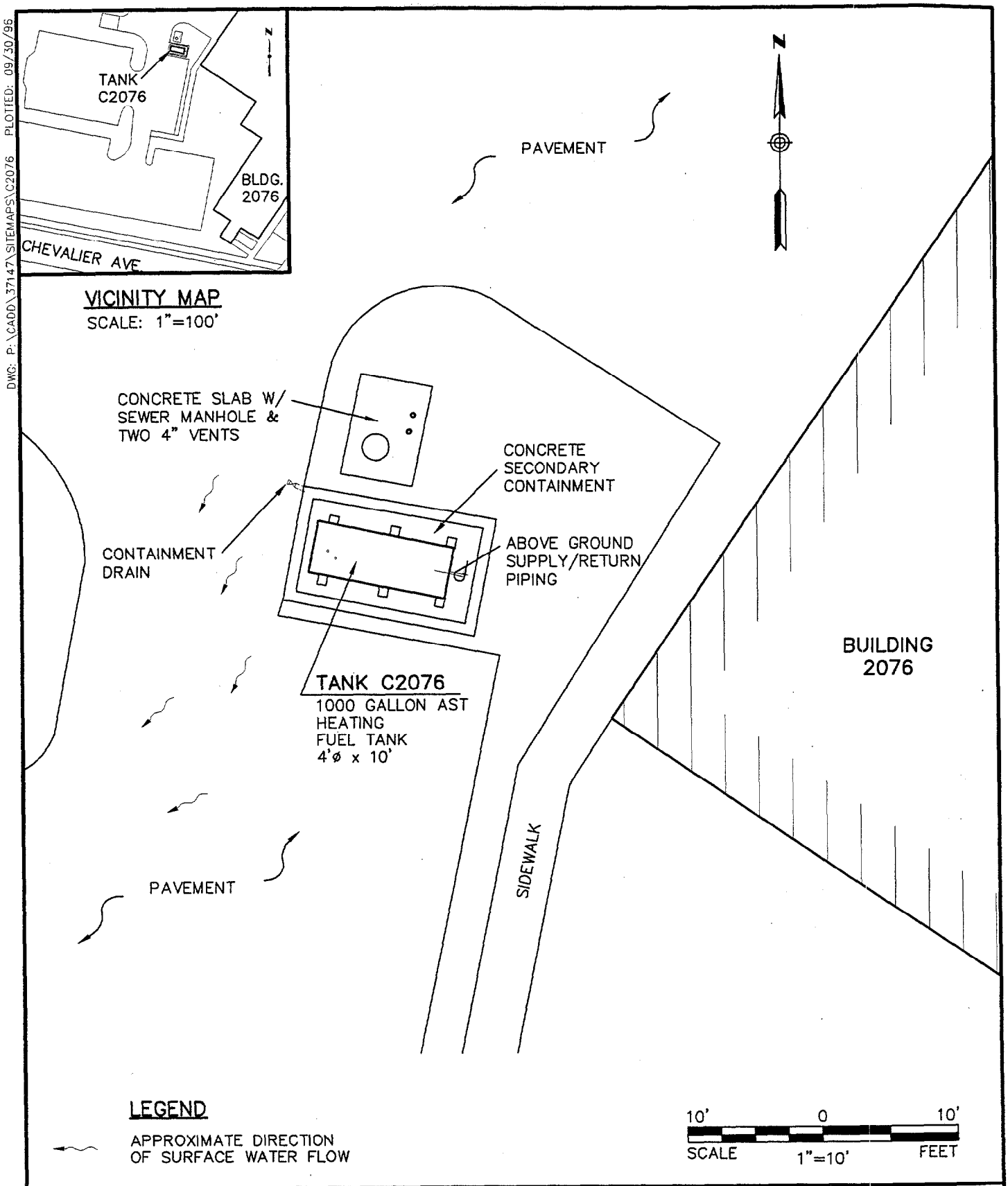
Tank ID C2076 - AST	
Year of Installation	1985
Size	1000-gallons
Contents	Heating fuel
Throughput	13,922 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	Registered
Status	In-Service
Tank Construction	
- Type and Material	Single-walled painted steel on supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Concrete secondary containment
Piping Construction	
- Type and Material	Aboveground steel and underground
- Cathodic Protection	None; not required
- Leak Prevention	None; required
Leak Detection	
- Tank	SPCC
- Piping	SPCC
- Site	SPCC
Integrity Testing	Data not available; not required

6.59.3 Regulatory Compliance Requirements

Tank C2076

Tank C2076 is scheduled for removal and replacement with a vaulted tank under Navy contract no. N62467-96-C-0849 (already funded).

Recommend installation of an anti-syphon valve on all aboveground piping routed outside secondary containment. Estimated cost $500.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.59

SITE MAP OF TANK C2076
TRUMBO POINT ANNEX
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.60 Trumbo Point Tank Farm (Trumbo Point Tank Farm Bulk Pipeline and Tanks D1, D2, D3, D4, D6, D21, D25, D26A, D27, D29,D1292B and D1469)

6.60.1 General Information

The Trumbo Point Fuel Farm is located on Trumbo Road east of the U.S. Coast Guard piers. Key West Pipeline, an independent company, operates a fuel farm located immediately to the north of this facility. The Trumbo Point Fuel Farm is the main storage site for diesel fuel, vehicular diesel and vehicular gasoline used by NAS Key West facilities. The site is contractor operated by AVANTRA but government owned. Trumbo Point Fuel Farm receives diesel fuel from vessels via a four inch pipeline found on the U.S. Coast Guard pier. Groundwater monitoring wells have been installed on site for leak detection. The Fuel Farm consists of twelve fuel storage tanks:

-	D1	-	D6	-	D27
-	D2	-	D21	-	D29
-	D3	-	D25	-	D1292B
-	D4	-	D26A	-	D1469

6.60.2 Specific Tank Information

Tanks D1, D2 and D3 are 563,200-gallon diesel fuel tanks. These tanks are bunkered USTs equipped with high-level alarm systems. Tank D1 is located in the northwest quadrant of the fuel farm north of the building D19. Tank D2 is found southeast of tank D1 and east of building D19. Tank D2 was taken out-of-service in January 1996. Tank D3 is in the southwestern quadrant of the fuel farm and south of tank D2.

Tank ID D1 - UST	
Year of Installation	1942
Size	586,000-gallons
Contents	Vehicular Diesel
Throughput	897,630 gal/yr
Regulated - Federal	Regulated; 40 CFR 112; 40 CFR 280
Regulated - Florida	Regulated; FAC 62-761
Florida Registration	Registered
Status	In-Service
Tank Construction	
- Type and Material	Field erected concrete
- Cathodic Protection	None; N/A
- Spill/Overfill Prevention	High level alarm; spill containment; additional required
Piping Construction	
- Type and Material	Underground steel
- Cathodic Protection	None; required
- Leak Prevention	None; required
Leak Detection	
- Tank	Manual gauging; groundwater monitoring; SPCC; additional required
- Piping	Groundwater monitoring; SPCC; additional required
- Site	Groundwater monitoring; SPCC; additional required
Integrity Testing	Data not available; required

Tank ID D2 - UST	
Year of Installation	1942
Size	586,000-gallons
Contents	Vehicular Diesel
Throughput	0 gal/yr
Regulated - Federal	Regulated; 40 CFR 112; 40 CFR 280
Regulated - Florida	Regulated; FAC 62-761
Florida Registration	Registered
Status	Out-of-service
Tank Construction	
- Type and Material	Field erected concrete
- Cathodic Protection	None; N/A
- Spill/Overfill Prevention	High level alarm; spill containment; additional required
Piping Construction	
- Type and Material	Underground steel
- Cathodic Protection	None; required
- Leak Prevention	None; required
Leak Detection	
- Tank	Groundwater monitoring; manual gauging; SPCC; additional required
- Piping	Groundwater monitoring; SPCC; additional required
- Site	Groundwater monitoring; SPCC; additional required
Integrity Testing	Data not available; required

Tank ID D3 - UST	
Year of Installation	1942
Size	586,000-gallons
Contents	Vehicular Diesel
Throughput	1,056,020 gal/yr
Regulated - Federal	Regulated; 40 CFR 112; 40 CFR 280
Regulated - Florida	Regulated; FAC 62-761
Florida Registration	Registered
Status	In-Service
Tank Construction	
- Type and Material	Field erected concrete
- Cathodic Protection	None; N/A
- Spill/Overfill Prevention	High level alarm; spill containment; additional required
Piping Construction	
- Type and Material	Underground steel
- Cathodic Protection	None; required
- Leak Prevention	None; required
Leak Detection	
- Tank	Groundwater monitoring; manual gauging; SPCC; additional required
- Piping	Groundwater monitoring; SPCC; additional required
- Site	Groundwater monitoring; SPCC; additional required
Integrity Testing	Data not available; required

6.60.3 Specific Tank Information

Tank D4 is found east of tank D3 in the southeastern quadrant of the fuel farm. This 1,155,000-gallon bunkered UST has been out-of-service since 1988. Prior to D4 being taken out-of-service it was used to store vehicular diesel fuel.

Tank ID D4 - UST	
Year of Installation	1942
Size	1,155,000-gallons
Contents	Vehicular Diesel
Throughput	0 gal/yr
Regulated - Federal	Regulated; 40 CFR 112; 40 CFR 280
Regulated - Florida	Regulated; FAC 62-761
Florida Registration	Registered
Status	Out-of-service
Tank Construction	
- Type and Material	Field erected concrete
- Cathodic Protection	None; N/A
- Spill/Overfill Prevention	High level alarm; spill containment; additional required
Piping Construction	
- Type and Material	Underground steel
- Cathodic Protection	None; required
- Leak Prevention	None; required
Leak Detection	
- Tank	Groundwater monitoring; manual gauging; SPCC; additional required
- Piping	Groundwater monitoring; SPCC; additional required
- Site	Groundwater monitoring; SPCC; additional required
Integrity Testing	Data not available; required

6.60.4 Specific Tank Information

Tank D6 is found southeast of tank D3 in the southeastern quadrant of the fuel farm. This 1,155,000-gallon bunkered UST has been out-of-service since 1988. Approximately 90,000 gallons of used oil and water is currently stored in this tank. Prior to D6 being taken out-of-service diesel fuel was stored.

Tank ID D6 - UST	
Year of Installation	1942
Size	1,155,000-gallons
Contents	Used Oil
Throughput	0 gal/yr
Regulated - Federal	Regulated; 40 CFR 112; 40 CFR 280
Regulated - Florida	Regulated; FAC 62-761
Florida Registration	Registered
Status	Out-of-service
Tank Construction	
- Type and Material	Field erected concrete
- Cathodic Protection	None; N/A
- Spill/Overfill Prevention	High level alarm; spill containment; additional required
Piping Construction	
- Type and Material	Underground steel
- Cathodic Protection	None; required
- Leak Prevention	None; required
Leak Detection	
- Tank	Groundwater monitoring; manual gauging; SPCC; additional required
- Piping	Groundwater monitoring; SPCC; additional required
- Site	Groundwater monitoring; SPCC; additional required
Integrity Testing	Data not available; required

6.60.5 Specific Tank Information

Located in the southwestern quadrant of the fuel farm, south of building D19, is tank D21. This tank is a 10,000-gallon bunkered UST that is currently out-of-service. Tank D21 is currently filled with water but previously stored vehicular diesel fuel.

Tank ID D21 - UST	
Year of Installation	1942
Size	10,000-gallons
Contents	Vehicular diesel
Throughput	0 gal/yr
Regulated - Federal	Regulated; 40 CFR 112; 40 CFR 280
Regulated - Florida	Regulated; FAC 62-761
Florida Registration	Registered
Status	Out-of-service
Tank Construction	
- Type and Material	Field erected concrete
- Cathodic Protection	None; N/A
- Spill/Overfill Prevention	None; required
Piping Construction	
- Type and Material	Underground steel
- Cathodic Protection	None; required
- Leak Prevention	None; required
Leak Detection	
- Tank	Groundwater monitoring; SPCC; additional required
- Piping	Groundwater monitoring; SPCC; additional required
- Site	Groundwater monitoring; SPCC; additional required
Integrity Testing	Data not available; required

6.60.6 Specific Tank Information

Tank D25 is a 3,500-gallon valve vault located north of building D26 in the southeast quadrant of the fuel farm. Due to leakage of inline valves this vault is approximately 3/4 full of oil and must therefore be considered as a UST. No overfill or leak detection exists for this tank.

Tank ID D25 - UST	
Year of Installation	Data not available
Size	3,500-gallons
Contents	Used Oil
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112; 40 CFR 280
Regulated - Florida	Regulated; FAC 62-761
Florida Registration	None; registration required
Status	In-service
Tank Construction	
- Type and Material	Field erected concrete
- Cathodic Protection	None; N/A
- Spill/Overfill Prevention	None; required
Piping Construction	
- Type and Material	Underground steel
- Cathodic Protection	None; required
- Leak Prevention	None; required
Leak Detection	
- Tank	Groundwater monitoring; additional required
- Piping	Groundwater monitoring; additional required
- Site	Groundwater monitoring; additional required
Integrity Testing	Data not available; required

6.60.7 Specific Tank Information

Tank D26A is a 500-gallon UST found east of building D26 in the southeast quadrant of the fuel farm. This tank is out-of-service. The tank previously contained leaded gasoline.

Tank ID D26A - UST	
Year of Installation	1956
Size	500-gallons
Contents	Leaded Gasoline
Throughput	0 gal/yr
Regulated - Federal	Regulated; 40 CFR 112; 40 CFR 280
Regulated - Florida	Regulated; FAC 62-761
Florida Registration	Registered
Status	Out-of-service
Tank Construction	
- Type and Material	Single-walled unpainted steel
- Cathodic Protection	None; required
- Spill/Overfill Prevention	None; required
Piping Construction	
- Type and Material	Underground steel
- Cathodic Protection	None; required
- Leak Prevention	None; required
Leak Detection	
- Tank	Groundwater monitoring; additional required
- Piping	Groundwater monitoring; additional required
- Site	Groundwater monitoring; additional required
Integrity Testing	Data not available; required

6.60.8 Specific Tank Information

Previously used for storing Bunker C, tank D27 has been taken out-of-service. An unknown quantity of Bunker C remains in this tank. Tank D27 is located east of building D26 and is a 10,000-gallon bunkered UST.

Tank ID D27 - UST	
Year of Installation	1942
Size	10,000-gallons
Contents	Bunker C
Throughput	0 gal/yr
Regulated - Federal	Regulated; 40 CFR 112; 40 CFR 280
Regulated - Florida	Regulated; FAC 62-761
Florida Registration	Registered
Status	Out-of-service
Tank Construction	
- Type and Material	Field erected concrete
- Cathodic Protection	None; N/A
- Spill/Overfill Prevention	Spill containment; additional required
Piping Construction	
- Type and Material	Underground steel
- Cathodic Protection	None; required
- Leak Prevention	None; required
Leak Detection	
- Tank	Groundwater monitoring; SPCC; additional required
- Piping	Groundwater monitoring; SPCC; additional required
- Site	Groundwater monitoring; SPCC; additional required
Integrity Testing	Data not available; required

6.60.9 Specific Tank Information

The Trumbo Point Generator Building D29 is located in the northeast quadrant of the fuel farm adjacent to Mustin Street. Tank D29, found on the east side of building D29, contains diesel fuel used to fuel the fuel farm's emergency generator. This 560-gallon AST is within a valved concrete secondary containment.

Tank ID D29 - AST	
Year of Installation	1985
Size	560-gallons
Contents	Emergency Generator Diesel
Throughput	683 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Regulated; FAC 62-762
Florida Registration	Registered
Status	In-service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Single-walled painted steel on supports None; not required Concrete secondary containment; manual gauging; additional required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground copper None; not required None; not required
Leak Detection - Tank - Piping - Site	 Groundwater monitoring; SPCC Groundwater monitoring; SPCC Groundwater monitoring; SPCC
Integrity Testing	Data not available; not required

6.60.10 Specific Tank Information

Tank D1292B is located north of building D19 and south of tank D1 in the northwestern quadrant of the fuel farm. This 20,000-gallon AST contains vehicular gasoline used in the fueling of military vehicles. Tank D1292B is equipped with a high-level alarm system and double-walled steel piping where underground. Fuel is dispensed to fuel trucks via truck fill stands. A 3' deep valved concrete impoundment provides secondary containment.

Tank ID D1292B - AST	
Year of Installation	1995
Size	20,000-gallons
Contents	Unleaded Gasoline
Throughput	60,000 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Regulated; FAC 62-762
Florida Registration	Registered
Status	In-service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Painted steel on supports None; not required Concrete secondary containment; manual gauging; additional required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Single aboveground painted steel and double-walled underground steel None; not required Double-walled under truck fill pad with interstitial monitoring; additional required
Leak Detection - Tank - Piping - Site	 Groundwater monitoring; SPCC Groundwater monitoring; interstitial monitoring; SPCC Groundwater monitoring; SPCC
Integrity Testing	Data not available; not required

6.60.11 Specific Tank Information

Tank D4169 is a 250-gallon vaulted AST equipped with overfill and leak protection. Vehicular diesel stored in this tank is used to refuel military vehicles via a small electrical pump and polyethylene hose. Tank D4169 is located east of tank D1292B.

Tank ID D4169 - AST	
Year of Installation	1992
Size	250-gallons
Contents	Vehicular Diesel
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Vaulted steel on supports None; N/A Secondary containment for fill port; level gauge; manual gauging
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground rubber None; not required None; not required
Leak Detection - Tank - Piping - Site	 Groundwater monitoring; SPCC Groundwater monitoring; SPCC Groundwater monitoring; SPCC
Integrity Testing	Data not available; not required

6.60.12 Regulatory Compliance Requirements

Trumbo Point Fuel Farm Bulk Pipeline

Integral piping shall be upgraded to meet 67-761.500 by December 31, 2000 or closed. Estimated cost $10,000.00.

Tanks D1, D2, and D3

Based on information provided by the facility these tanks are scheduled for closure pursuant to BRAC activities at NAS Key West.

Integral piping shall be upgraded to meet 67-761.500 by December 31, 2000 or closed. Estimated cost $250,000.00.

Tank closure and removal including assessment must be completed by December 31, 2009. Estimated cost per tank $300,000.00.

Tanks D4, D6, D21, and D25

These tanks are scheduled for removal under Navy contract no. N62467-96-C-0793.

Integral piping shall be upgraded to meet 67-761.500 by December 31, 2000 or closed. Estimated cost $250,000.00 (included in D1, D2, D3 estimate).

Tank closure and removal including assessment must be completed by December 31, 2009. Estimated cost per tank $300,000.00.

Tank D25 requires registration with FDEP.

Tank D29

Provide lock for secondary containment drain valve by December 31, 1999. Estimated cost $50.00

Install an anti-syphon valve on all aboveground piping routed outside secondary containment by December 31, 1999. Estimated cost $500.00.

Tank D1292B

Provide lock for secondary containment drain valve by December 31, 1999. Estimated cost $50.00.

Install anti-syphon valve on all aboveground piping routed outside secondary containment by December 31, 1999. Estimated cost $500.00.

Install impervious liner for secondary containment by January 1, 1998. Estimated cost $1,000.00.

Provide tank level gauge by December 31, 1999. Estimated cost $2,000.00.

Comply with SPCC Plan recommendation to increase secondary containment volume by January 1, 1998.

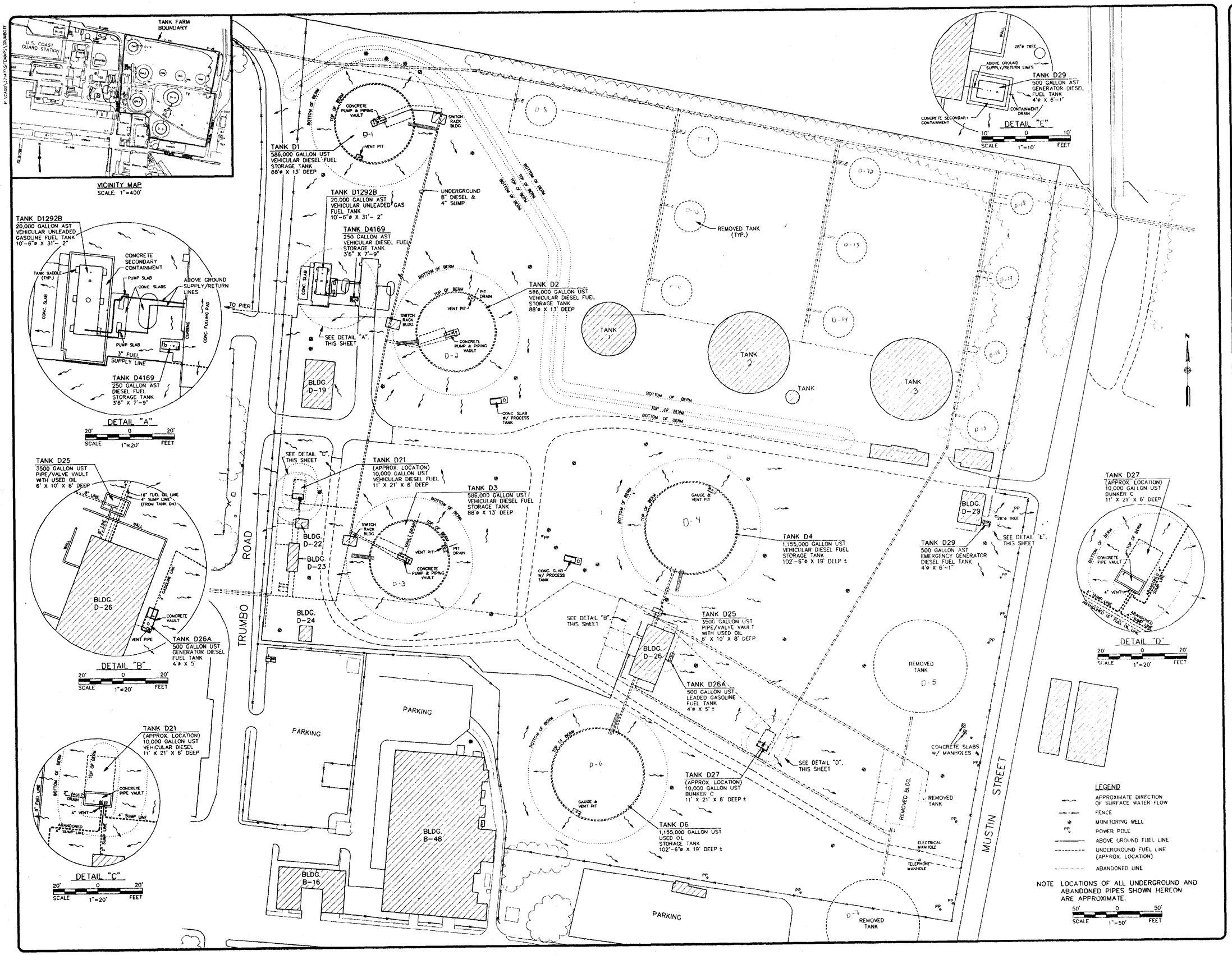
Tank D4169

No recommendation.

Tank D26A and D27

These tanks are scheduled for removal under Navy Contract No. N62467-96-C-0793 (already funded).

Upgrade tanks and piping or close by December 31, 2000.
Estimated cost for tank upgrade (D26A) $4,000.00.
Estimated cost for tank upgrade (D27) $10,000.00.
Estimated cost for tank removal (D26A) $2,000.00.
Estimated cost for tank removal (D27) $15,000.00.



TANK LIST:

- TANK D1
- TANK D2
- TANK D3
- TANK D4
- TANK D6
- TANK D21
- TANK D25
- TANK D26A
- TANK D27
- TANK D29
- TANK D1292B
- TANK D4169

NOTE:
THE FOLLOWING DRAWINGS CONTAIN INFORMATION AS TO THE LOCATION OF ASSOCIATED TRUMBO POINT TANK FARM PIPING AND CAN BE FOUND IN THE NAS KEY WEST PUBLIC WORKS OFFICE PLAN ROOM:

1. SECTION BASE NO. 3 OIL AND GASOLINE LINES
   NAVFAC DRAWING NO. UNKNOWN
   SHEET 1 OF 2 AND 2 OF 2
   DATE UNKNOWN
2. REPLACEMENT OF AVIATION GASOLINE DEFUELING LINES AT U.S. NAVAL STATION ANNEX, KEY WEST, FL.
   PWO. DRAWING NO. P-2628
   SHEET 1 OF 1
   DATED 05/06/67
3. RENEWAL OF FUEL PIPING
   Y & D DRAWING NO. 967995 THROUGH 967998
   FILE KM1-62182
   DATED 12/31/92
4. TRUMBO POINT FUEL LINES LOCATION
   CONST. CONTRACT NO. N-62467-89-D-0779
   DATED 07/01/90

REV. NO.	CODE	CIRCLES	DATE	DESCRIPTION	RUST APPV.
				NOTE: CIRCLE ALL REVISIONS, IDENTIFY WITH DIAMOND, NUMBER AND ARROW REMOVE ONLY CIRCLE AND ARROW BEFORE NEXT REVISION	

	ISSUE CODE	C	MAT'L T.C.	F	CONST'N
A	PRELIMINARY	D	MAT'L PURC.		
B	DESIGN	E	BIDS		

SEAL

SIGNATURE

DATE

RUST ENVIRONMENT & INFRASTRUCTURE

DSGN.	SCALE: 1" = 50'
DR. TOM WESTBURY	DATE: OCTOBER, 1996
CK. J. JOHNSON	RUST FILE NUMBER: TRUMBOTF
APPV.	

SITE MAP OF TRUMBO POINT ANNEX TANK FARM

NAVAL AIR STATION
KEY WEST, FLORIDA

FIGURE 6.60

0088B04X

FLEMING KEY

6.61 Naval Research Lab Marine Corrosion Facility - Building F15 (Tank F15)

6.61.1 General Information

The Naval Research Facility building F15 is located on Fleming Key east of building F11 and adjacent to the east is the Gulf of Mexico. Activities at this facility include the experimentation with various metals and coatings to determine their vulnerability to the effects of saltwater. Tank F15 is a 100-gallon diesel fuel tank attached to the base of an emergency generator and is located on the north side of the lab. This tank is currently not in use but will be utilized as a backup power source should electrical service be lost.

6.61.2 Specific Tank Information

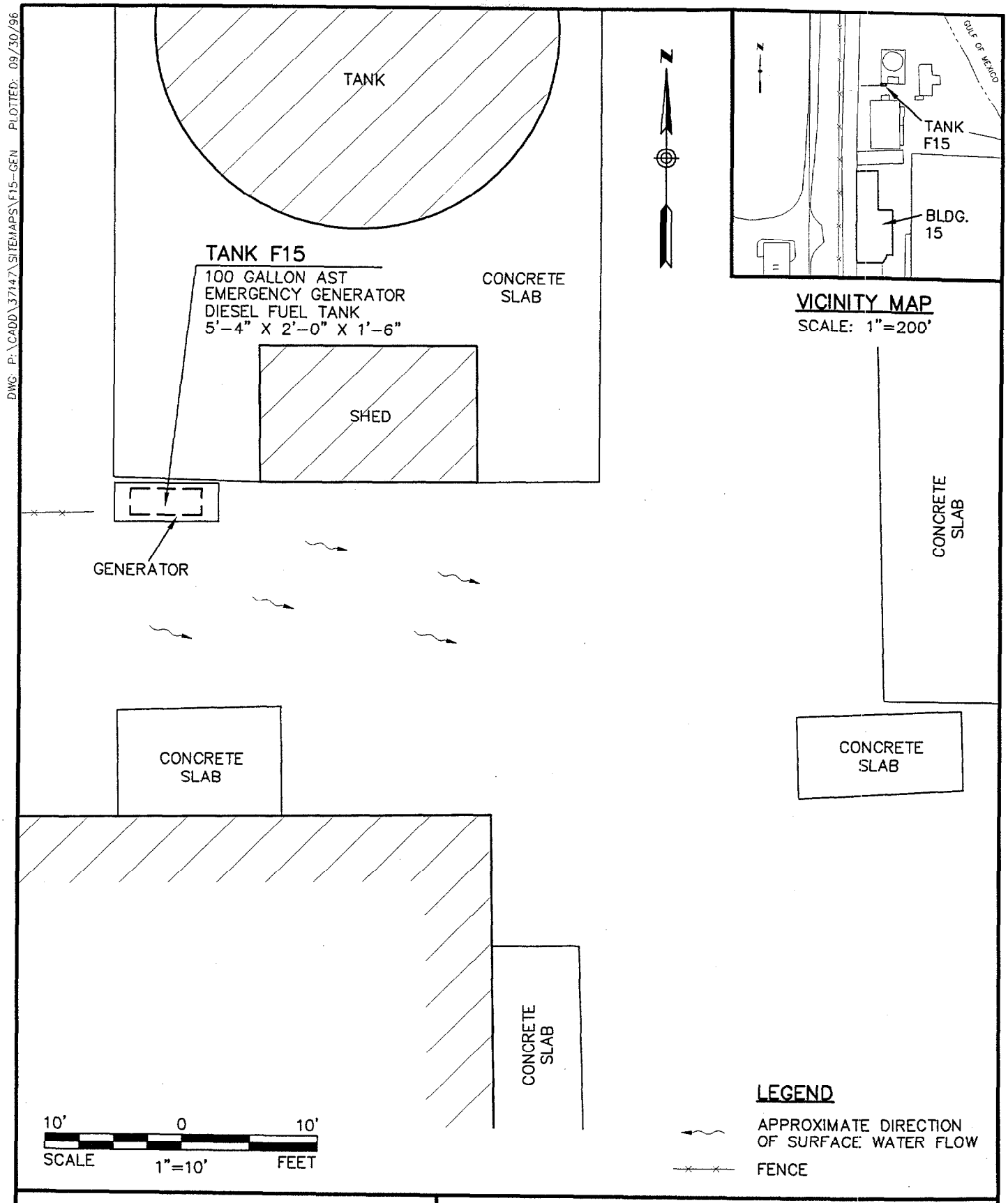
Tank ID F15 - AST	
Year of Installation	1988
Size	100-gallons
Contents	Emergency Generator Diesel
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Single-walled painted steel None; not required None; required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 N/A N/A N/A
Leak Detection - Tank - Piping - Site	 None; required N/A None; required
Integrity Testing	None; required

6.61.3 Regulatory Compliance Requirements

Tank F15

Provide secondary containment with locking valve by January 1, 1998. Estimated cost $1500.00.

Inspect tank and site monthly and incorporate into SPCC Plan by January 1, 1998.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.61

SITE MAP OF TANK F15
FLEMING KEY
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147

OCTOBER, 1996

6.62 Special Forces - Fire Pump Station Building KW400 (Tank KW400)

6.62.1 General Information

Building KW400 is a fire pump station at the Special Forces Facility on the north end of Fleming Key. Fleming Key is bound on the north, west and south by the Gulf of Mexico. This AST is found inside building KW400. Tank KW400 is a 250-gallon diesel fuel tank within an 8" deep concrete containment. Any spills or leaks from this tank would discharge into the secondary containment and flow into the double-wall containment of the transfer piping from building KW200. Interstitial monitoring provides leak detection.

6.62.2 Specific Tank Information

Tank ID KW400 - AST	
Year of Installation	1993
Size	250-gallons
Contents	Pump Diesel
Throughput	42 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Painted Steel on Supports None; not required Concrete secondary containment (insufficient capacity); manual gauging; additional required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground single-walled painted steel and underground painted steel within polyethylene secondary containment None; not required Polyethylene secondary containment

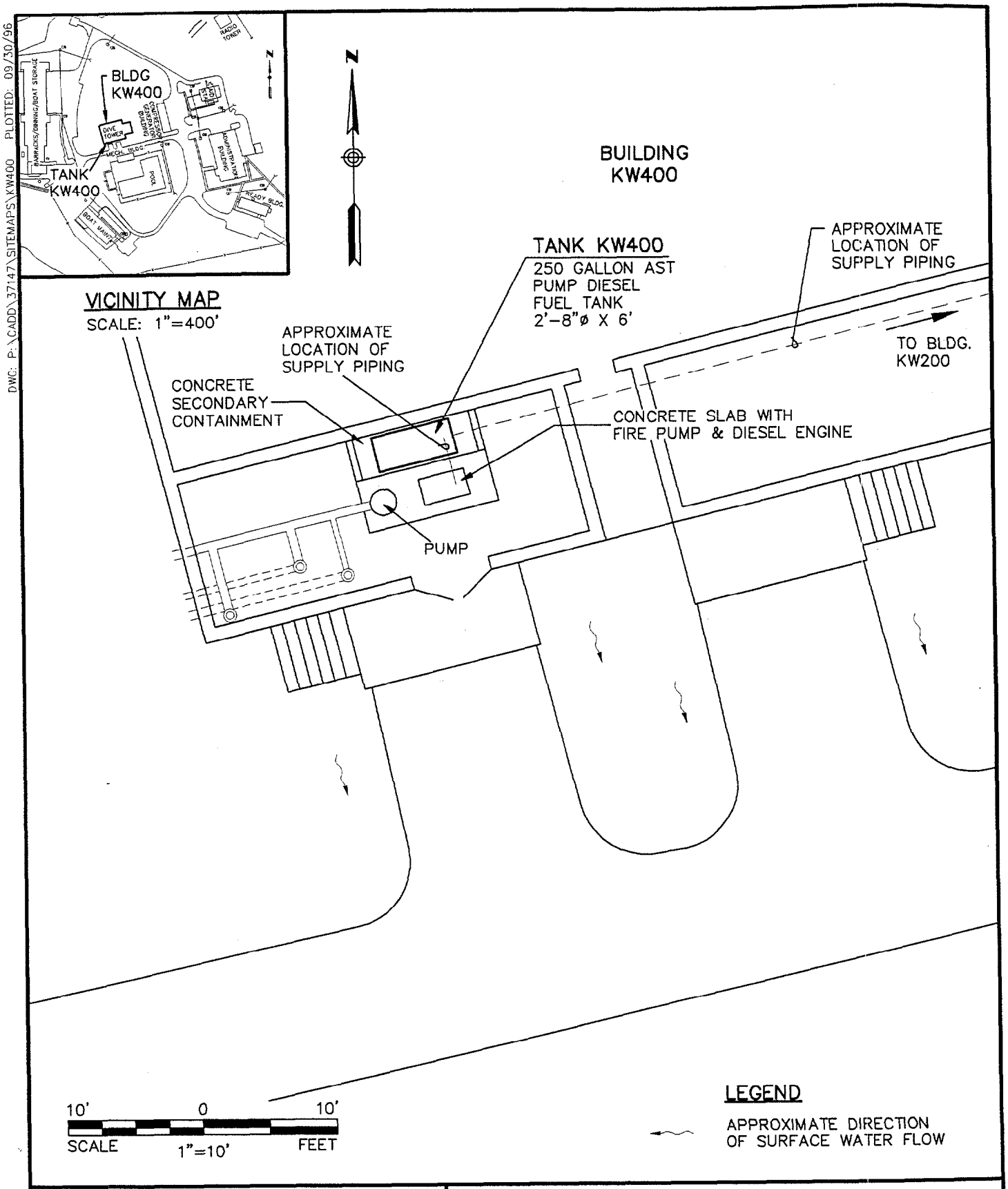
Tank ID KW400 - AST	
Leak Detection	
- Tank	None; required
- Piping	Interstitial monitoring, secondary containment; additional required
- Site	None; required
Integrity Testing	None; not required

6.62.3 Regulatory Compliance Requirements

Tank KW400

Provide additional secondary containment volume by January 1, 1998. Volume of polyethylene secondary containment piping and associated sump less internal piping is less than 110% of KW400 volume. Estimated cost is $500.00.

Inspect tank, piping and site monthly and incorporate into SPCC Plan by January 1, 1998.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.62

SITE MAP OF TANK KW400
FLEMING KEY
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.63 Special Forces - Boat Maintenance Facility Building KW600 (Tank KW600)

6.63.1 General Information

Tank KW600 is an underground oil/water separator found southwest of building KW400 and north of building KW600 at the Fleming Key Special Forces facility. This tank collects used oil generated from maintenance activities conducted in building KW600. Segregated water from the separator discharges to the facility's sanitary sewer system. Used oil is collected and disposed of under a NAS Key West Public Works contract.

6.63.2 Specific Tank Information

Tank ID KW600 - UST	
Year of Installation	1994
Size	400-gallons
Contents	Used Oil
Throughput	50 gal/yr
Regulated - Federal	Unregulated
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Fiberglass
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	None; not required
Piping Construction	
- Type and Material	Underground
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	None; not required
- Piping	None; not required
- Site	None; not required
Integrity Testing	None; N/A

6.63.3 Regulatory Compliance Requirements

Tank KW600

Tank KW600 is considered a process tank and is therefore exempt from state and federal regulation.

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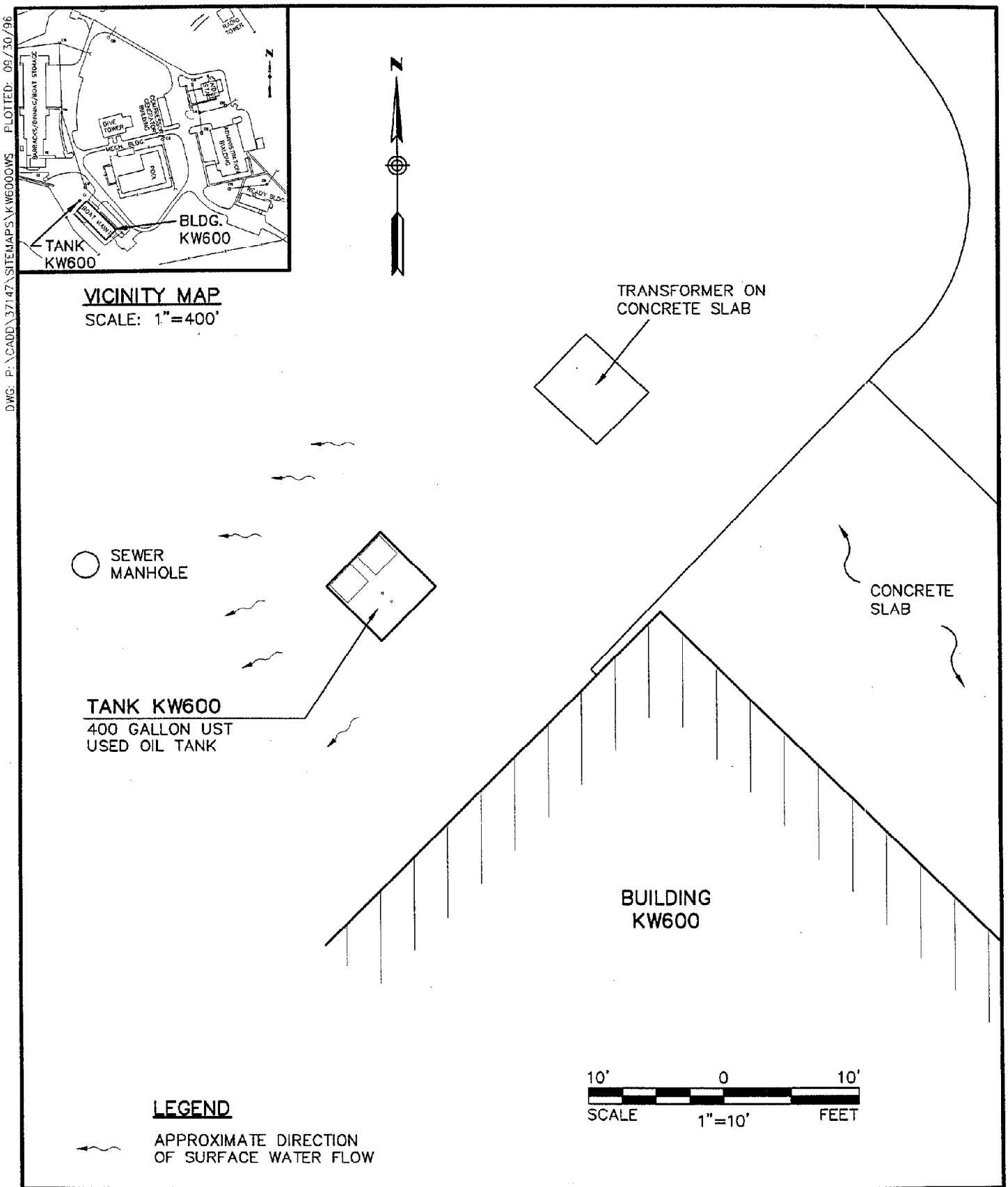


RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.63

SITE MAP OF TANK KW600
FLEMING KEY
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.64 Compressor/Generator - Building KW200 (Tank F01, F01A, F01B, F01C, and F01D

6.64.1 General Information

Building KW200 is the compressor/generator building on Fleming Key at the Special Forces facility.

6.64.2 Specific Tank Information

Tank F01 located to the north of building KW200. This 2,650-gallon AST contains diesel fuel and provides an alternative fuel source to the air compressors housed in building KW200. Tank F01 is equipped with a valved concrete secondary containment and interstitial monitoring of its double-walled piping.

Tank ID F01 - AST	
Year of Installation	1994
Size	2,650-gallons
Contents	Diesel (Compressor; generator; fire pumps)
Throughput	17 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Regulated; FAC 62-762
Florida Registration	Registered
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Single-walled painted steel on supports None; not required Concrete secondary containment; manual gauging; additional required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground painted steel; polyethylene underground steel within secondary containment None; not required Polyethylene secondary containment; additional required

Tank ID F01 - AST	
Leak Detection - Tank - Piping - Site	 None; required Interstitial monitoring; secondary containment; additional required None; required
Integrity Testing	Data not available; not required

6.64.3 Specific Tank Information

Tanks F01A, F01B and F01C are 60-gallon aboveground day tanks that receive fuel from tank F01 and transfer it to one air compressor, two emergency generators located inside building KW200. Each tank has been equipped with fuel level gauges. A floor trench drain provides secondary containment at this site.

Tank ID F01A - AST	
Year of Installation	1993
Size	60-gallons
Contents	Compressor Diesel
Throughput	17 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Painted Steel None; not required Level gauge; floor drain to oil/water separator
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground rubber None; not required None; not required

Tank ID F01A - AST	
Leak Detection - Tank - Piping - Site	 None; required None; required None; required
Integrity Testing	None; not required

6.64.4 Specific Tank Information

Tank ID F01B - AST	
Year of Installation	1993
Size	60-gallons
Contents	Emergency Generator Diesel
Throughput	17 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Painted Steel None; not required Level gauge; floor drain to oil/water separator
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground rubber None; not required None; not required
Leak Detection - Tank - Piping - Site	 None; required None; required None; required
Integrity Testing	None; not required

6.64.5 Specific Tank Information

Tank ID F01C - AST	
Year of Installation	1993
Size	60-gallons
Contents	Emergency Generator Diesel
Throughput	17 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Painted Steel
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Level gauge; floor drain to oil/water separator
Piping Construction	
- Type and Material	Aboveground rubber
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	None; required
- Piping	None; required
- Site	None; required
Integrity Testing	None; not required

6.64.6 Specific Tank Information

Tank F01D is a 25-gallon aboveground diesel fuel tank mounted to the pulley housing of the compressor found in building KW200. This tank receives fuel from tank F01 and provides fuel for an air compressor. The floor trench drain described previously for the three day tanks provides secondary containment.

Tank ID F01D - AST	
Year of Installation	1994
Size	25-gallons
Contents	Compressor Diesel
Throughput	17 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Single-walled painted steel
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Floor drain to oil/water separator
Piping Construction	
- Type and Material	N/A
- Cathodic Protection	N/A
- Leak Prevention	N/A
Leak Detection	
- Tank	None; required
- Piping	N/A
- Site	None; required
Integrity Testing	None; not required

6.64.7 Regulatory Compliance Requirements

Tank F01

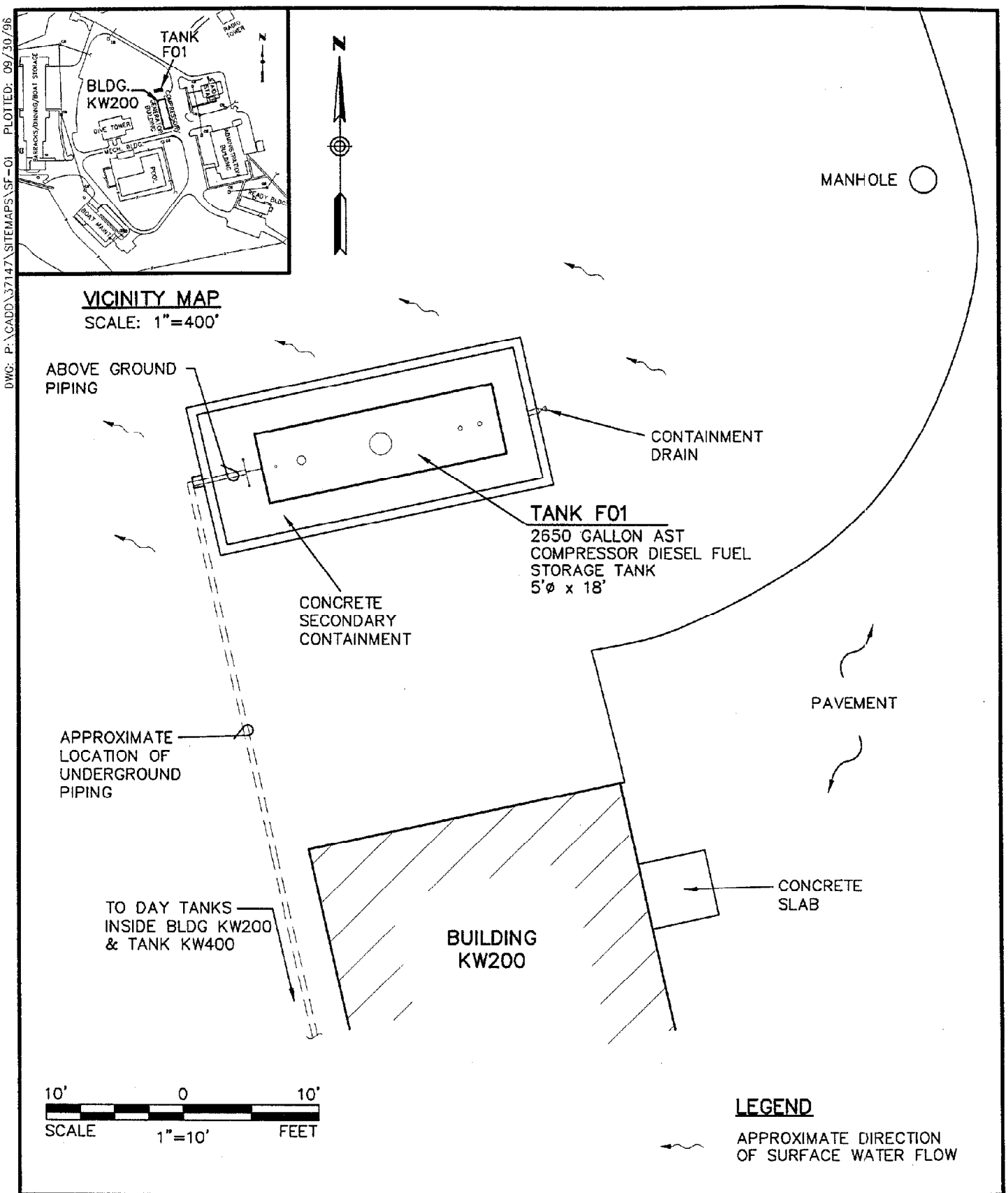
Provide lock for secondary containment by December 31, 1999. Estimated cost $50.00

Inspect tank, piping and site monthly and incorporate into SPCC Plan by January 1, 1998.

Install anti-syphon valve on all aboveground piping routed outside secondary containment by December 31, 1999. Estimated cost $500.00.

Tanks F01A, B, C, and D

Inspect tank, piping and site monthly and incorporate into SPCC Plan by January 1, 1998.

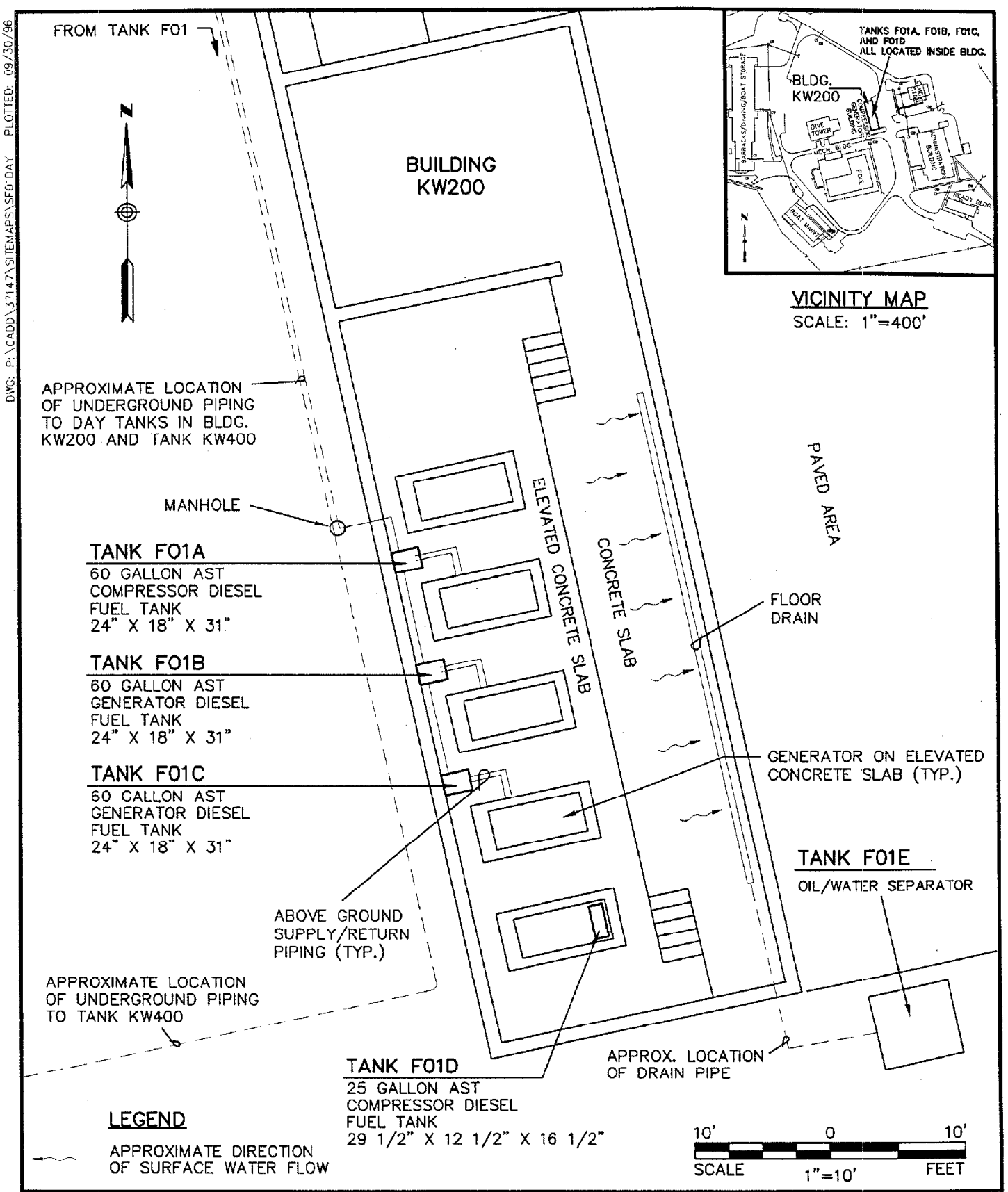


RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.64

SITE MAP OF TANK F01
FLEMING KEY
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.64A

SITE MAP OF TANKS F01A, B, C, & D
FLEMING KEY
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.65 Compressor/Generator - Building KW200 (Tank F01E)

6.65.1 General Information

Tank F01E is an underground oil/water separator located southeast of building KW200 at the Fleming Key Special Forces facility. This tank collects used oil generated by the air compressors housed in building KW200. Segregated water from the separator discharges to the facility's sanitary sewer system. Used oil is collected and disposed of under a NAS Key West Public Works contract.

6.65.2 Specific Tank Information

Tank ID F01E - UST	
Year of Installation	1994
Size	400-gallons
Contents	Used Oil
Throughput	50 gal/yr
Regulated - Federal	Unregulated
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Fiberglass
- Cathodic Protection	None; N/A
- Spill/Overfill Prevention	None; N/A
Piping Construction	
- Type and Material	Underground
- Cathodic Protection	None; N/A
- Leak Prevention	None; N/A
Leak Detection	
- Tank	None; N/A
- Piping	None; N/A
- Site	None; N/A
Integrity Testing	None; N/A

6.65.3 Regulatory Compliance Requirements

Tank F01E

Tank F01E is considered a process tank and is therefore exempt from state and federal regulation.

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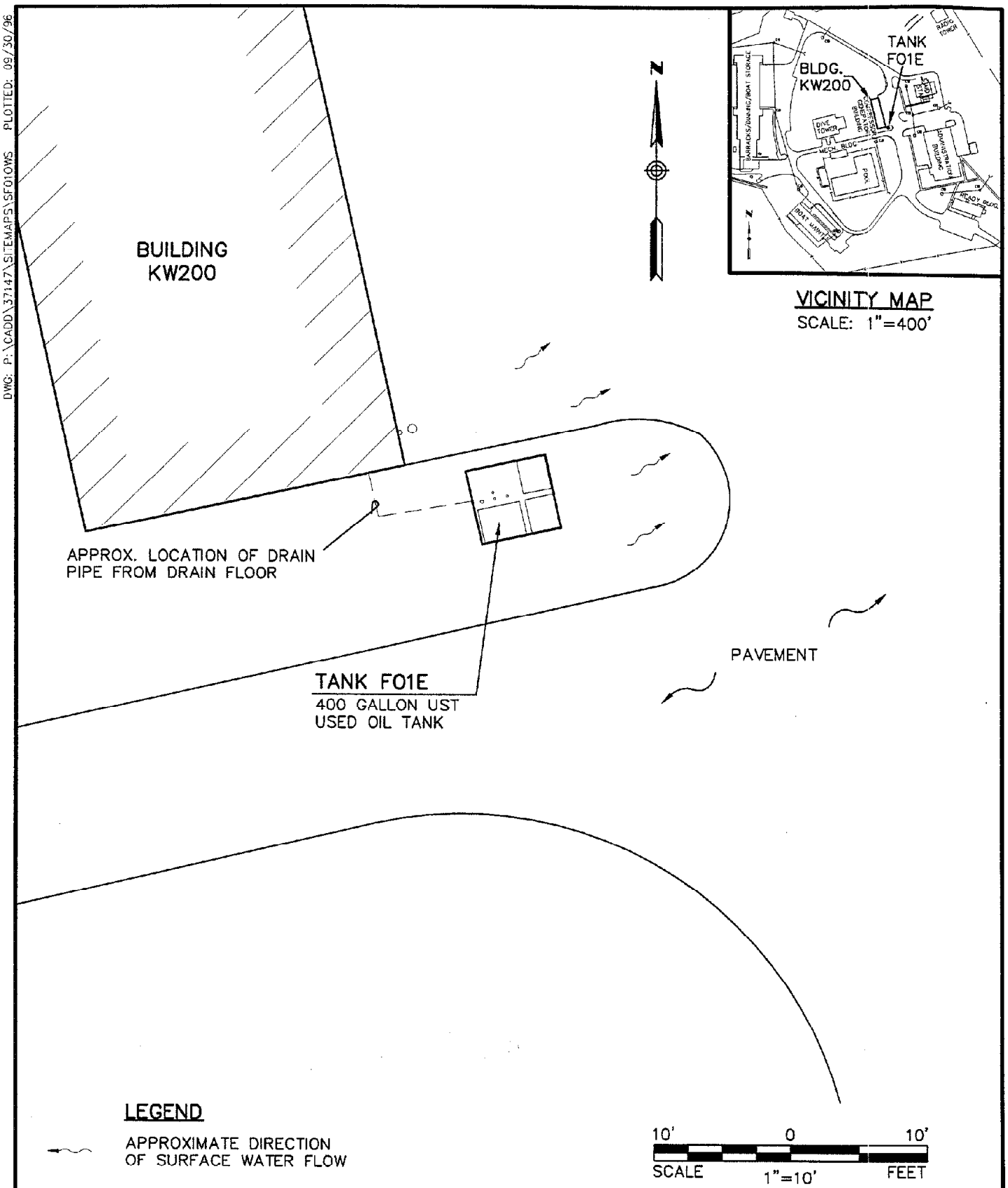

RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.65

SITE MAP OF TANK F01E
FLEMING KEY
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147

OCTOBER, 1996

6.66 Special Forces - Boat Dock (Tank F02)

6.66.1 General Information

Tank F02 is located at the Special Forces facility on Fleming Key northeast of the Administration building and next to the boat launch. This 4,000-gallon vaulted AST stores vehicular unleaded gasoline. Fuel from tank F02 is used to refuel Special Force's marine vehicles. Standard dispenser pumps are used for the fuel transfer and are found in a building adjacent to the boat dock. Tank F02 is a vaulted tank equipped with a level gauge and interstitial monitoring.

6.66.2 Specific Tank Information

Tank ID F02 - AST	
Year of Installation	1995
Size	4,000-gallons
Contents	Unleaded Gasoline
Throughput	10,000 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Regulated; FAC 62-762
Florida Registration	Registered
Status	In-Service
Tank Construction	
- Type and Material	Vaulted steel on supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Level Gauge
Piping Construction	
- Type and Material	Aboveground galvanized steel
- Cathodic Protection	None; not required
- Leak Prevention	None; required
Leak Detection	
- Tank	None; required
- Piping	None; required
- Site	None; required
Integrity Testing	None; not required

6.66.3 Regulatory Compliance Requirements

Tank F02

Inspect tank, piping and site monthly and incorporate into SPCC Plan by January 1, 1998.

Install anti-syphon valve on all aboveground piping routed outside secondary containment by December 31, 1999. Estimated cost $500.00.

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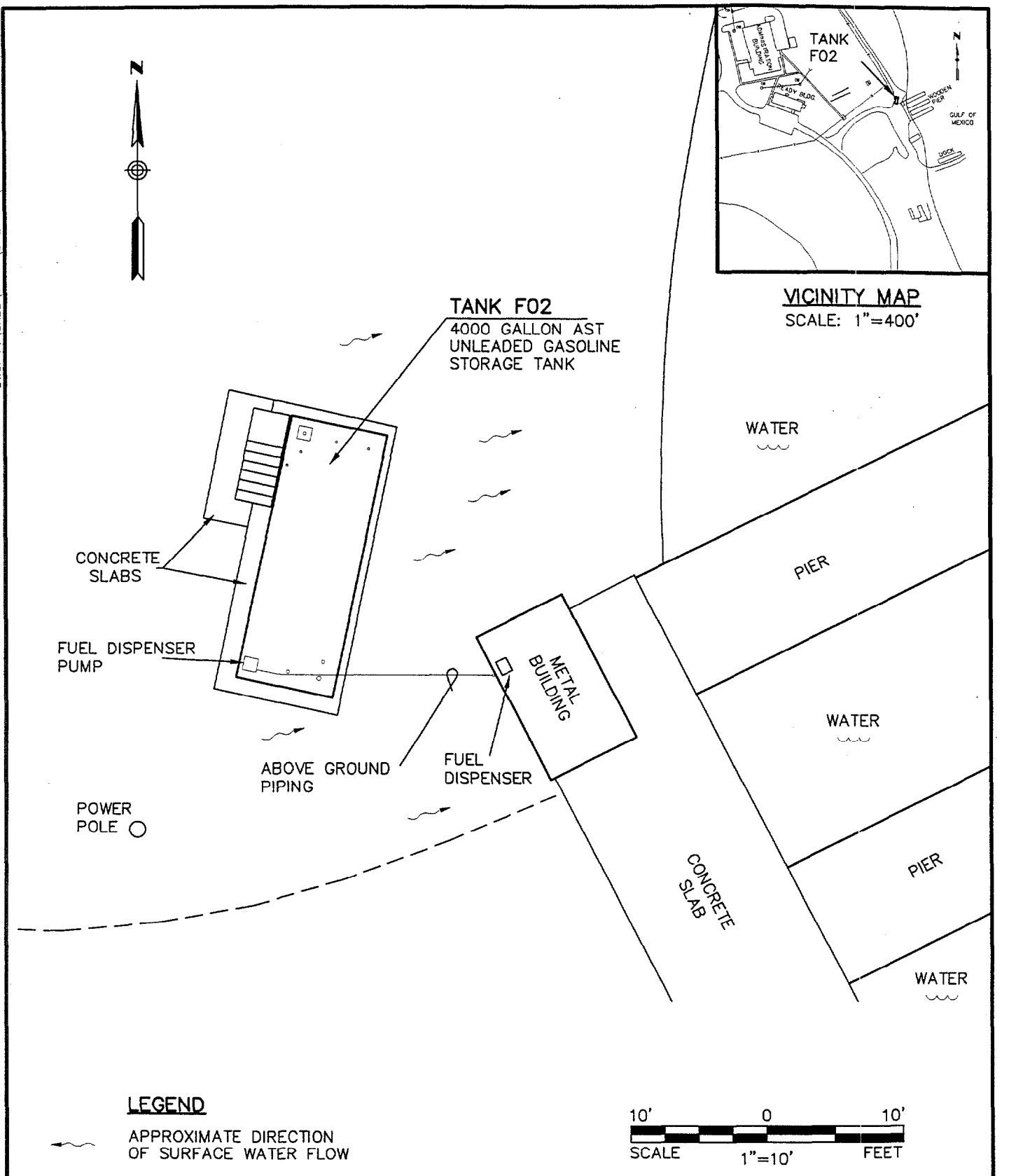


RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.66

SITE MAP OF TANK F02
FLEMING KEY
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.67 US Department of Agriculture (Tank USDA1, 2, 3, and 4)

6.67.1 General Information

The United States Department of Agriculture (USDA) is located on Fleming Key south of the Special Forces facility. Due to the location of the USDA facility to Navy property and the potential for impact in the event of a release, these tanks have been included in this Plan. This site has four storage tanks: USDA1, USDA2, USDA3 and USDA4.

6.67.2 Specific Tank Information

Tank USDA1 is found on the southwest corner of the facility. This 8,000-gallon UST provides diesel fuel for the facility's emergency generator.

Tank ID USDA1 - UST	
Year of Installation	1979
Size	8,000-gallons
Contents	Emergency Generator Diesel
Throughput	1,500 gal/yr
Regulated - Federal	Regulated; 40 CFR 112; 40 CFR 280
Regulated - Florida	Regulated; FAC 62-761
Florida Registration	Data not available; registration required
Status	In-Service
Tank Construction	
- Type and Material	Fiberglass; additional required
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Manual gauging; additional required
Piping Construction	
- Type and Material	Underground fiberglass
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	None; not required
- Piping	None; not required
- Site	None; not required
Integrity Testing	Data not available; required

6.67.3 Specific Tank Information

Tanks USDA2 and USDA3 are 4,000-gallon USTs used to provide diesel to the facility's generator used as a secondary power source for the facility's boiler and incinerator. These tanks are found on the northwest side of the USDA facility.

Tank ID USDA2 - UST	
Year of Installation	1979
Size	4,000-gallons
Contents	Emergency Generator Diesel
Throughput	1,000 gal/yr
Regulated - Federal	Regulated; 40 CFR 112; 40 CFR 280
Regulated - Florida	Regulated; FAC 62-761
Florida Registration	Data not available; registration required
Status	In-Service
Tank Construction	
- Type and Material	Fiberglass; additional required
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Level gauge; manual gauging; additional required
Piping Construction	
- Type and Material	Underground fiberglass
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	None; not required
- Piping	None; not required
- Site	None; not required
Integrity Testing	Data not available; required

6.67.4 Specific Tank Information

Tank ID USDA3 - UST	
Year of Installation	1979
Size	4,000-gallons
Contents	Emergency Generator Diesel
Throughput	1,000 gal/yr
Regulated - Federal	Regulated; 40 CFR 112; 40 CFR 280
Regulated - Florida	Regulated FAC 62-761
Florida Registration	Data not available; registration required
Status	In-Service
Tank Construction	
- Type and Material	Fiberglass; additional required
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Level gauge; manual gauging; additional required
Piping Construction	
- Type and Material	Underground fiberglass
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	None; not required
- Piping	None; not required
- Site	None; not required
Integrity Testing	Data not available; required

6.67.5 Specific Tank Information

Tank USDA4 is a 250-gallon AST containing vehicular diesel. Fuel from this tank is used in the operation of the facility's forklifts. No secondary containment is present at this tank.

Tank ID USDA4 - AST	
Year of Installation	1996
Size	250-gallons
Contents	Vehicular Diesel
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Painted Steel on Supports None; not required None; required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground rubber None; not required None; not required
Leak Detection - Tank - Piping - Site	 None; required None; required None; required
Integrity Testing	Data not available; not required

6.67.6 Regulatory Compliance Requirements

<u>Tanks USDA1, USDA2, and USDA3</u>

Register tank with FDEP.

Install spill containment and overfill protection for tanks by December 31, 1998. Estimated cost $7,000.00.

Install tank secondary containment by December 31, 2009. Estimated cost per tank $6,000.00.

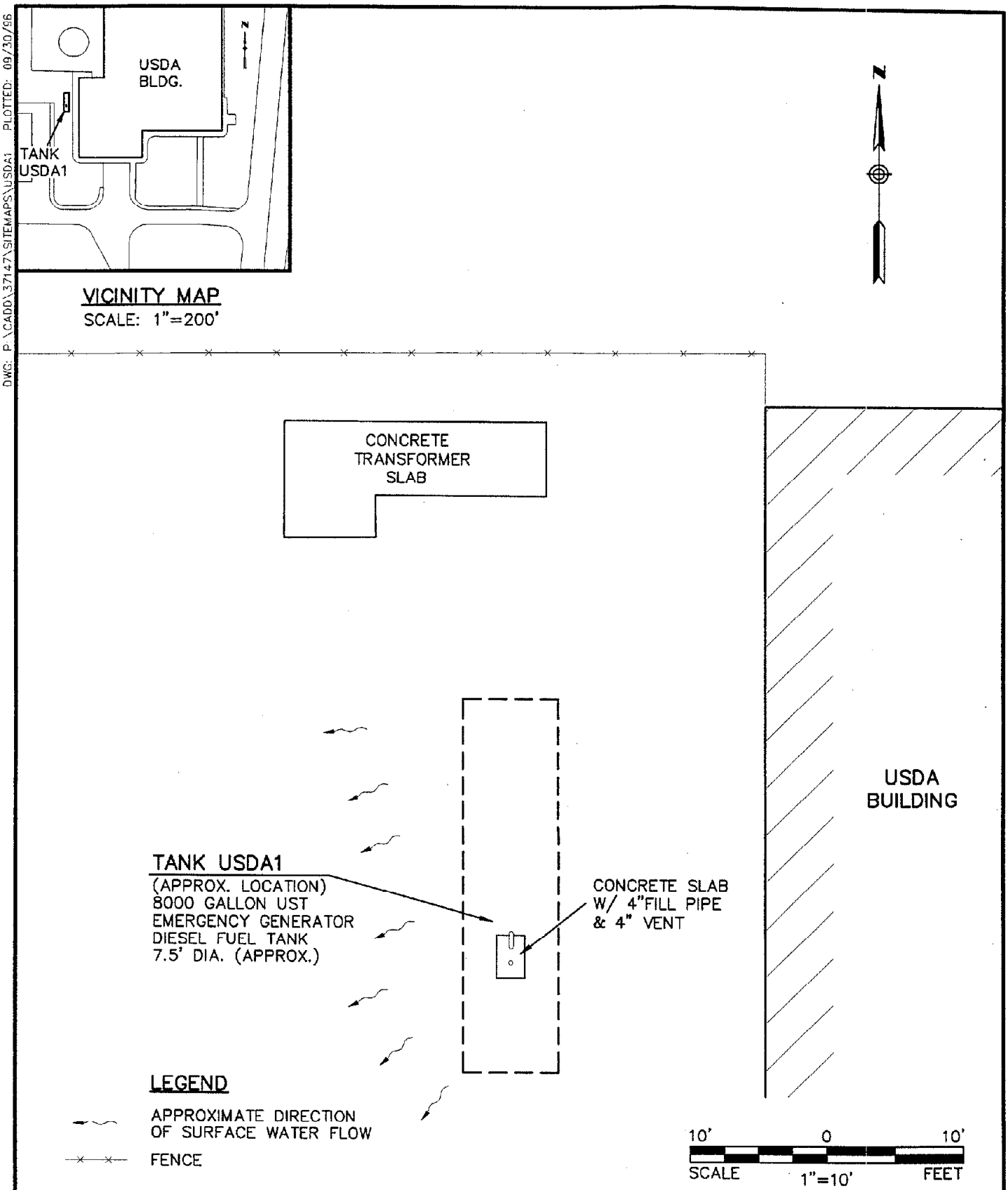
These tanks are owned by the U.S. Department of Agriculture and should be incorporated into their SPCC Plan.

Tank USDA 4

Provide secondary containment with locking drain valve by January 1, 1998. Estimated cost $1,000.00.

Recommend installation of an anti-syphon valve on all aboveground piping routed outside secondary containment. Estimated cost $500.00.

This tank is owned by U.S. Department of Agriculture and should be incorporated into their SPCC Plan.



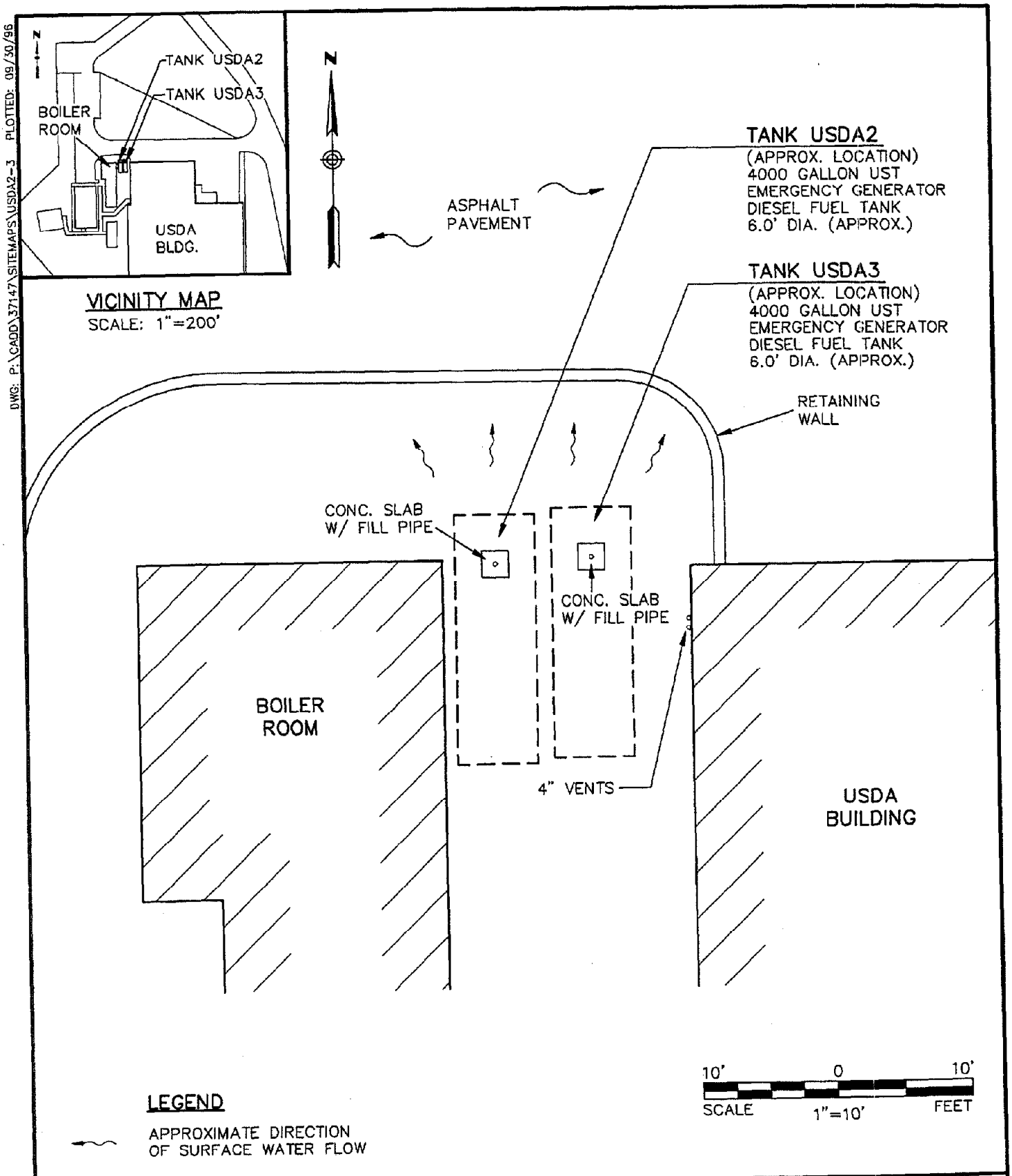
RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.67

SITE MAP OF TANK USDA1
FLEMING KEY
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147

OCTOBER, 1996



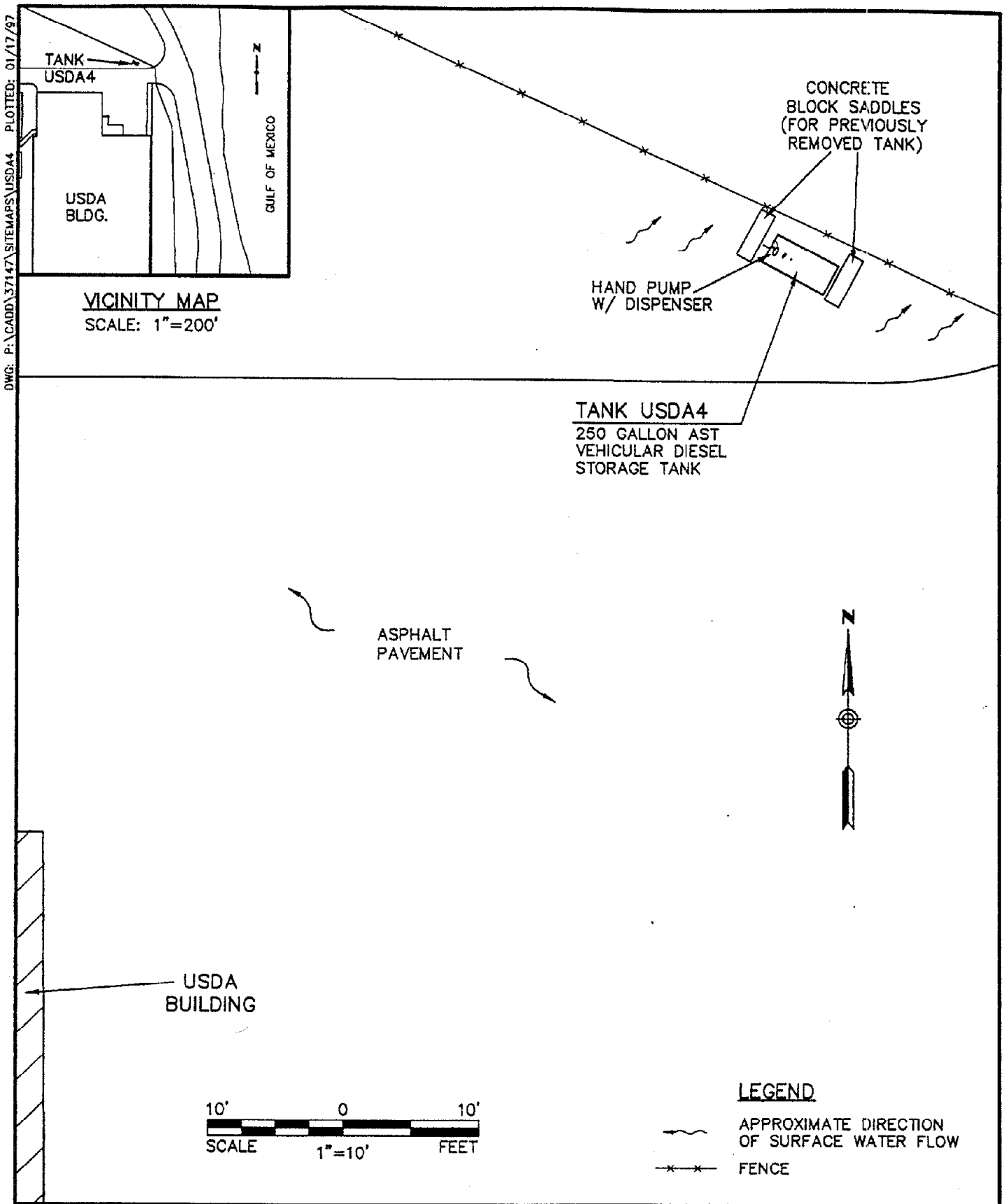
RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.67A

SITE MAP OF TANKS USDA2 & USDA3
FLEMING KEY
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147

OCTOBER, 1996



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.67B

SITE MAP OF TANK USDA4
FLEMING KEY
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147

OCTOBER, 1996

TRUMAN ANNEX

6.68 Potable Water Pump Station - Building 38 (Tank 38)

6.68.1 General Information

The potable water pump station, building 38, is on the corner of Front and Caroline Street. Present at this site is a 300-gallon aboveground diesel fuel storage tank. Fuel from this tank is used to power the pump station's water pumps during power outages. Tank 38 has no secondary containment and is found on the east side of building 38.

6.68.2 Specific Tank Information

Tank ID 38 - AST	
Year of Installation	Data Not Available
Size	300-gallons
Contents	Pump Diesel
Throughput	88 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Painted Steel on Supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	None; required
Piping Construction	
- Type and Material	Aboveground unpainted copper
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	None; required
- Piping	None; required
- Site	None; required
Integrity Testing	Data not available; not required

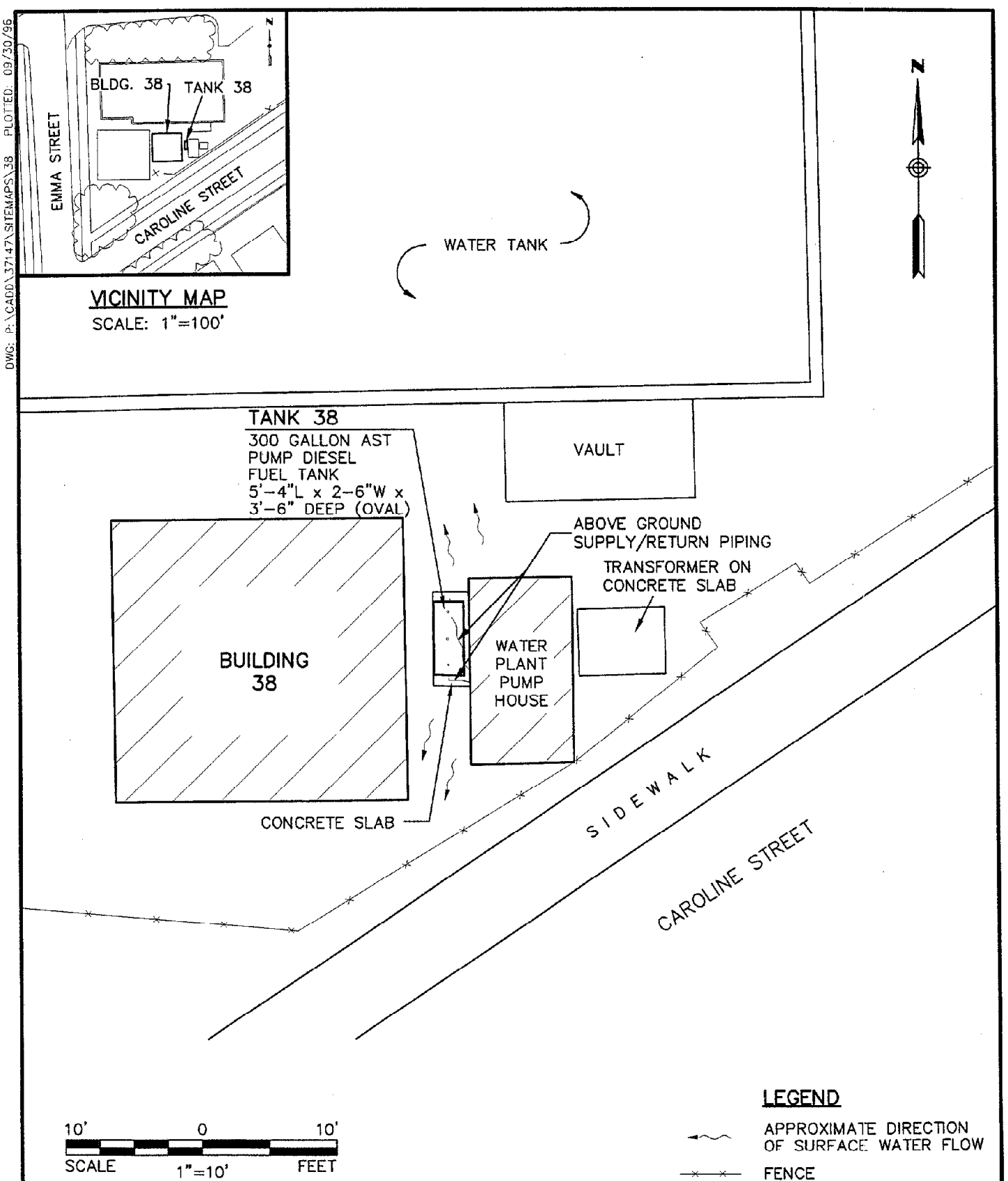
6.68.3 Regulatory Compliance Requirements

Tank 38

Provide secondary containment with locking valve by January 1, 1998. Estimated cost $1500.00.

Inspect tank, piping and site monthly and incorporate into SPCC Plan by January 1, 1998.

Recommend installation of an anti-syphon valve on all aboveground piping routed outside secondary containment. Estimated cost $500.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.68

SITE MAP OF TANK 38
TRUMAN ANNEX
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.69 Truman Annex Port Services - Building 149 (Tank 149-1 and -2)

6.69.1 General Information

The Truman Annex Port Services facility is located east of building 149 at the south end of Truman Annex Basin adjacent to Pier 8. The fueling facilities are used to fuel Naval marine and shore vehicles. This site includes two ASTs found inside a 4' deep valved concrete secondary containment. Tank 149-1 is a 2,000-gallon gasoline tank with a fuel level gauge. Tank 149-2 is a 1,000-gallon vehicular gasoline tank with a fuel level gauge. Fuel issues are gravity fed via 1-1/2" piping through two standard dispenser pumps. Both tanks 149-1 and 149-2 are scheduled for removal in FY96 and to be replaced with two vaulted tanks.

6.69.2 Specific Tank Information

Tank ID 149-1 - AST	
Year of Installation	1989
Size	2,000-gallons
Contents	Unleaded gasoline
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Regulated; FAC 62-762
Florida Registration	None; registration required
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Unpainted steel on supports None; not required Broken level gauge; concrete secondary containment; additional required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground steel inside containment and underground fiberglass outside None; required None; required

Tank ID 149-1 - AST	
Leak Detection - Tank - Piping - Site	 SPCC SPCC SPCC
Integrity Testing	Data not available; not required

6.69.3 Specific Tank Information

Tank ID 149-2 - AST	
Year of Installation	1989
Size	1,000-gallons
Contents	Unleaded gasoline
Throughput	1,820 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Regulated; FAC 62-762
Florida Registration	None; registration required
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Unpainted steel on supports None; not required Broken level gauge; concrete secondary containment; additional required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground steel inside containment and underground fiberglass outside None; required None; required
Leak Detection - Tank - Piping - Site	 SPCC SPCC SPCC
Integrity Testing	Data not available; not required

6.69.4 Regulatory Compliance Requirements

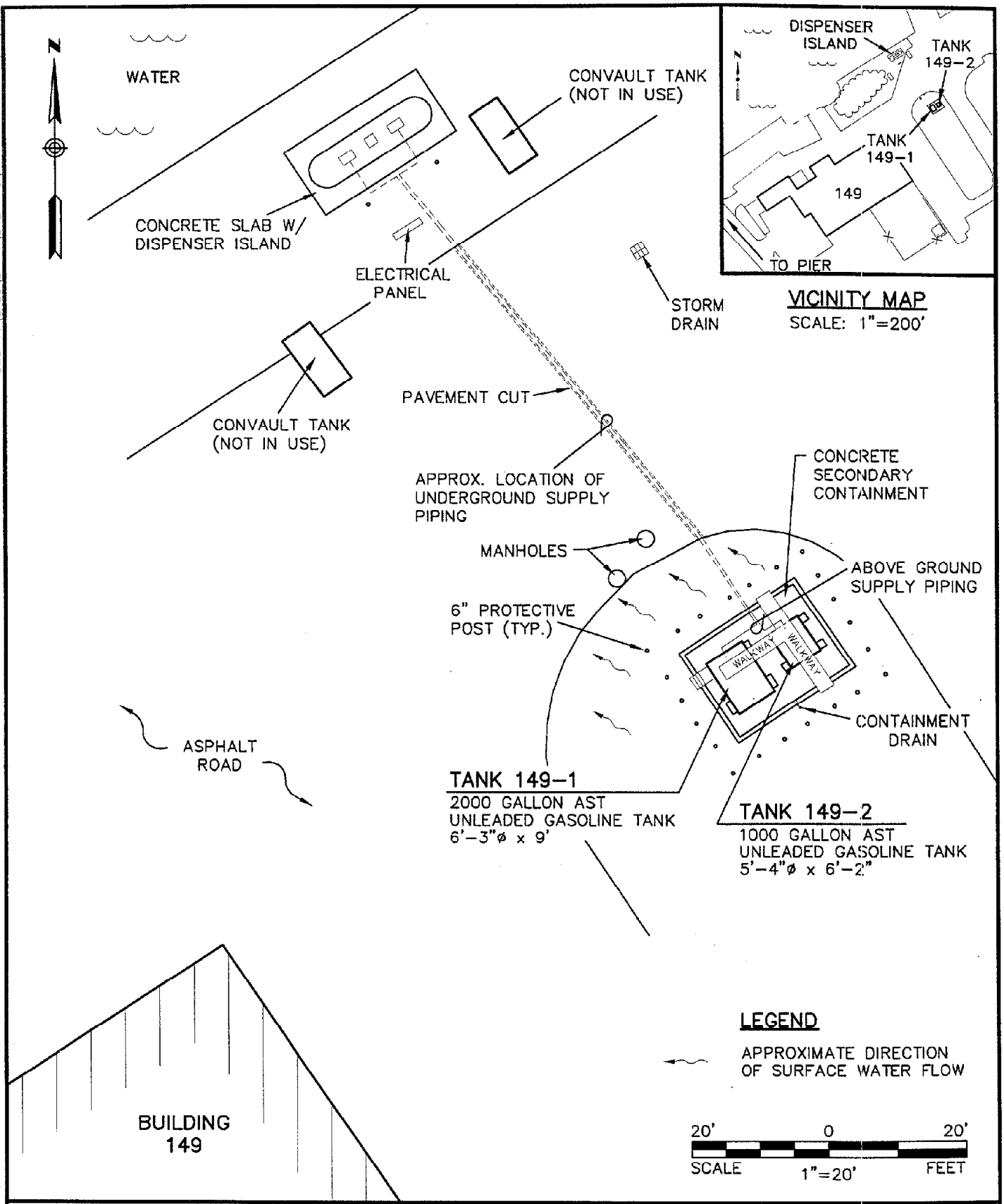
Tanks 149-1 and 149-2

Scheduled for removal FY96 (already funded).

Tank closure and removal including assessment must be completed by December 31, 1999. Estimated cost per tank $1,000.00.

Underground piping required released detection on December 31, 1993. Estimated cost $7,000.00.

Provide release detection for piping or close piping by January 1, 1998. Estimated cost (closing pipe) $5,000.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.69

SITE MAP OF TANKS 149-1 & 2
TRUMAN ANNEX
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147

OCTOBER, 1996

6.70 JIATFE Building 290 (Tanks 290, 290-A, 290-C and 290-D)

6.70.1 General Information

The JIATFE Building 290 is located south of building 291 on Ulma Street on the Truman Annex. Tank 290 is found north of building 290 and south of building 291. This 750-gallon aboveground diesel tank provides fuel to an emergency generator for use in case of an electrical outage. Tank 290 is found in a 2' deep valved concrete secondary containment. Tank 290C is a 150-gallon diesel tank mounted in the base of an emergency generator that receives fuel from tank 290. No secondary containment is available at the generator site.

6.70.2 Specific Tank Information

Tank ID 290 - AST	
Year of Installation	1987
Size	750-gallons
Contents	Emergency Generator Diesel
Throughput	164 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Regulated; FAC 62-762
Florida Registration	Registered
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Unpainted steel on supports None; not required Concrete secondary containment; manual gauging; additional required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground painted steel inside secondary containment; underground steel outside None; required None; required

Tank ID 290 - AST	
Leak Detection - Tank - Piping - Site	 SPCC SPCC; additional required SPCC; additional required
Integrity Testing	Data not available; not required

6.70.3 Specific Tank Information

Tank ID 290-C - AST	
Year of Installation	1975
Size	150-gallons
Contents	Emergency Generator Diesel
Throughput	164 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Steel None; not required None; required (waived)
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 N/A N/A N/A
Leak Detection - Tank - Piping - Site	 None; required N/A None; required
Integrity Testing	Data not available; not required

6.70.4 Specific Tank Information

Tank 290A is a 700-gallon AST containing diesel fuel. Located on the south side of building 291 and west of tank 290, tank 290A provides fuel for the administration building emergency generator. A 2' deep valved concrete impoundment furnishes secondary containment for this tank. Tank 291D is a 35-gallon diesel generator tank mounted to the base of building 291's emergency generator. No secondary containment exists for the generator site.

Tank ID 290-A - AST	
Year of Installation	1987
Size	700-gallons
Contents	Emergency Generator Diesel
Throughput	164 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Regulated; FAC 62-762
Florida Registration	Registered
Status	In-Service
Tank Construction	
- Type and Material	Unpainted steel on supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Concrete secondary containment; manual gauging; additional required
Piping Construction	
- Type and Material	Aboveground unpainted steel
- Cathodic Protection	None; not required
- Leak Prevention	None; required
Leak Detection	
- Tank	SPCC
- Piping	SPCC
- Site	SPCC
Integrity Testing	Data not available; not required

6.70.5 Specific Tank Information

Tank ID 290-D - AST	
Year of Installation	Data not available
Size	35-gallons
Contents	Emergency Generator Diesel
Throughput	164 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Steel
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	None; required (waived)
Piping Construction	
- Type and Material	N/A
- Cathodic Protection	N/A
- Leak Prevention	N/A
Leak Detection	
- Tank	None; required
- Piping	N/A
- Site	None; required
Integrity Testing	Data not available; not required

6.70.6 Regulatory Compliance Requirements

Tank 290

Provide double-walled pipe with interstitial monitoring or monitoring wells by January 1, 1998.

If monitoring wells are installed to satisfy the release detection requirement, provide either double-wall fiberglass pipe or cathodically protected steel pipe by December 31, 1999.

Estimated cost (double-walled piping with monitoring) $2,000.00.

Estimated cost (monitoring wells) $900.00.

Estimated cost (cathodic protected piping) $750.00.

Consider replacing underground piping with aboveground piping by January 1, 1998. Estimated cost $3,500.00.

Provide lock for secondary containment by December 31, 1999. Estimated cost $50.00.

Paint tank as to provide corrosion protection by December 31, 1999. Estimated cost $400.00.

Install anti-syphon valve on all aboveground piping routed outside secondary containment by December 31, 1999. Estimated cost $500.00.

Tank 290-A

Provide lock for secondary containment by December 31, 1999. Estimated cost $50.00.

Paint aboveground piping to provide corrosion protection by December 31, 1999. Estimated cost $100.00.

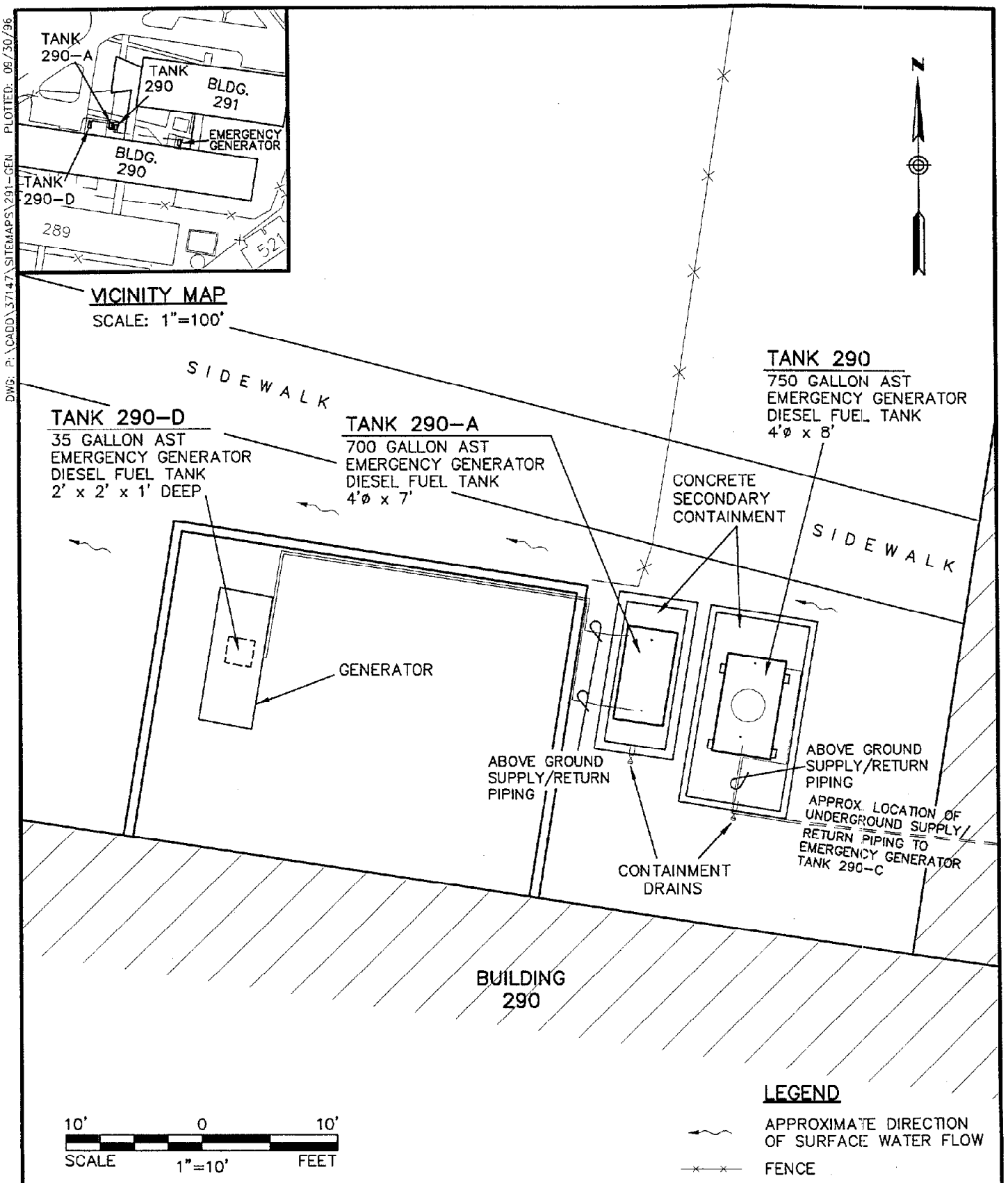
Paint tank to provide corrosion protection by December 31, 1999. Estimated cost $400.00.

Install anti-syphon valve on all aboveground piping routed outside secondary containment by December 31, 1999. Estimated cost $500.00.

Tanks 290-C and D

40 CFR 112 requires all ASTs to have secondary containment. Due to the location of these tanks, in the event of a release, the likelihood of the spill reaching navigable waters is low. Therefore, no secondary containment is required.

Inspect tank, piping and site monthly and incorporate into SPCC Plan by January 1, 1998.

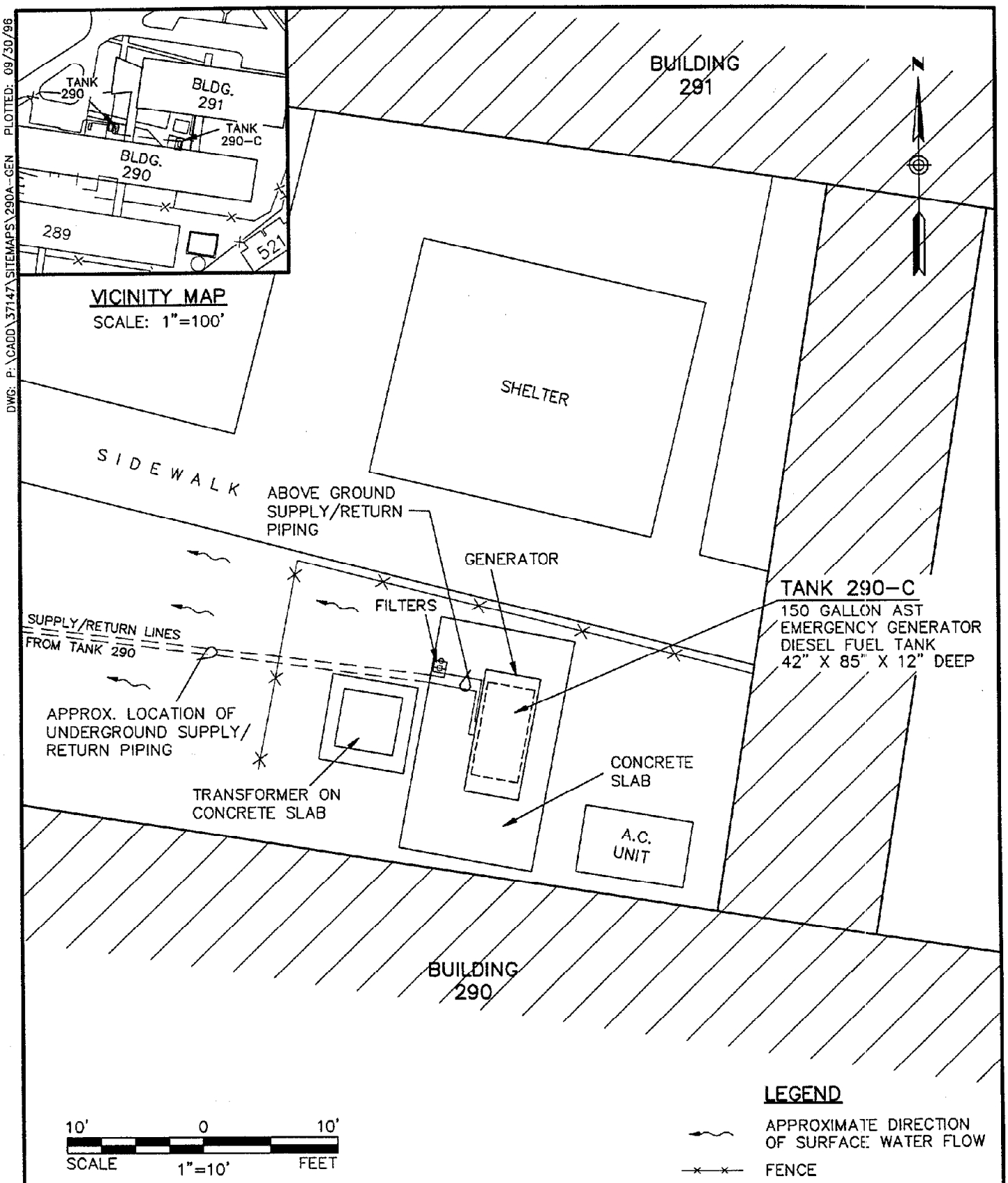


RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.70

SITE MAP OF TANKS 290, 290-A & 290-D
TRUMAN ANNEX
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.70A

SITE MAP OF TANK 290-C
TRUMAN ANNEX
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.71 JIATFE Building 290 (Tanks 290-B and 290-E)

6.71.1 General Information

The JIATFE Building 290 is located on Covington Avenue on the Truman Annex. Tank 290-B and 290-E are on the south side of building 290. Tank 290-B is a 1,500-gallon aboveground tank within a 2'-6" valved concrete secondary containment. This tank is equipped with an automatic tank gauge. Tank 290-B provides fuel to a generator day tank found in an out building west of the tank. Tank 290-E is a 25-gallon day tank found west of tank 290-B that transfers fuel from tank 290-B to the JIATFE emergency power generator. Tank 290-E is fitted with a fill gauge but has no secondary containment.

6.71.2 Specific Tank Information

Tank ID 290-B - AST	
Year of Installation	Data not available
Size	1500-gallons
Contents	Emergency Generator Diesel
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Regulated; FAC 62-762
Florida Registration	None; registration required
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Unpainted steel on supports None; not required Automatic level gauge; concrete secondary containment; additional required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground painted steel and underground steel None; required None; required

Tank ID 290-B - AST	
Leak Detection - Tank - Piping - Site	 None; required None; required None; required
Integrity Testing	Data not available; not required

6.71.3 Specific Tank Information

Tank ID 290-E - AST	
Year of Installation	Data not available
Size	25-gallons
Contents	Emergency Generator Diesel
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Painted steel on supports None; not required Fill gauge; required (waived)
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground painted steel None; not required None; not required
Leak Detection - Tank - Piping - Site	 None; required None; required None; required
Integrity Testing	Data not available; not required

6.71.4 Regulatory Compliance Requirements

Tank 290-B

Relocate auto level gauge to location visible to person filling tank. Estimated cost $500.00.

Provide double-walled pipe with interstitial monitoring or monitoring wells by January 1, 1998.
If monitoring wells are installed to satisfy the release detection requirement, provide either double-wall fiberglass pipe or cathodically protected steel pipe by December 31, 1999.
Estimated cost (double-walled piping with monitoring) $2,000.00.
Estimated cost (monitoring wells) $900.00.
Estimated cost (cathodic protected piping) $750.00.

Consider replacing underground piping with aboveground piping by January 1, 1998. Estimated cost $2,000.00.

Provide lock for secondary containment by December 31, 1999. Estimated cost $50.00.

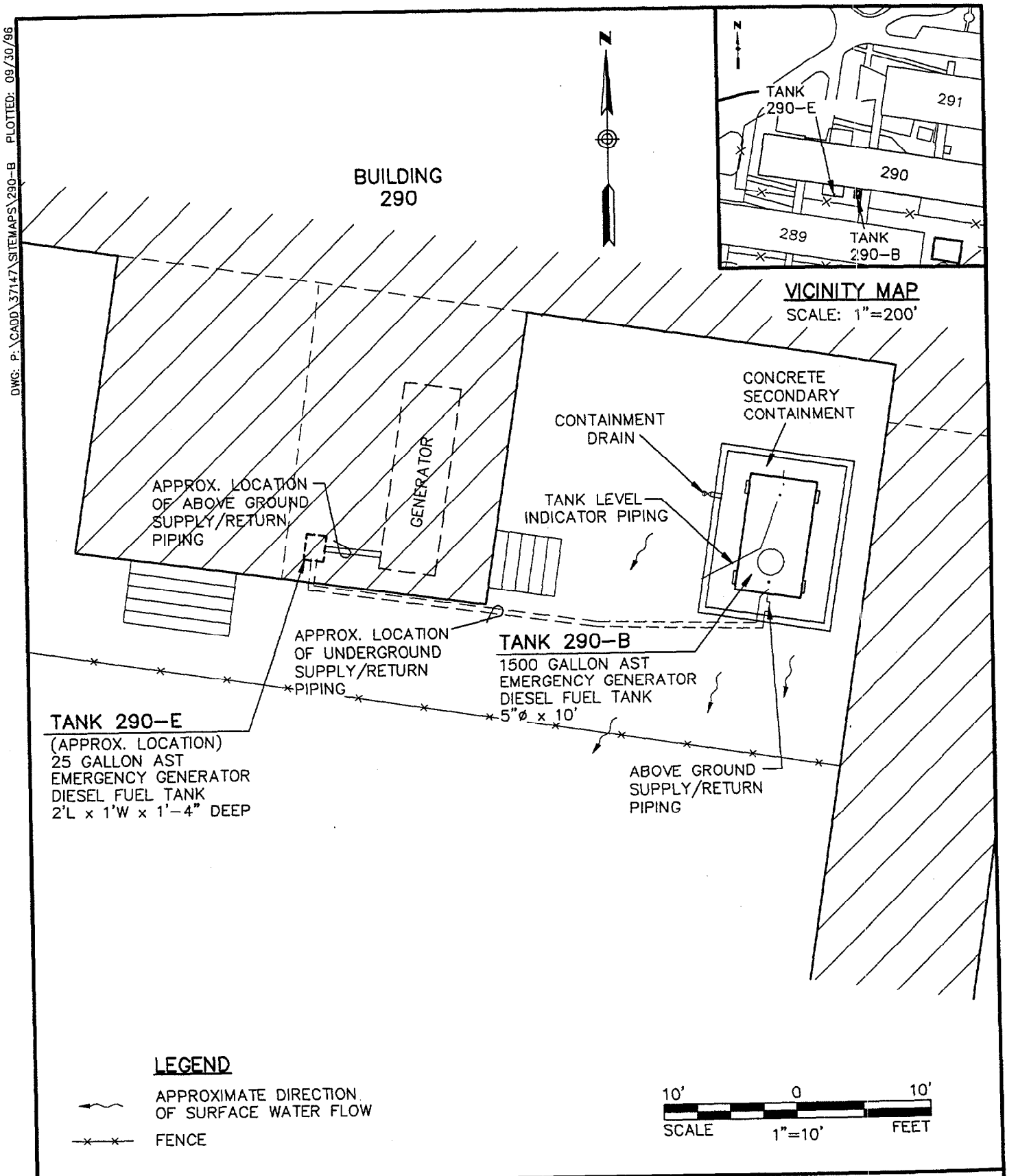
Install anti-syphon valve on all aboveground piping routed outside secondary containment by December 31, 1999. Estimated cost $500.00.

Register tank with FDEP.

Tank 290-E

40 CFR 112 requires all ASTs to have secondary containment. Due to the location of tank 290-E, in the event of a release, the likelihood of the spill reaching navigable waters is low. Therefore, no secondary containment is required

Inspect tank, piping and site monthly and incorporate into SPCC Plan by January 1, 1998.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.71

SITE MAP OF TANKS 290-B & 290-E
TRUMAN ANNEX
NAVAL AIR STATION - KEY WEST, FLORIDA

RUST Project No. 37147

OCTOBER, 1996

6.72 Bachelor Enlisted Quarters (BEQ) Building 437 (Tank 437)

6.72.1 General Information

The Bachelor Enlisted Quarters (BEQ) building 437 is located on Truman Annex south of street "A". Tank 437 is found under the parking lot south of building 437. This 1,000-gallon underground tank supplies heating fuel for building 437's hot water heater boiler.

6.72.2 Specific Tank Information

Tank ID 437 - UST	
Year of Installation	1958
Size	1000-gallons
Contents	Heating Fuel
Throughput	1,560 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	Registered
Status	In-Service
Tank Construction	
- Type and Material	Steel
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	None; not required
Piping Construction	
- Type and Material	Underground steel
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	SPCC
- Piping	SPCC
- Site	SPCC
Integrity Testing	August 1996

6.72.3 Regulatory Compliance Requirements

Tank 437

Tank 437 is scheduled for removal and replacement with vaulted tank under Navy contract no. N62467-96-C-0793 (already funded).

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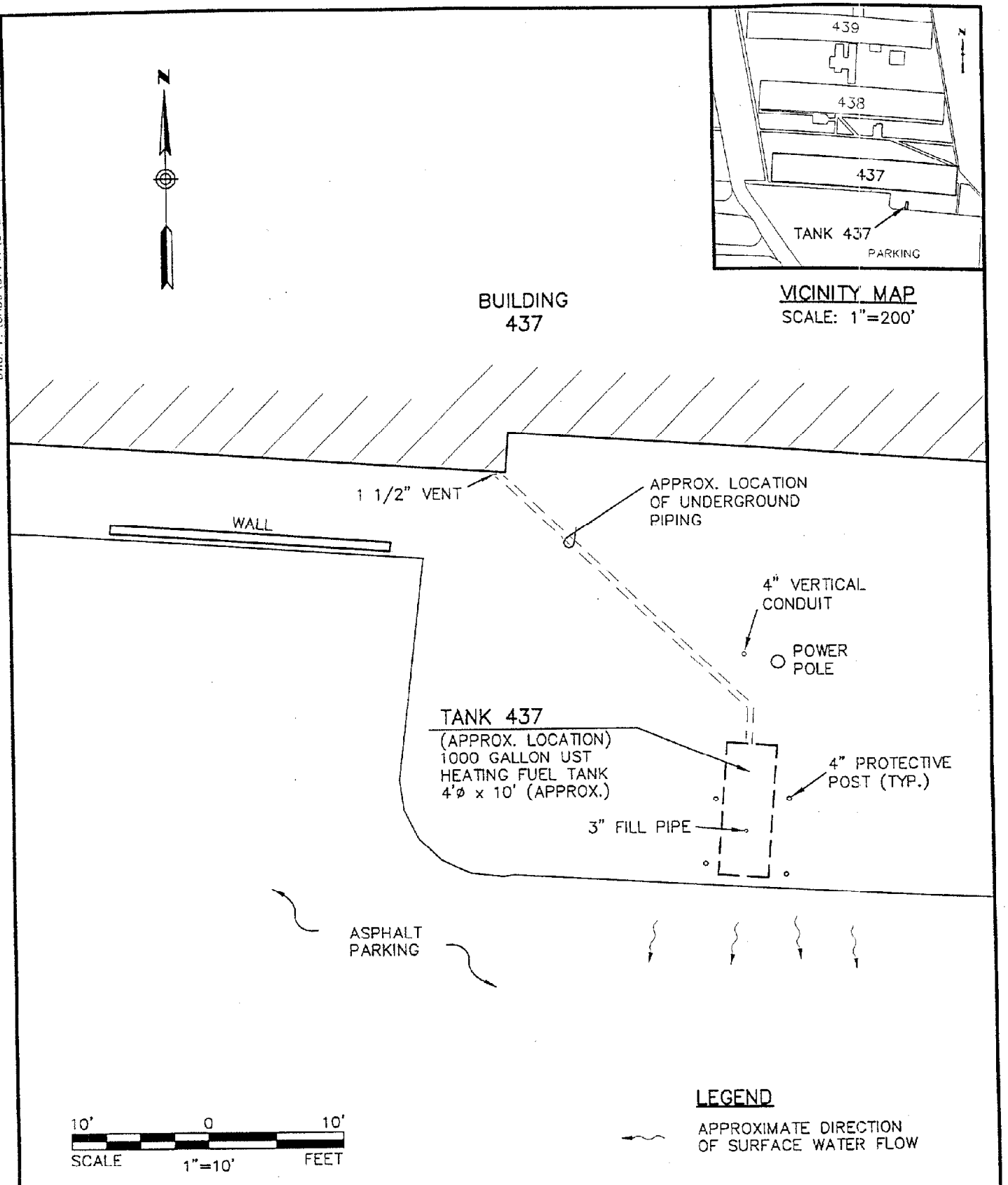


RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.72

SITE MAP OF TANK 437

TRUMAN ANNEX

NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.73 Bachelor Enlisted Quarters (BEQ) Building 438 (Tanks 438 and 438A)

6.73.1 General Information

The Bachelor Enlisted Quarters (BEQ) building 438 is located on Truman Annex south of street "A". Two diesel fuel tanks are located on the north of building 438. Tank 438 is a 1,000-gallon underground diesel tank that is currently out of service. Tank 438-A, tank 438's replacement, is a 500-gallon vaulted tank equipped with a level gauge. Fuel from this tank provides fuel for building 438's hot water boiler. Removal of tank 438 is scheduled for FY 96.

6.73.2 Specific Tank Information

Tank ID 438 - UST	
Year of Installation	1958
Size	1,000-gallons
Contents	Heating fuel
Throughput	0 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	Registered
Status	Out-of-Service
Tank Construction	
- Type and Material	Single-walled steel
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	None; not required
Piping Construction	
- Type and Material	Underground steel
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	SPCC
- Piping	SPCC
- Site	SPCC
Integrity Testing	Data not available; not required

6.73.3 Specific Tank Information

Tank ID 438-A - AST	
Year of Installation	1995
Size	500-gallon
Contents	Heating Fuel (JP-5)
Throughput	1,159 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Vaulted steel
- Cathodic Protection	None; N/A
- Spill/Overfill Prevention	Level gauge
Piping Construction	
- Type and Material	Aboveground unpainted steel
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	SPCC
- Piping	SPCC
- Site	SPCC
Integrity Testing	Data not available; not required

6.73.4 Regulatory Compliance Requirements

Tank 438

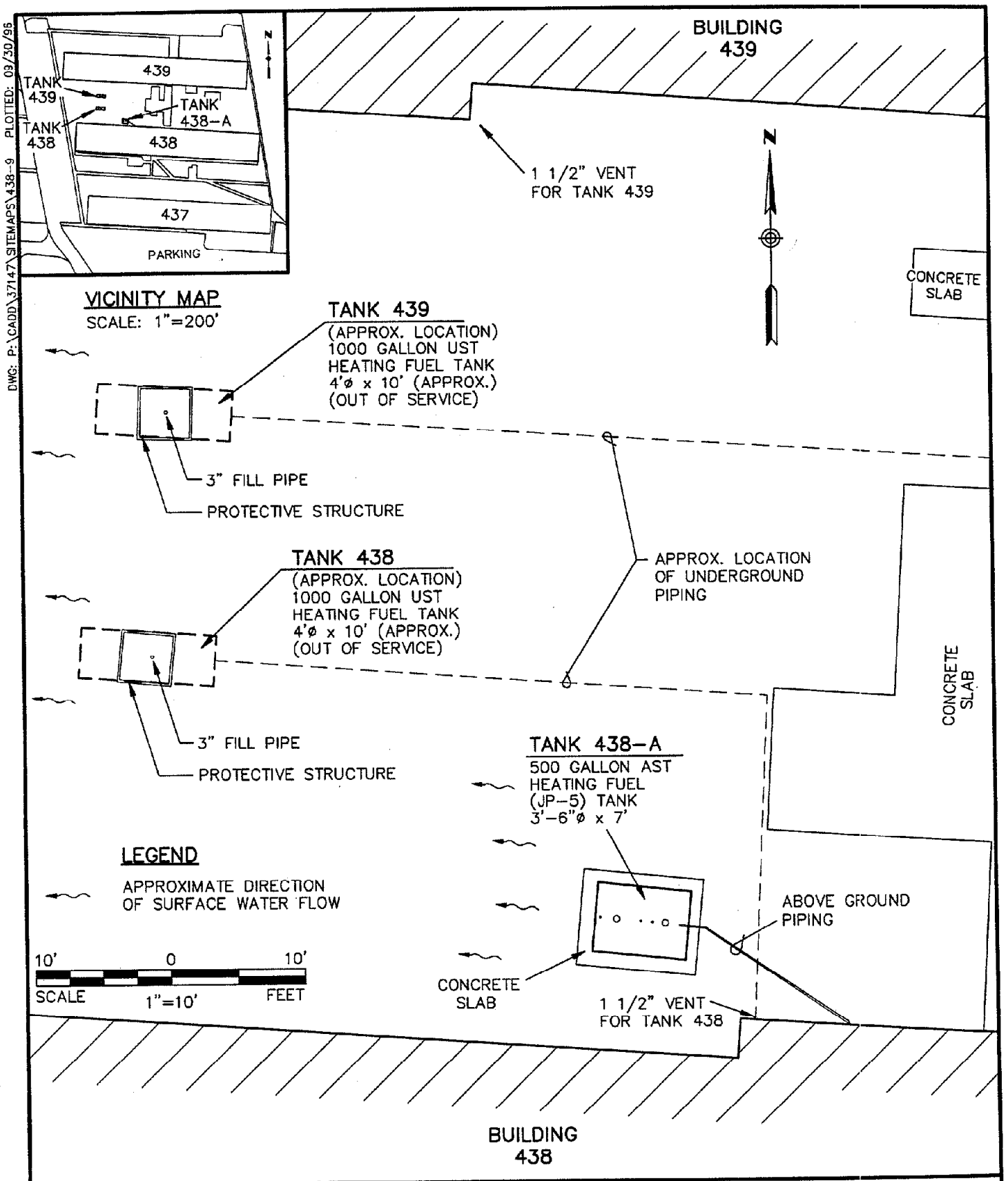
Tank 438 is scheduled for removal and replacement with vaulted tank under Navy contract no. N62467-96-C-0793 (already funded).

Tank 438-A

Recommend painting piping to provide corrosion protection. Estimated cost $100.00.

Recommend installation of an anti-syphon valve on all aboveground piping routed outside

secondary containment. Estimated cost $500.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.73

SITE MAP OF TANKS 438, 438-A, & 439
TRUMAN ANNEX
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.74 Bachelor Enlisted Quarters (BEQ) Building 439 (Tanks 439 and 439A)

6.74.1 General Information

The Bachelor Enlisted Quarters (BEQ) building 439 is located at Truman Annex south of street "A". Two diesel fuel tanks are located on the south of building 439. Tank 439 is a 1,000-gallon underground diesel tank that is currently out of service. Tank 439-A, tank 439's replacement, is a 500-gallon vaulted tank equipped with a level gauge. Fuel from this tank provides fuel for building 439's hot water boiler. Removal of tank 439 is scheduled for FY96.

6.74.2 Specific Tank Information

Tank ID 439 - UST	
Year of Installation	1958
Size	1000-gallons
Contents	Heating Fuel
Throughput	0 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	Registered
Status	Out-of-Service
Tank Construction	
- Type and Material	Single-walled steel
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	None; not required
Piping Construction	
- Type and Material	Underground steel
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	SPCC
- Piping	SPCC
- Site	SPCC
Integrity Testing	Data not available; not required

6.74.3 Specific Tank Information

Tank ID 439-A - AST	
Year of Installation	1995
Size	500-gallon
Contents	Heating Fuel (JP-5)
Throughput	1,642 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	Registered
Status	In-Service
Tank Construction	
- Type and Material	Vaulted steel
- Cathodic Protection	None; N/A
- Spill/Overfill Prevention	Level gauge
Piping Construction	
- Type and Material	Aboveground unpainted steel
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	SPCC
- Piping	SPCC
- Site	SPCC
Integrity Testing	Data not available; not required

6.74.4 Regulatory Compliance Requirements

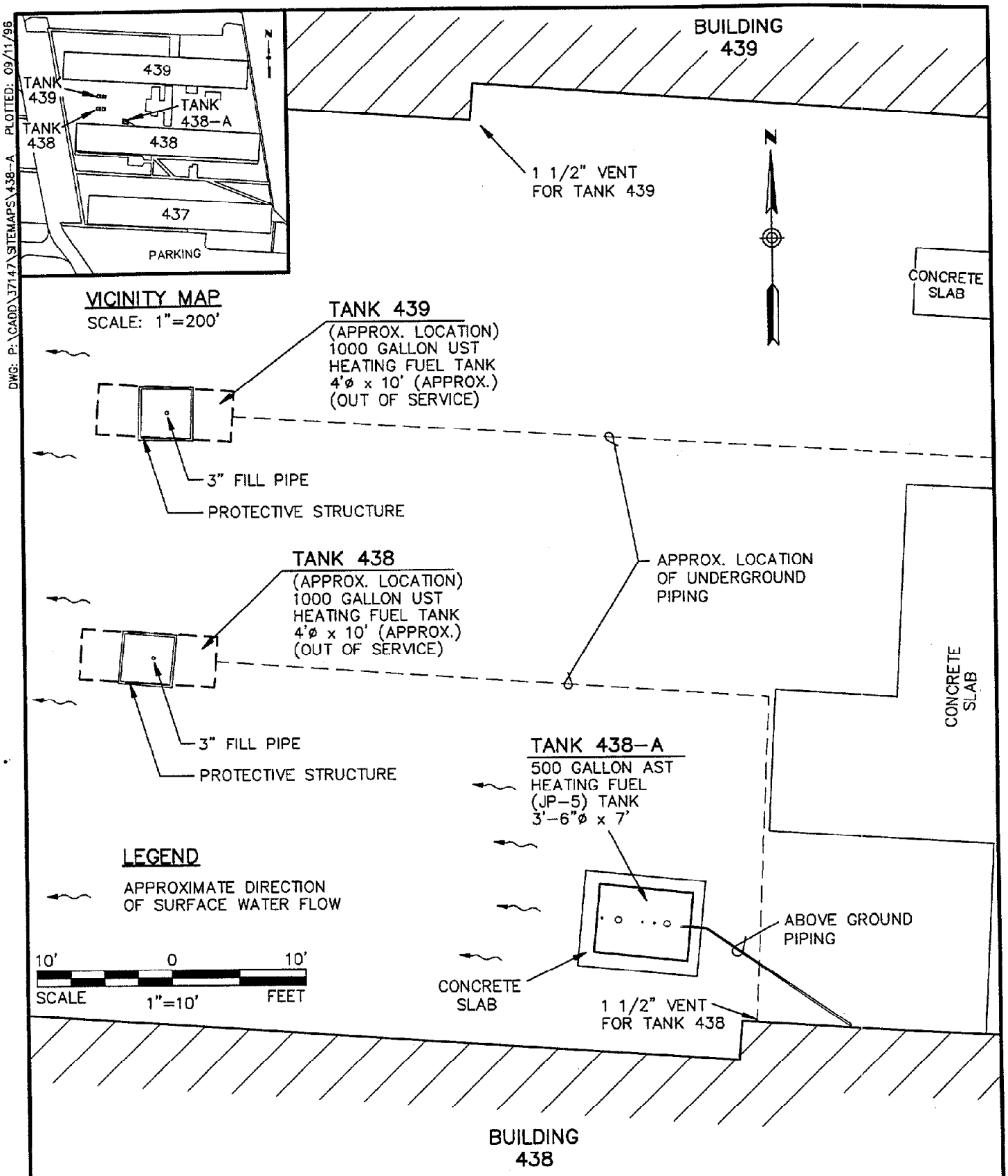
Tank 439

Tank 439 is scheduled for removal and replacement with vaulted tank under Navy contract no. N62467-96-C-0793 (already funded).

Tank 439-A

Recommend painting piping to provide corrosion protection. Estimated cost $100.00.

Recommend installation of an anti-syphon valve on all aboveground piping routed outside secondary containment. Estimated cost $500.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.74

SITE MAP OF TANKS 438, 438-A, & 439
TRUMAN ANNEX
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

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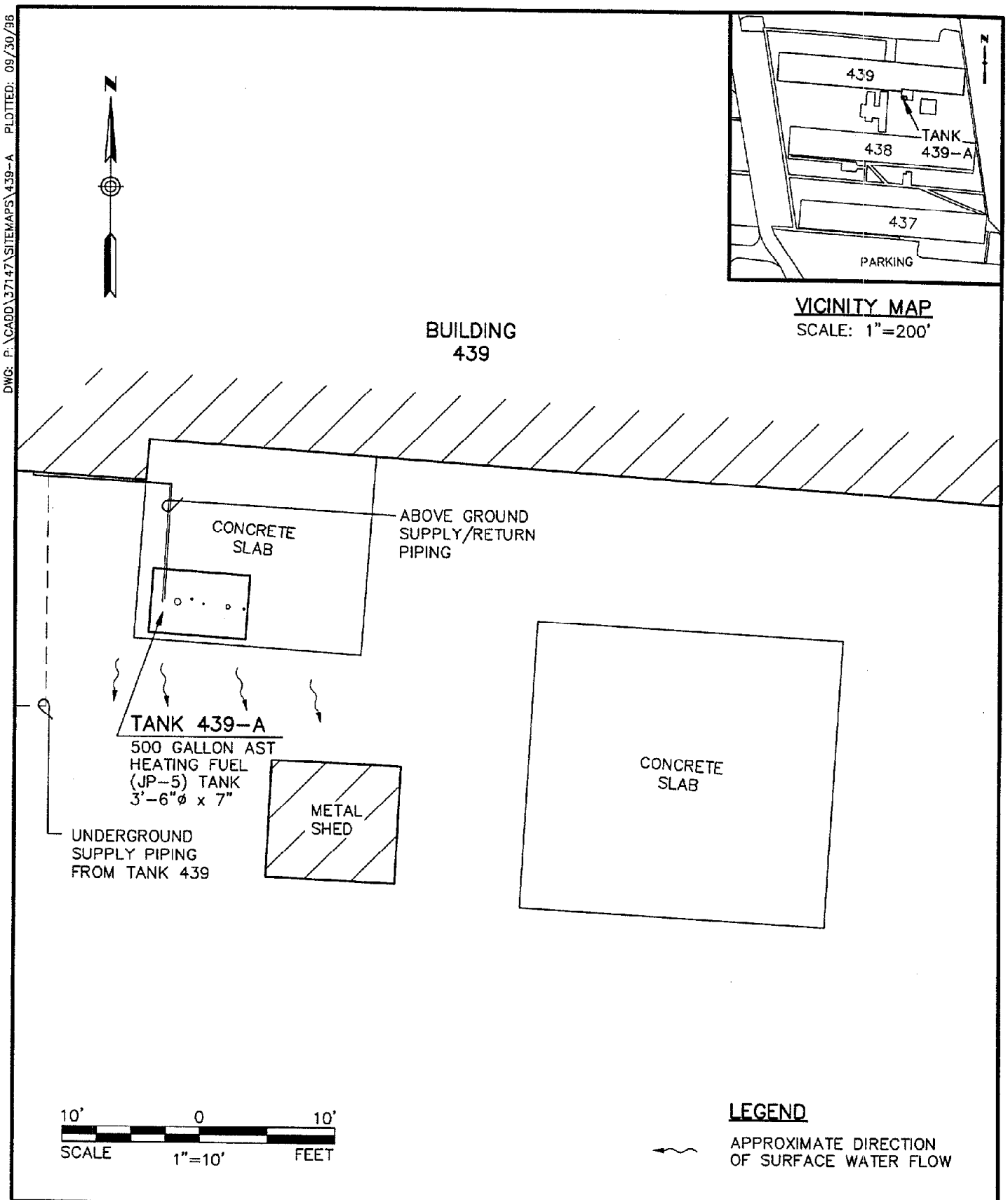


RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.74A

SITE MAP OF TANK 439-A
TRUMAN ANNEX
NAVAL AIR STATION - KEY WEST, FLORIDA

RUST Project No. 37147

OCTOBER, 1996

6.75 JIATFE Building 1279 (Tanks 1279, 1279A and 1279B)

6.75.1 General Information

The JIATFE Activity building 1279 is located west of street "A" at Truman Annex. Three tanks reside at this site, two ASTs and one UST. Tank 1279A is found on the east side of building 1260. This tank is a 500-gallon UST containing used oil. Tanks 1279B and tank 1279 are found west of building 1260 and south of building 1279. Tank 1279B is a 3,000-gallon AST containing diesel fuel used to power generators housed in building 1260 during power failures. Tank 1279 shares a 3' deep valved concrete secondary containment with tank 1279B. This 100-gallon AST contains vehicular gasoline use to fuel lawn care and other maintenance equipment.

6.75.2 Specific Tank Information

Tank ID 1279 - AST	
Year of Installation	Data Not Available
Size	100-gallon
Contents	Unleaded gasoline
Throughput	200 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Unpainted steel tank on supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Concrete secondary containment
Piping Construction	
- Type and Material	Aboveground rubber
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	None; required
- Piping	None; required
- Site	None; required
Integrity Testing	Data not available; not required

6.75.3 Specific Tank Information

Tank ID 1279A - UST	
Year of Installation	1987
Size	500-gallon
Contents	Used Oil
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112; 40 CFR 280
Regulated - Florida	Regulated FAC 62-761
Florida Registration	None; registration required
Status	In-Service
Tank Construction	
- Type and Material	Steel
- Cathodic Protection	None; required
- Spill/Overfill Prevention	None; required
Piping Construction	
- Type and Material	Underground steel
- Cathodic Protection	None; required
- Leak Prevention	None; required
Leak Detection	
- Tank	SPCC; additional required
- Piping	SPCC; additional required
- Site	SPCC; additional required
Integrity Testing	Data not available; required

6.75.4 Specific Tank Information

Tank ID 1279B - AST	
Year of Installation	1988
Size	3000-gallon
Throughput	470 gal/yr
Contents	Emergency Generator Diesel
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Regulated; FAC 62-762
Florida Registration	None; registration required
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Unpainted steel on supports None; required Concrete secondary containment; manual gauging; additional required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground steel; underground steel; additional required None; required (if steel) None; required
Leak Detection - Tank - Piping - Site	 SPCC; additional required SPCC; additional required SPCC; additional required
Integrity Testing	Data not available; not required

6.75.5 Regulatory Compliance Requirements

Tank 1279

Inspect tank, piping and site monthly and incorporate into SPCC Plan by January 1, 1998.

Tank 1279A

Tank A1279A is scheduled for removal under Navy contract no. N62467-96-C-0849 (already funded).

Tank and pipe closure and removal including assessment must be completed by December 31, 2000. Estimated cost $2,000.00.
Register tank with FDEP.

Tank 1279B

Provide double-walled pipe with interstitial monitoring or monitoring wells by January 1, 1998.
If monitoring wells are installed to satisfy the release detection requirement, provide either double-wall fiberglass pipe or cathodically protected steel pipe by December 31, 1999.
Estimated cost (double-walled piping with monitoring) $2,000.00.
Estimated cost (monitoring wells) $900.00.
Estimated cost (cathodic protected piping) $750.00.

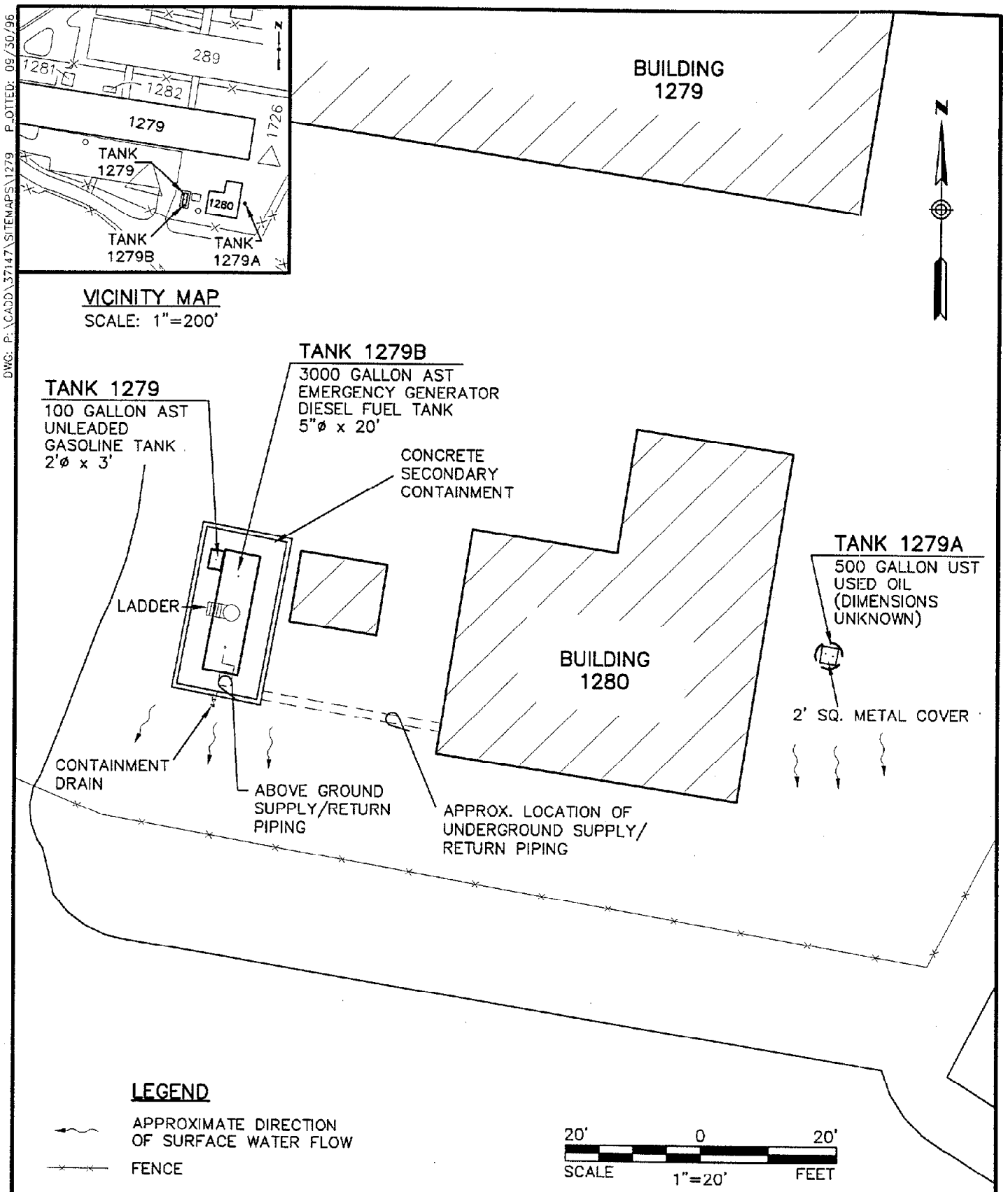
Consider replacing underground piping with aboveground piping by January 1, 1998. Estimated cost $1,800.00.

Paint tank as to provide corrosion protection by December 31, 1999. Estimated cost $600.00.

Provide lock for secondary containment by December 31, 1999. Estimated cost $50.00.

Install anti-syphon valve on all aboveground piping routed outside secondary containment by December 31, 1999. Estimated cost $500.00.

Register tank with FDEP.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.75

SITE MAP OF TANKS 1279, 1279A, & B
TRUMAN ANNEX
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147

OCTOBER, 1996

6.76 Bachelor Enlisted Quarters (BEQ) Building 1350 (Tank 1350)

6.76.1 General Information

The Bachelor Enlisted Quarters (BEQ) building 1350 is located west of street "A" at Truman Annex. One diesel fuel tank is located on the south of building 1350 under the parking lot. Tank 1350 is a 1,000-gallon underground heating fuel tank used to provide fuel for building 1350's hot water boiler. Removal of this tank is scheduled for FY 96.

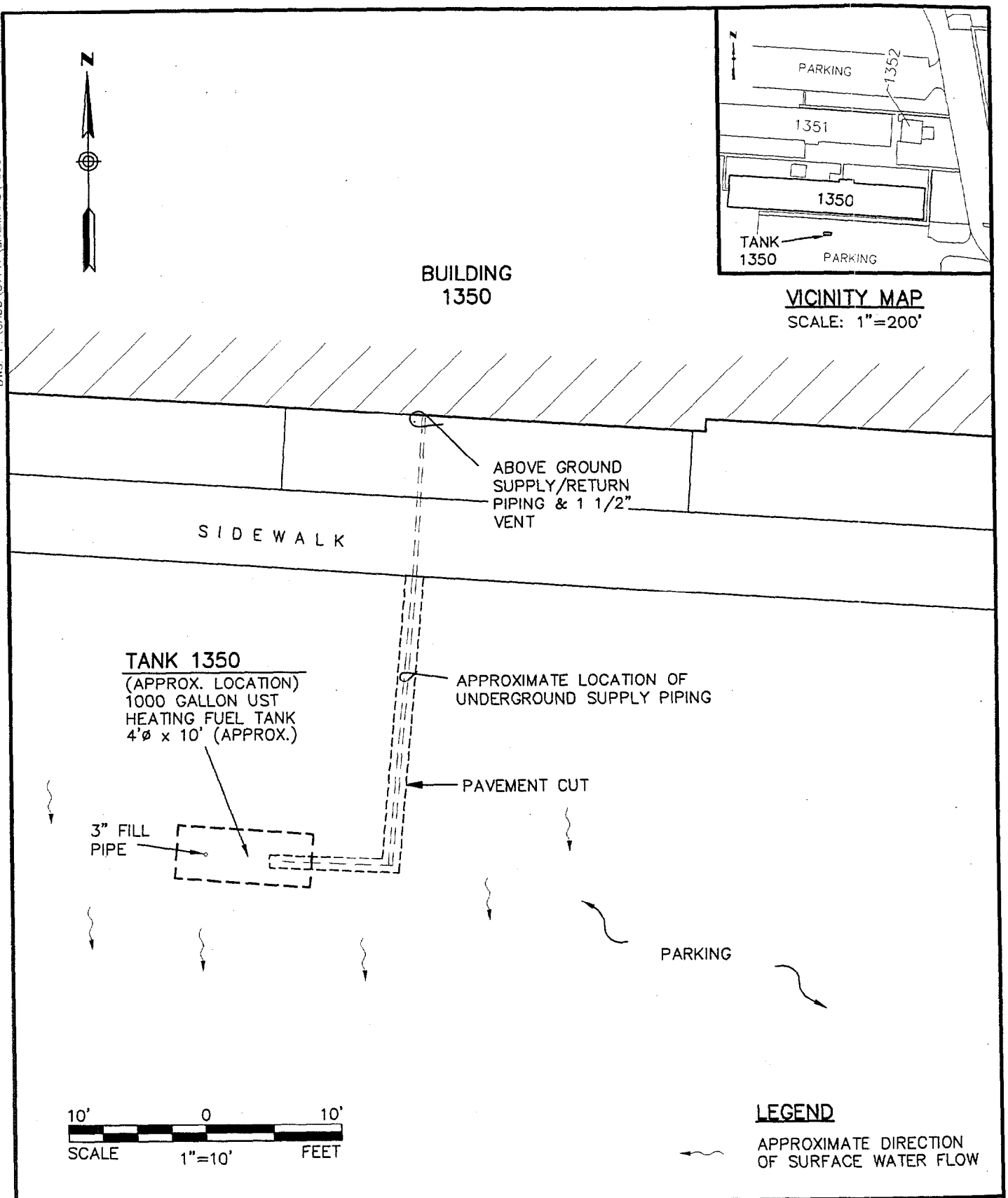
6.76.2 Specific Tank Information

Tank ID 1350 - UST	
Year of Installation	1966
Size	1000-gallons
Contents	Heating Fuel
Throughput	1,252 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	Registered
Status	In-Service
Tank Construction	
- Type and Material	Steel
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	None; not required
Piping Construction	
- Type and Material	Underground steel
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	SPCC
- Piping	SPCC
- Site	SPCC
Integrity Testing	August 1996

6.76.3 Regulatory Compliance Requirements

Tank 1350

Tank 1350 is scheduled for removal and replacement with vaulted tank under Navy contract no. N62467-96-C-0793 (already funded).



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.76

SITE MAP OF TANK 1350
TRUMAN ANNEX
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.77 Bachelor Enlisted Quarters (BEQ) Building 1351 (Tank 1351)

6.77.1 General Information

The Bachelor Enlisted Quarters (BEQ) building 1351 is located west of street "A" at Truman Annex. One heating fuel tank is located on the northside of building 1351 under the parking lot. Tank 1351 is a 1,000-gallon underground tank used to provide fuel for building 1351's hot water boiler. Removal of this tank is scheduled for FY 96.

6.77.2 Specific Tank Information

Tank ID 1351 - UST	
Year of Installation	1966
Size	1000-gallons
Contents	Heating Fuel
Throughput	2,212 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	Registered
Status	In-Service
Tank Construction	
- Type and Material	Steel
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	None; not required
Piping Construction	
- Type and Material	Underground steel
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	SPCC
- Piping	SPCC
- Site	SPCC
Integrity Testing	August 1996

6.77.3 Regulatory Compliance Requirements

Tank 1351

Tank 1351 is scheduled for removal and replacement with vaulted tank under Navy contract no. N62467-96-C-0793 (already funded).

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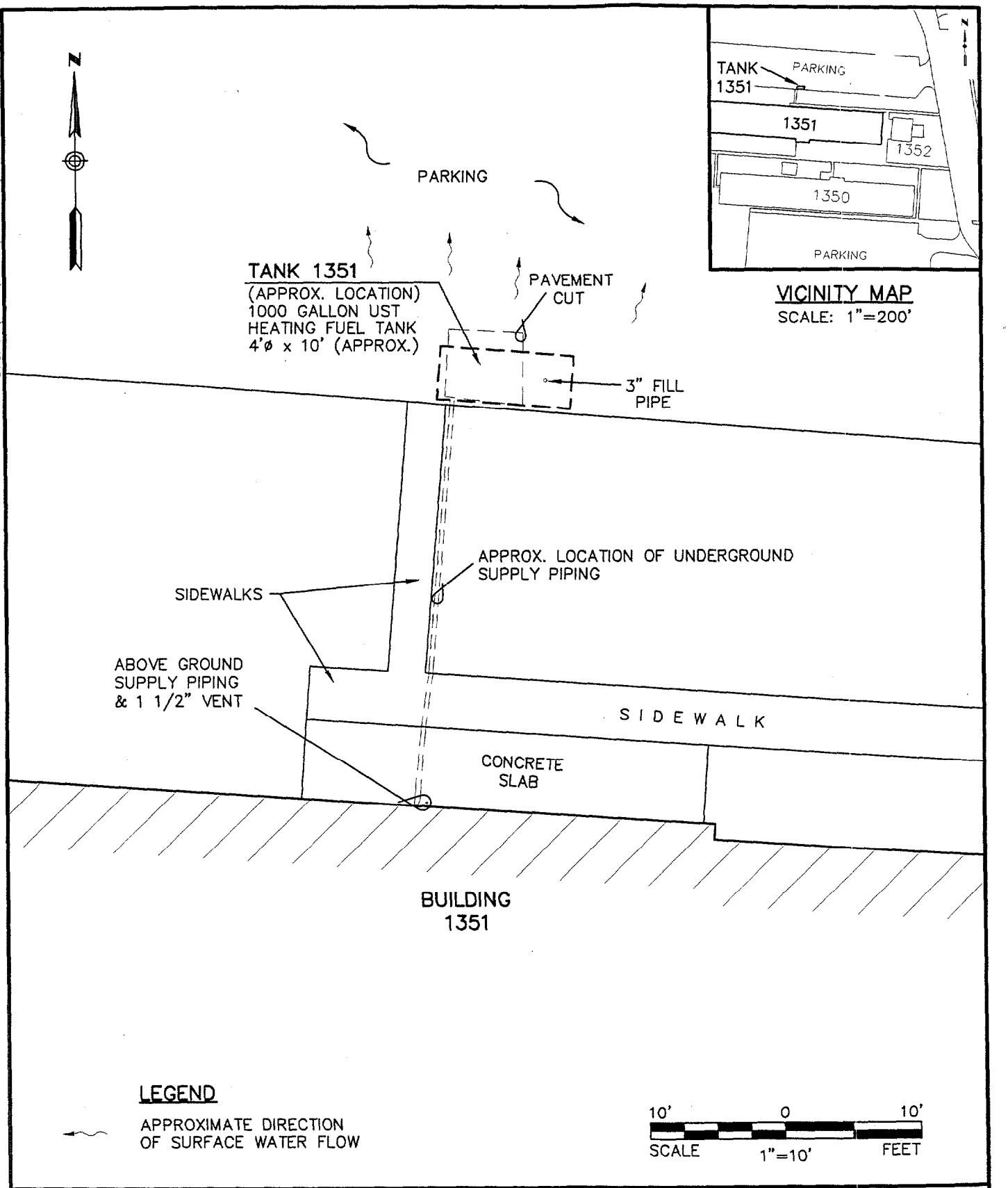


RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.77

SITE MAP OF TANK 1351
TRUMAN ANNEX
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.78 Key West Foreign Broadcast Facility Building 1355 (Tank 1355)

6.78.1 General Information

The Key West Foreign Broadcast Facility (KWFBIS) building 1355 is located at the intersection of United Street and Covington Avenue on Truman Annex. Adjacent to the south is the Atlantic Ocean. Tank 1355 is a 250-gallon AST found between buildings 1355 and 1357. JP-5 stored in this tank is used to power the facility's emergency generator in case of power loss. Tank 1355 is a steel tank within a concrete vault equipped with a level gauge.

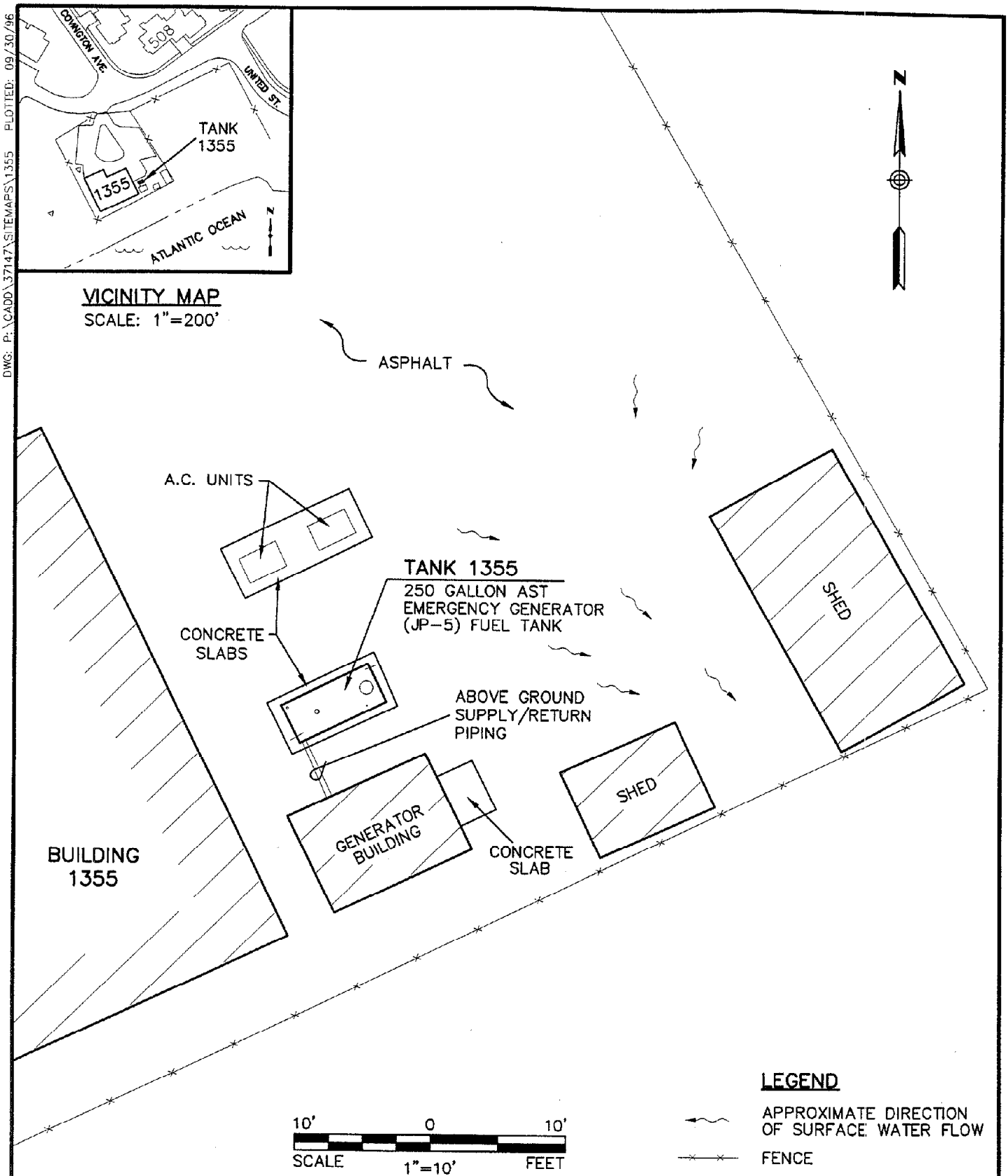
6.78.2 Specific Tank Information

Tank ID 1355 - AST	
Year of Installation	1995
Size	250-gallons
Contents	Emergency Generator JP-5
Throughput	78 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	Registered
Status	In-Service
Tank Construction	
- Type and Material	Vaulted steel on supports
- Cathodic Protection	None; N/A
- Spill/Overfill Prevention	Spill containment; level gauge
Piping Construction	
- Type and Material	Aboveground copper
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	SPCC
- Piping	SPCC
- Site	SPCC
Integrity Testing	Data not available; not required

6.78.3 Regulatory Compliance Requirements

Tank 1355

Recommend installation of an anti-syphon valve on all aboveground piping routed outside secondary containment. Estimated cost $500.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.78

SITE MAP OF TANK 1355
TRUMAN ANNEX
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147

OCTOBER, 1996

6.79 MUSE Building 4163 (Tank 4163)

6.79.1 General Information

The MUSE site is located at the north end of Dekalb Avenue on the Truman Annex. This site contains one 5,000-gallon aboveground diesel fuel storage tank. Tank 4163 is in a 2' deep valved concrete secondary containment. Fuel stored in this tank is used to power two generator stations.

6.79.2 Specific Tank Information

Tank ID 4163 - AST	
Year of Installation	1993
Size	5000-gallons
Contents	Emergency Generator Diesel
Throughput	3,858 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Regulated; FAC 62-762
Florida Registration	Registered
Status	In-Service
Tank Construction	
- Type and Material	Painted steel on supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Concrete secondary containment; additional required
Piping Construction	
- Type and Material	Aboveground galvanized steel
- Cathodic Protection	None; not required
- Leak Prevention	None; required
Leak Detection	
- Tank	SPCC
- Piping	SPCC
- Site	SPCC
Integrity Testing	Data not available; not required

6.79.3 Regulatory Compliance Requirements

Tank 4163

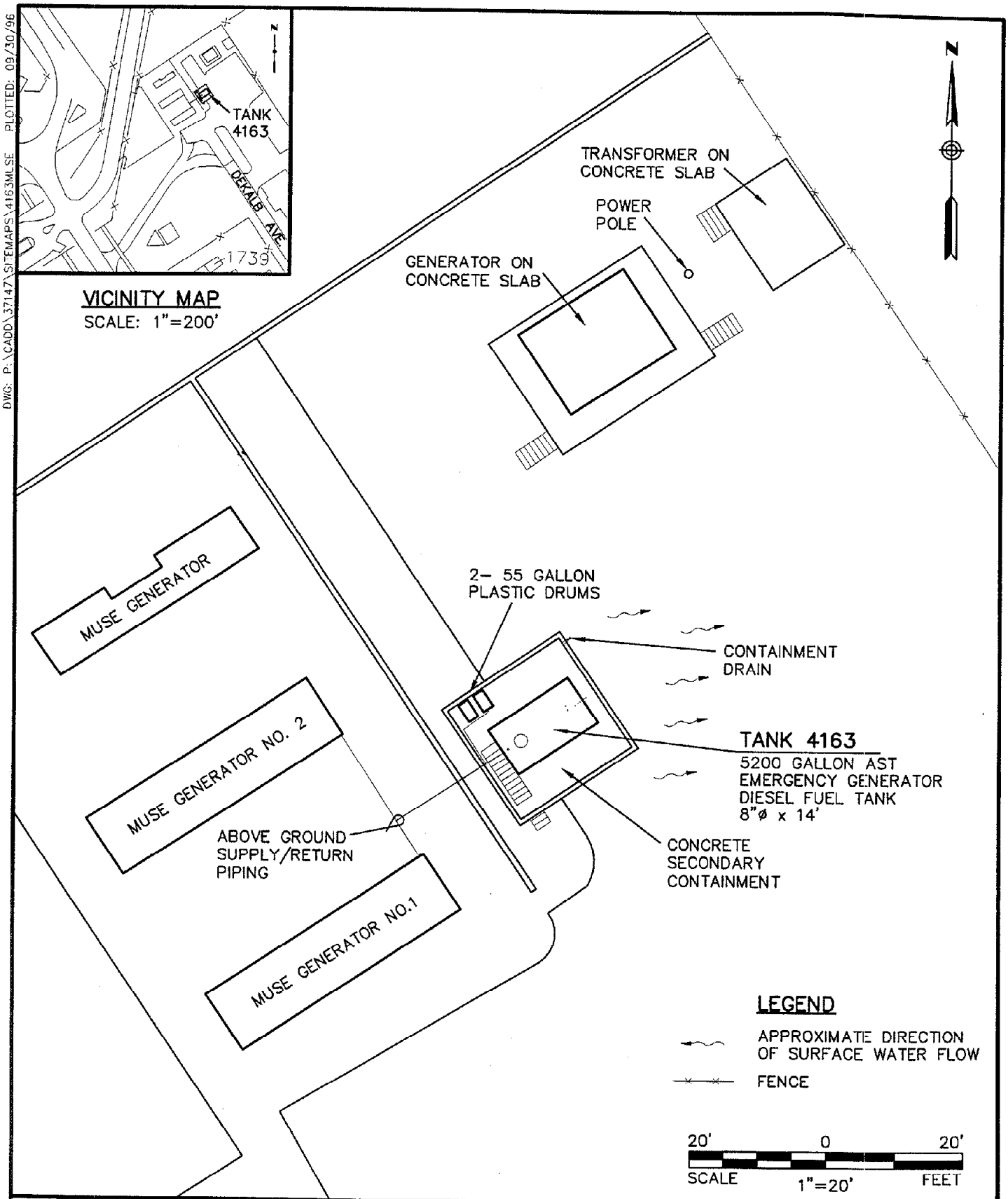
Provide lock for secondary containment by December 31, 1999. Estimated cost is $50.00.

Install tank level gauge by January 1, 1998. Estimated cost $2,000.00.

Install anti-syphon valve on all aboveground piping routed outside secondary containment by December 31, 1999. Estimated cost $500.00.

Install impervious liner for secondary containment by January 1, 1998. Estimated cost $1,000.00.

Note: Plastic drums in containment area are considered containers not tankage.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.79

SITE MAP OF TANK 4163
TRUMAN ANNEX
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147

OCTOBER, 1996

6.80 Inner and Outer Mole (Tanks OW-1, OW-1A, OW-102 and OW102A)

6.80.1 General Information

The Inner and Outer Moles of the Truman Annex complex are located at the northern end of Truman Annex and extend northerly into the Atlantic Ocean. This facility was originally designed to refuel Naval marine vehicles but is used for vessel docking at this time. The Inner and Outer Moles were both designed to receive bilge water and other oily waters from docked vessels via oil/water separators. Oily water received on the moles enter through pipe lines and are transported to the oil/water separators. Tank OW-1A is an oil/water separator on the outer mole. As oily water is received into OW-1A the oil is segregated from the water and stored until levels reach the separators maximum storage capacity of 650-gallons. Tank OW-1, a 4,000-gallon UST, located west of OW-1-A receives the segregated oil after maximum separator capacities are reached. Management of the oily product is handled under a NAS Key West Public Works contract. Segregated water discharges into a nearby sewage pump station. Tank OW-102 and tank OW102A (oil/water separator) are located on the west side of building 102 on the Inner Mole. Content and operation of these tanks are the same as described above for OW-1A and OW-1.

6.80.2 Specific Tank Information

Tank ID OW-1 - UST	
Year of Installation	1990
Size	4000-gallons
Contents	Used Oil
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112; 40 CFR 280
Regulated - Florida	Regulated; FAC 62-761
Florida Registration	Registered
Status	In-Service
Tank Construction	
- Type and Material	Fiberglass; additional required
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Tank gauging connection; high level alarm; additional required
Piping Construction	
- Type and Material	Aboveground and underground painted steel; additional required
- Cathodic Protection	None; required (if steel)
- Leak Prevention	None; required
Leak Detection	
- Tank	SPCC; additional required
- Piping	SPCC; additional required
- Site	SPCC; additional required
Integrity Testing	August 1996

6.80.3 Specific Tank Information

Tank ID OW-1A - UST	
Year of Installation	1985
Size	650-gallons
Contents	Used Oil
Throughput	Data not available
Regulated - Federal	Unregulated
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Double-walled fiberglass
- Cathodic Protection	None; N/A
- Spill/Overfill Prevention	Overflow discharge to tank OW-1
Piping Construction	
- Type and Material	Aboveground and underground steel
- Cathodic Protection	None; N/A
- Leak Prevention	None; N/A
Leak Detection	
- Tank	None; N/A
- Piping	None; N/A
- Site	None; N/A
Integrity Testing	Data not available; N/A

6.80.4 Specific Tank Information

Tank ID OW-102 - UST	
Year of Installation	1990
Size	4000-gallons
Contents	Used Oil
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112; 40 CFR 280
Regulated - Florida	Regulated; FAC 62-761
Florida Registration	Registered
Status	In-Service
Tank Construction	
- Type and Material	Fiberglass; additional required
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Tank gauging connection; high level alarm; additional required
Piping Construction	
- Type and Material	Aboveground and underground painted steel; additional required
- Cathodic Protection	None; required (if steel)
- Leak Prevention	None; required
Leak Detection	
- Tank	SPCC; monitoring wells; additional required
- Piping	SPCC; monitoring wells; additional required
- Site	SPCC; monitoring wells; additional required
Integrity Testing	August 1996

6.80.5 Specific Tank Information

Tank ID OW102A - UST	
Year of Installation	1985
Size	650-gallons
Contents	Used Oil
Throughput	Data not available
Regulated - Federal	Unregulated
Regulated - Florida	Unregulated; FAC 62-761
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Double-walled fiberglass
- Cathodic Protection	None; N/A
- Spill/Overfill Prevention	Overflow discharge to tank OW-102
Piping Construction	
- Type and Material	Aboveground and underground steel
- Cathodic Protection	None; N/A
- Leak Prevention	None; N/A
Leak Detection	
- Tank	None; N/A
- Piping	None; N/A
- Site	None; N/A
Integrity Testing	Data not available; N/A

6.80.6 Regulatory Compliance Requirements

Tank OW-1 and OW-102

By December 31, 2000, provide release detection for the tank and piping and replace underground piping with fiberglass piping with secondary containment.

Recommend tank and piping release detection be a network of four (4) monitoring wells for the tank (two additional monitoring wells at OW-102) and interstitial monitoring for the piping. Estimated cost $7,500.00.

Provide spill containment and overfill protection by December 31, 1998. Estimated cost $2,000.00.

Provide secondary containment for tank by December 31, 2009. Estimated cost $5,000.00.

Tank OW-1A and OW102A

These tank are considered a process tank and are therefore exempt from state and federal regulation.

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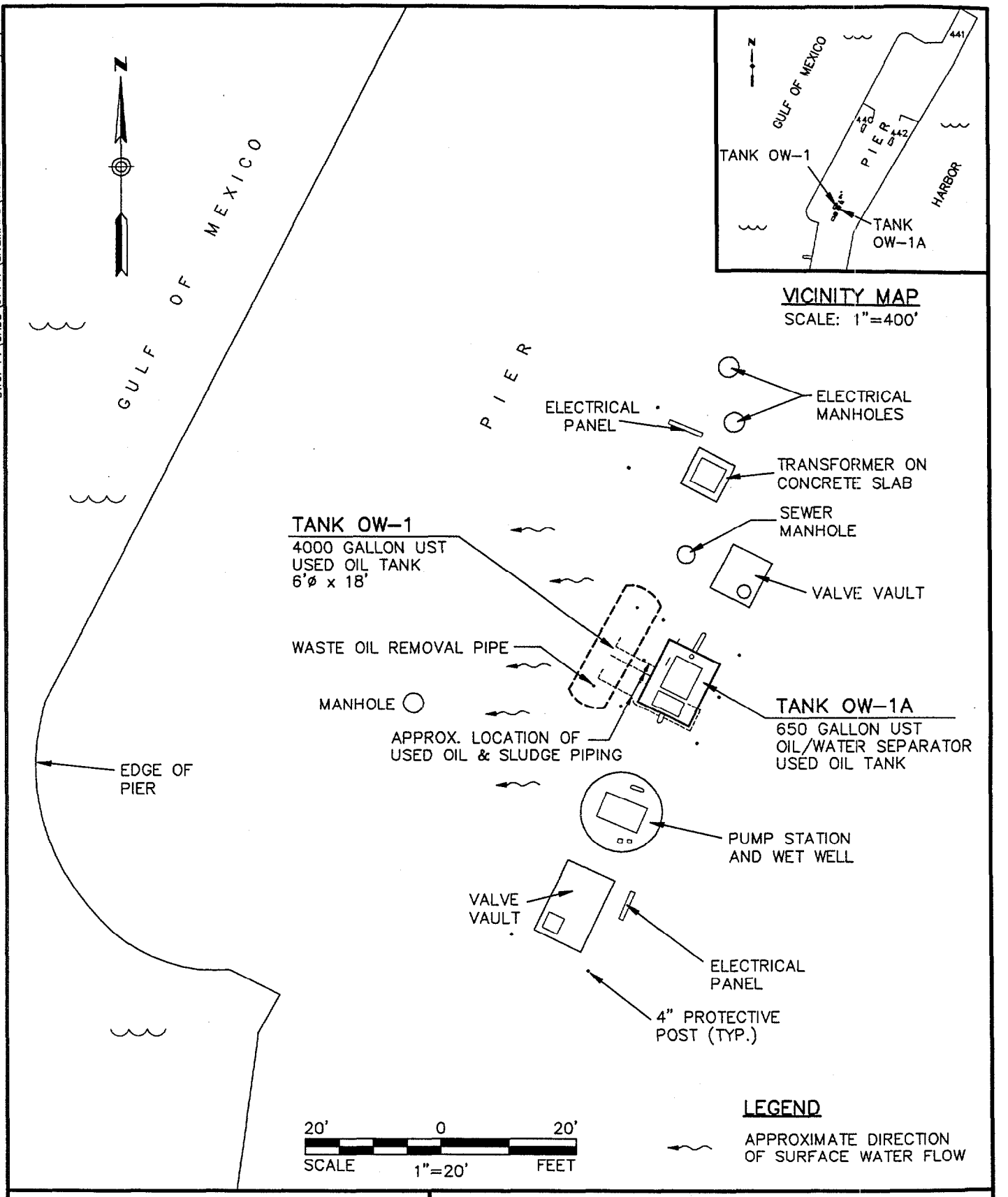
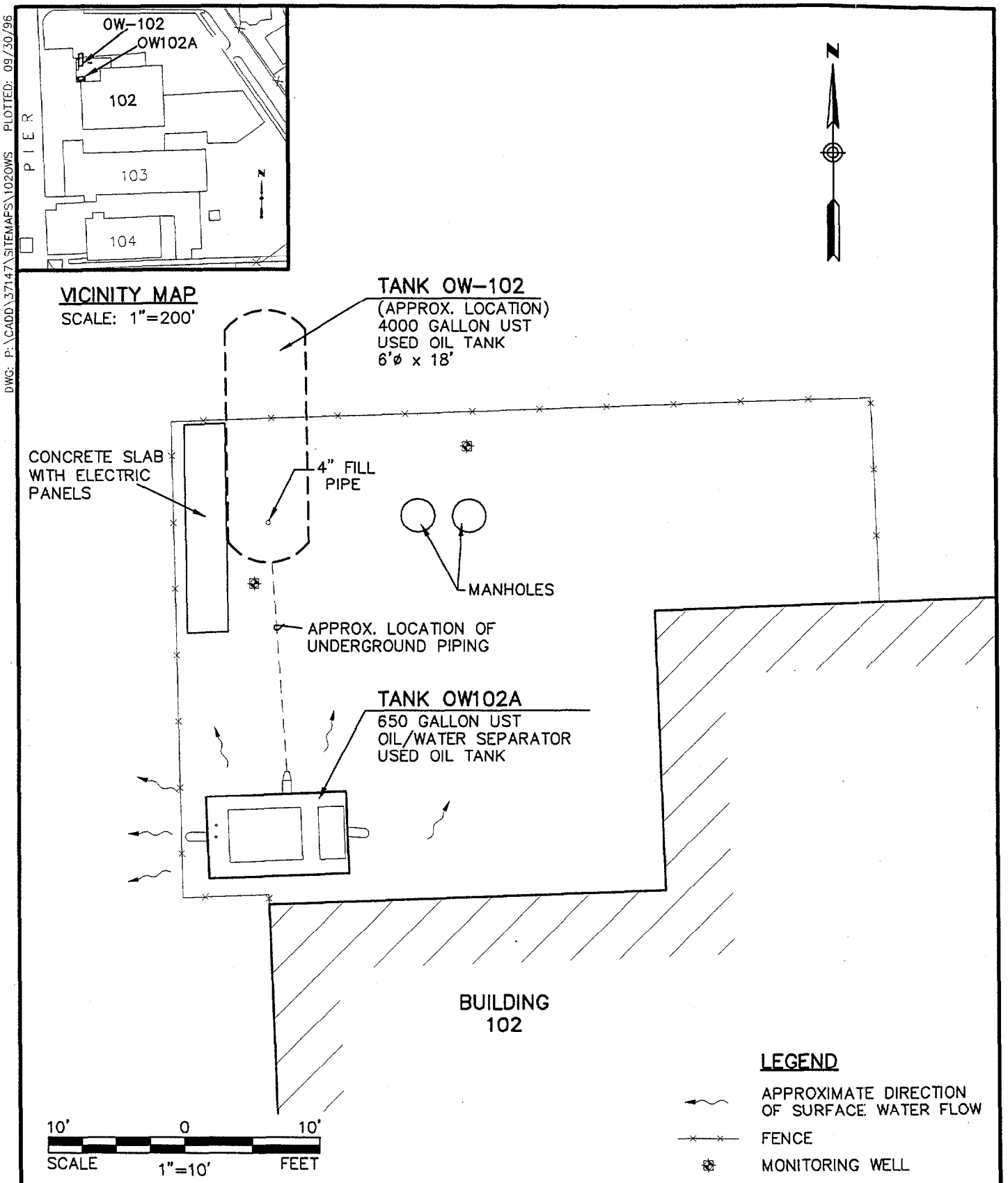


RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.80

SITE MAP OF TANKS OW-1 & OW-1A
TRUMAN ANNEX
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.80A

SITE MAP OF TANKS OW-102 & OW102A
TRUMAN ANNEX
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

SIGSBEE PARK

6.81 Sanitary Sewer Pump Station - Building V988 (Tank V988)

6.81.1 General Information

Building V988 a sewage pump station is located north of Sigsbee Road and south of the Sigsbee Marina. A 110-gallon AST containing diesel fuel is found on the northeast side of the pump station building. Fuel from tank V988 is use to operate the site's emergency generator. Tank V988 has a 2' deep valved concrete secondary containment to control any spills or leaks.

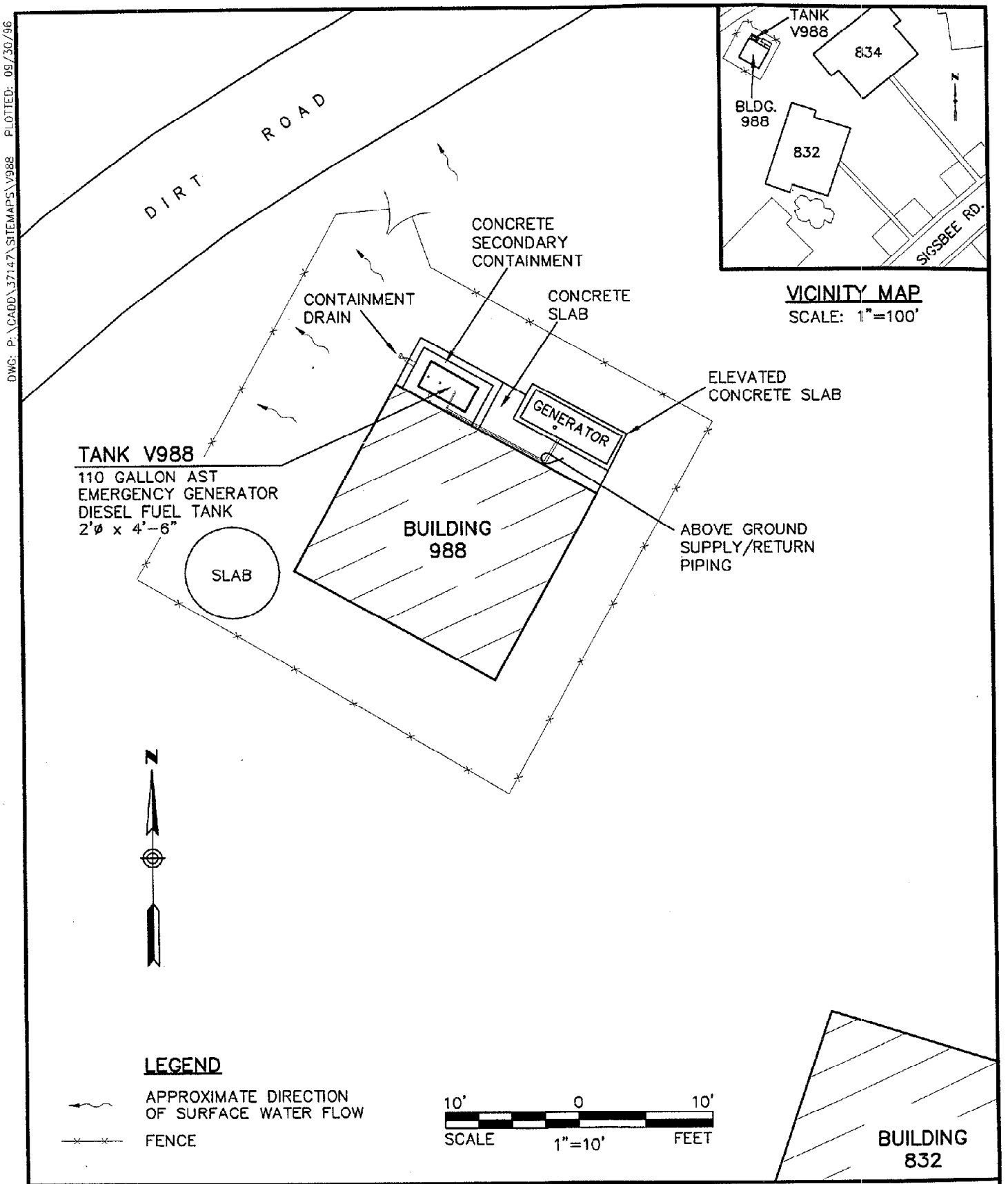
6.81.2 Specific Tank Information

Tank ID V988 - AST	
Year of Installation	1990
Size	110-gallons
Contents	Emergency Generator Diesel
Throughput	65 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	Registered
Status	In-Service
Tank Construction	
- Type and Material	Single-walled painted steel on supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Concrete secondary containment
Piping Construction	
- Type and Material	Aboveground painted steel
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	SPCC
- Piping	SPCC
- Site	SPCC
Integrity Testing	Data not available; not required

6.81.3 Regulatory Compliance Requirements

Tank V988

Recommend installation of an anti-syphon valve on all aboveground piping routed outside secondary containment. Estimated cost $500.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.81

SITE MAP OF TANK V988
SIGSBEE PARK
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.82 Sewage Pump Station - Building V1274 (Tank V1274A)

6.82.1 General Information

Tank V1274A is a 250-gallon diesel generator fuel tank mounted in the base of an emergency generator. Located west of building V1274 the emergency generator supplies power to an existing pump station in case of an electrical outage. V1274A has no secondary containment. The NAS Public Works Office maintains and schedules refueling of this generator tank. A saltwater channel is found immediately to the east of this site.

6.82.2 Specific Tank Information

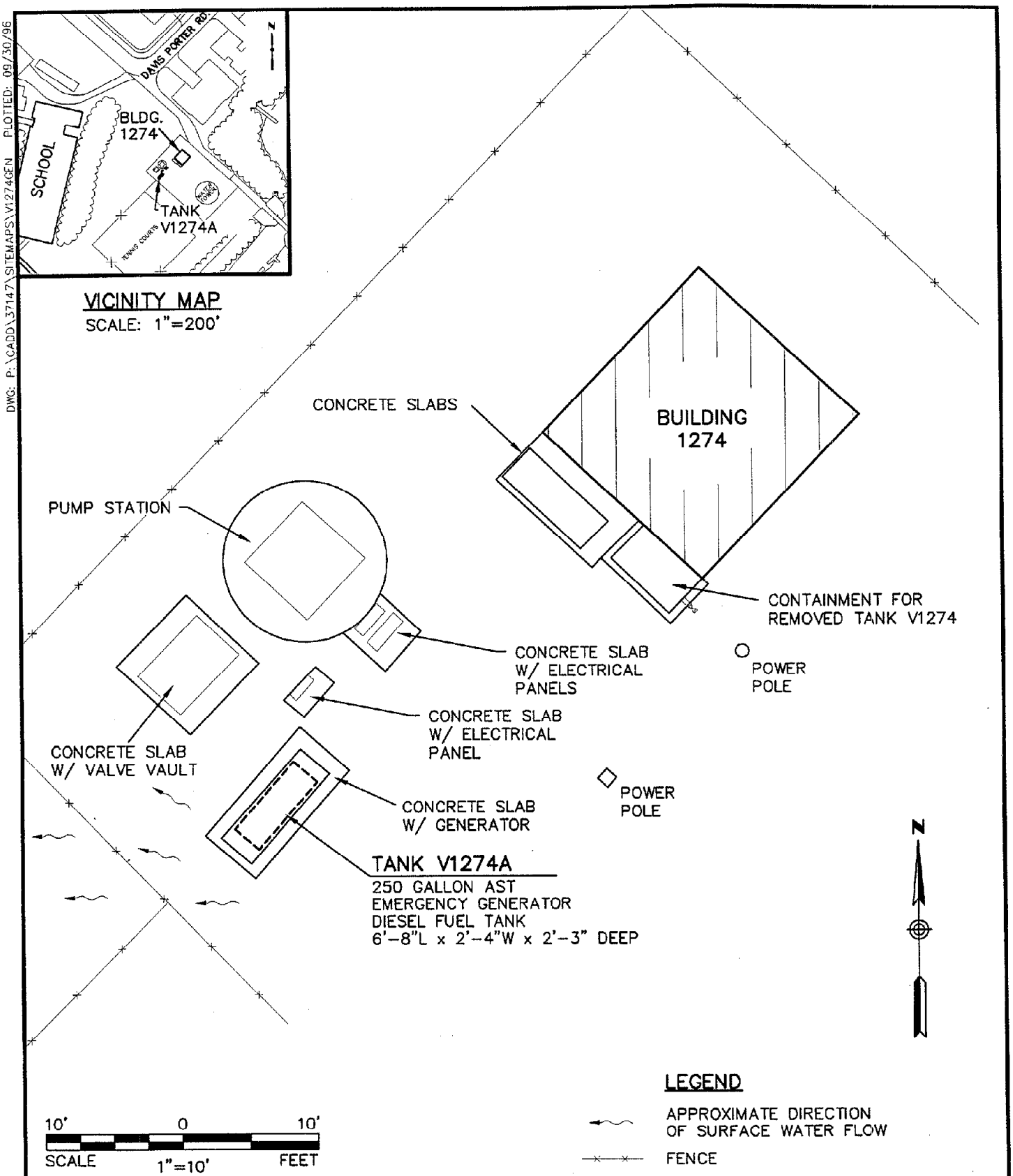
Tank ID V1274A - AST	
Year of Installation	Data not available
Size	250-gallons
Contents	Emergency Generator Diesel
Throughput	128 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Single-walled painted steel
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	None; required
Piping Construction	
- Type and Material	N/A
- Cathodic Protection	N/A
- Leak Prevention	N/A
Leak Detection	
- Tank	None; required
- Piping	N/A
- Site	None; required
Integrity Testing	Data not available; not required

6.82.3 Regulatory Compliance Requirements

Tank V1274A

Provide secondary containment with locking valve by January 1, 1998. Estimated cost $1500.00

Inspect tank, piping and site monthly and incorporate into SPCC Plan by January 1, 1998.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.82

SITE MAP OF TANK V1274A
SIGSBEE PARK
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.83 Potable Water System Pump Station - Building V1552 (Tanks V1552B and V1552C)

6.83.1 General Information

Building V1552 is a potable water pumping station located on Sigsbee Road east of the main entrance guard house. The Gulf of Mexico bounds this site on the east and west. Present at this site are two ASTs containing JP-5 fuel. Tank V1552B is a 500-gallon vaulted tank equipped with overfill and leak detection. JP-5 stored in this tank supplies fuel to tank V1552C which in turn provides a backup power source for the station's pumps during power outages. Tank V1552C is a 10-gallon AST and is mounted to the roof of building V1552. No secondary containment exists for the V1552C.

6.83.2 Specific Tank Information

Tank ID V1552B - AST	
Year of Installation	1995
Size	500-gallons
Contents	Pump Diesel (JP-5)
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	Registered
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Vaulted steel None; N/A Level gauge; leak detection gauge
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground unpainted steel None; not required None; not required
Leak Detection - Tank - Piping - Site	Leak detection gauge; additional required None; required None; required
Integrity Testing	Data not available; not required

6.83.3 Specific Tank Information

Tank ID V1552C - AST	
Year of Installation	Data not available
Size	10-gallons
Contents	Pump Diesel (JP-5)
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Single-walled unpainted steel None; not required None; required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Aboveground unpainted copper None; not required None; not required
Leak Detection - Tank - Piping - Site	 None; required None; required None; required
Integrity Testing	Data not available; not required

6.83.4 Regulatory Compliance Requirements

Tank V1552B

Inspect tank, piping and site monthly and incorporate into SPCC Plan by January 1, 1998.

Recommend installation of an anti-syphon valve on all aboveground piping routed outside secondary containment. Estimated cost $500.00.

Recommend painting piping to provide corrosion protection. Estimated cost $100.00.

Tank V1552C

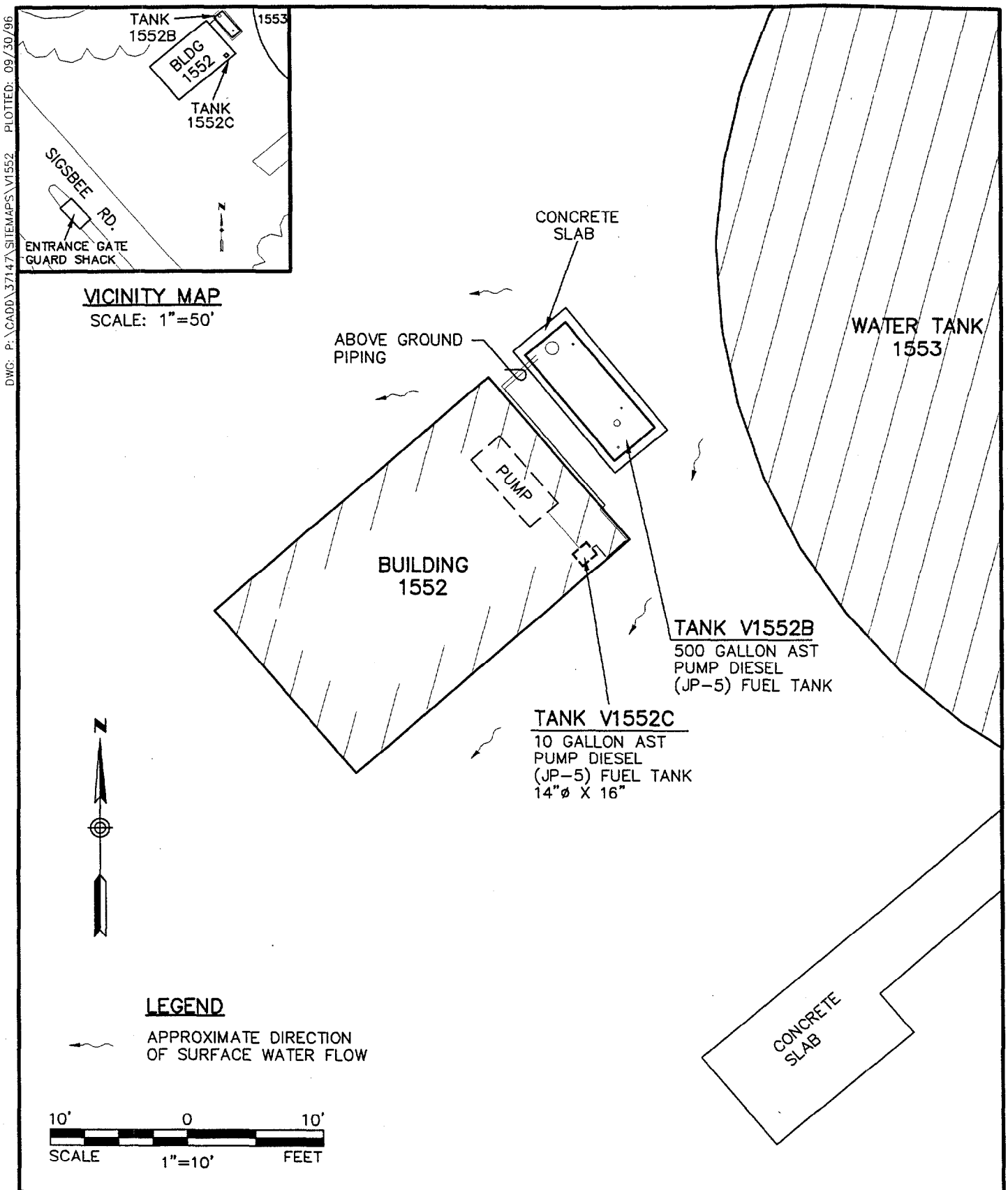
Provide secondary containment with locking drain valve by January 1, 1998.

Due to tank V1552C being supported from the roof of the pump house the installation of secondary containment would be very difficult, therefore tank removal is recommended. Recommend engine be upgraded to incorporate engine driven transfer pump to draw fuel from Tank V1552B to pump engine. Incorporate injector overflow back to V1552C. Estimated cost $2000.00.

If tank not removed, inspect tank, piping and site monthly and incorporate into SPCC Plan by January 1, 1998.

Recommend painting tank V1552C piping to provide corrosion protection. Estimated cost $100.00.

Recommend installation of an anti-syphon valve on all aboveground piping routed outside secondary containment. Estimated cost $500.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.83

SITE MAP OF TANKS V1552B & V1552C
SIGSBEE PARK
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.84 Sanitary Sewer Pump Station - Building V1554 (Tanks V1554 and V1554A)

6.84.1 General Information

The pneumatic sewage pump station V1554 is located at the north end of Barb Road. Military housing is found to the east and south with mangroves to the north and west of the site. Two ASTs are present on this site, V1554 and V1554-OWS.

6.84.2 Specific Tank Information

Tank V1554 contains diesel fuel used to provide fuel to the station's emergency generator if there is a loss of power. A 1'-5" deep valved concrete secondary containment is used to control any leaks or spills from this tank.

Tank ID V1554 - AST	
Year of Installation	1990
Size	110-gallons
Contents	Emergency Generator Diesel
Throughput	96 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	Registered
Status	In-Service
Tank Construction	
- Type and Material	Single-walled unpainted steel on supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Secondary containment
Piping Construction	
- Type and Material	Aboveground unpainted steel
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	SPCC
- Piping	SPCC
- Site	SPCC
Integrity Testing	Data not available; not required

6.84.3 Specific Tank Information

The oil/water separator V1554A is used to capture oily water generated from the compressed air tank blow-off valve found north of tank V1554A. The discharge port of V1554A is open and could result in a release if not checked on a regular basis by the NAS Key West Public Works Department. A 4" deep wooden secondary containment with sand bottom has been constructed around this unit.

Tank ID V1554A - AST	
Year of Installation	Data not available
Size	20-gallons
Contents	Used Oil
Throughput	Data not available
Regulated - Federal	Unregulated
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Single-walled fiberglass
- Cathodic Protection	None; N/A
- Spill/Overfill Prevention	Secondary containment (insufficient size); N/A
Piping Construction	
- Type and Material	Aboveground unpainted steel
- Cathodic Protection	None; N/A
- Leak Prevention	None; N/A
Leak Detection	
- Tank	SPCC; N/A
- Piping	SPCC; N/A
- Site	SPCC; N/A
Integrity Testing	Data not available; not required

6.84.4 Regulatory Compliance Requirements

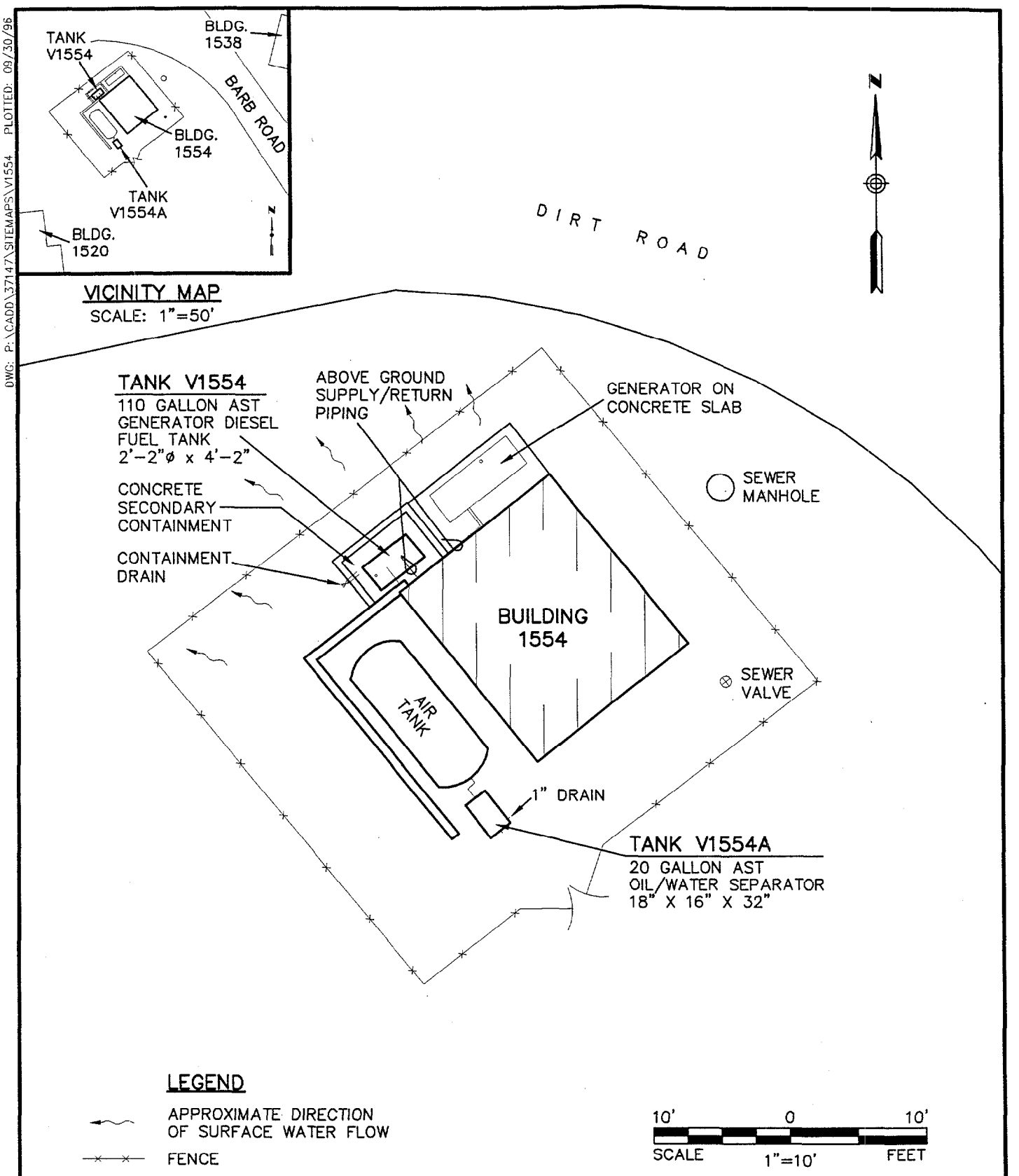
Tank V1554

Tank V1554 is scheduled for removal and replacement with a vaulted tank under Navy contract no. N62467-96-C-0849 (already funded).

Tank V1554A

Tank V1554A is considered a process tank and is therefore exempt from state and federal regulation.

Tank outlet should be piped to the sanitary sewer.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.84

SITE MAP OF TANKS V1554 & V1554A
SIGSBEE PARK
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147

OCTOBER, 1996

6.85 Sigsbee Marina - Building V3005 (Tank V3005)

6.85.1 General Information

The Sigsbee Marina is located in the northern section of Sigsbee Park. Adjacent to the north, west and south is the Gulf of Mexico. The marina filling station V3005 is centrally located in the marina and contains a 4,000-gallon UST. Vehicular gasoline from tank V3005 is used for refueling of recreation vehicles via two standard dispensers. Groundwater monitoring wells are used as leak detection.

6.85.2 Specific Tank Information

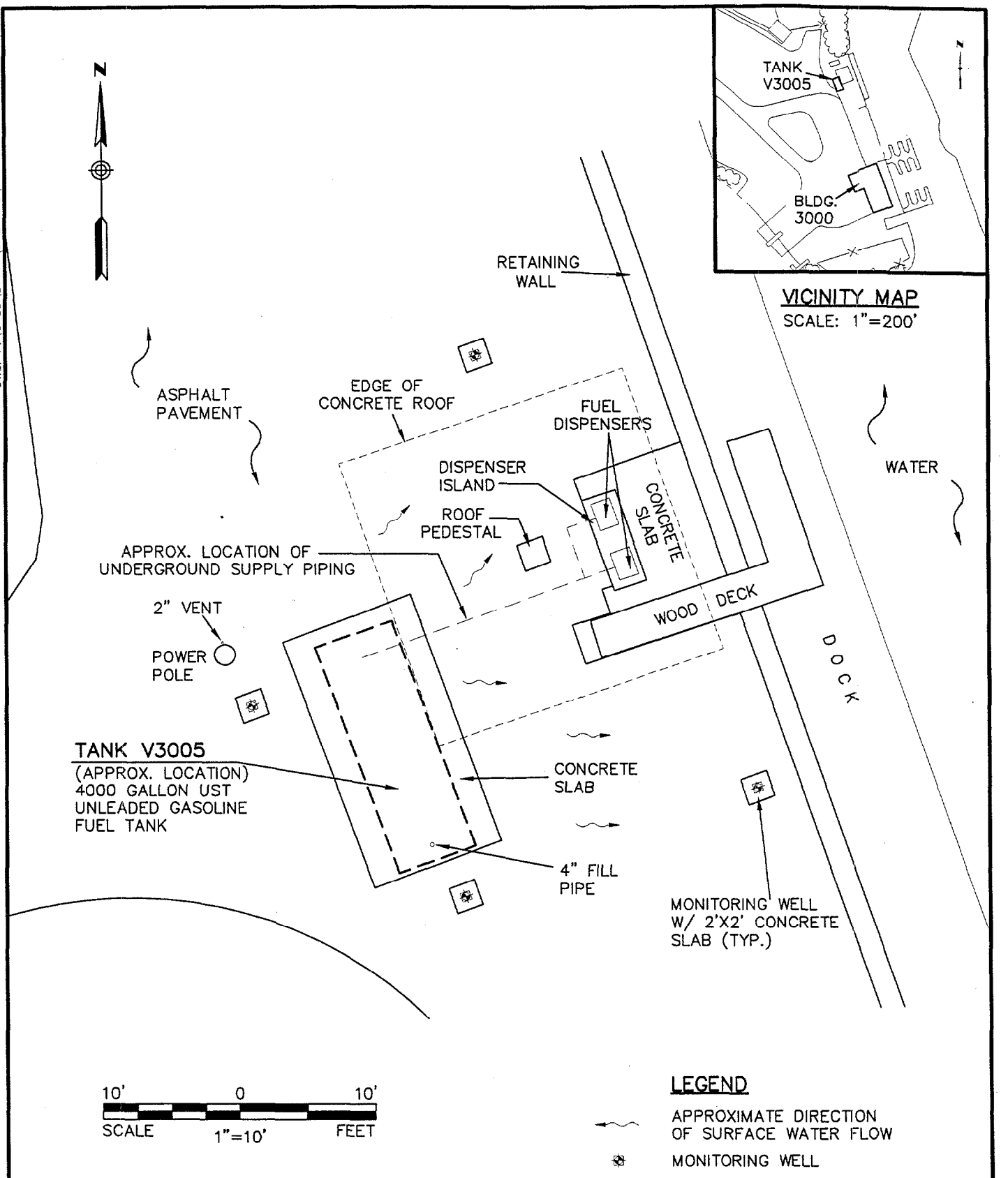
Tank ID V3005 - UST	
Year of Installation	1970
Size	4000-gallons
Contents	Unleaded Gasoline
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112; 40 CFR 280
Regulated - Florida	Regulated; FAC 62-761
Florida Registration	Registered
Status	In-Service
Tank Construction	
- Type and Material	Single-walled fiberglass; additional required
- Cathodic Protection	None; N/A
- Spill/Overfill Prevention	None; additional required
Piping Construction	
- Type and Material	Underground steel; additional required
- Cathodic Protection	None; required
- Leak Prevention	None; required
Leak Detection	
- Tank	Groundwater monitoring; daily tank gauging; SPCC; additional required
- Piping	Groundwater monitoring; SPCC; additional required
- Site	Groundwater monitoring; SPCC; additional required
Integrity Testing	August 1996

6.85.3 Regulatory Compliance Requirements

Tank V3005

Tank V3005 is scheduled for removal and replacement with a vaulted tank under Navy contract no. N62467-96-C-0849 (already funded).

Tank, piping and dispensing pump closure and removal including assessment must be completed by December 31, 2000. Estimated cost $7,500.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.85

SITE MAP OF TANK V3005
SIGSBEE PARK
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.86 Sigsbee Park Exchange Service Station - Building 800 (Tank V4022A, B, C, D, E, F, and G)

6.86.1 General Information

The Sigsbee Park Exchange Service Station is located on Sigsbee Road west of building 800. Sigsbee Park housing is found immediately to the south of the service station. Seven USTs exist at this site but only four are active. Fuels stored at this facility are used to refuel active and retired military personnel vehicles via four standard dispensing units. Located east of the dispensing station are the four active USTs V4022-A, V4022-B, V4022-C and V4022-D. Tanks V4022-A through V4022-C are 10,000-gallon fiberglass tanks containing vehicular gasoline. Tank V4022-D is a 6,000-gallon fiberglass tank containing vehicular diesel. The four active tanks are equipped with overfill protection and groundwater monitoring wells for leak detection. Tanks V4022-E, V4022-F and V4022-G are 1,000-gallon vehicular gasoline tanks located northeast of the main dispenser units. These tanks have been abandoned and are no longer in use.

6.86.2 Specific Tank Information

Tank ID V4022A - UST	
Year of Installation	1983
Size	10,000-gallons
Contents	Unleaded Gasoline
Throughput	388,060 gal/yr
Regulated - Federal	Regulated; 40 CFR 112; 40 CFR 280
Regulated - Florida	Regulated; FAC 62-761
Florida Registration	Registered
Status	In-Service
Tank Construction	
- Type and Material	Fiberglass; additional required
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Spill containment; additional required
Piping Construction	
- Type and Material	Underground fiberglass; additional required
- Cathodic Protection	None; not required
- Leak Prevention	None; required
Leak Detection	
- Tank	Groundwater monitoring; manual gauging; SPCC
- Piping	Groundwater monitoring; SPCC
- Site	Groundwater monitoring; SPCC
Integrity Testing	August 1996

6.86.3 Specific Tank Information

Tank ID V4022B - UST	
Year of Installation	1983
Size	10,000-gallons
Contents	Unleaded Gasoline
Throughput	111,075 gal/yr
Regulated - Federal	Regulated; 40 CFR 112; 40 CFR 280
Regulated - Florida	Regulated; FAC 62-761
Florida Registration	Registered
Status	In-Service
Tank Construction	
- Type and Material	Fiberglass; additional required
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Spill containment; additional required
Piping Construction	
- Type and Material	Underground fiberglass; additional required
- Cathodic Protection	None; not required
- Leak Prevention	None; required
Leak Detection	
- Tank	Groundwater monitoring; manual gauging; SPCC
- Piping	Groundwater monitoring; SPCC
- Site	Groundwater monitoring; SPCC
Integrity Testing	August 1996

6.86.4 Specific Tank Information

Tank ID V4022C - UST	
Year of Installation	1983
Size	10,000-gallons
Contents	Unleaded Gasoline
Throughput	109,250 gal/yr
Regulated - Federal	Regulated; 40 CFR 112; 40 CFR 280
Regulated - Florida	Regulated; FAC 62-761
Florida Registration	Registered
Status	In-Service
Tank Construction	
- Type and Material	Fiberglass; additional required
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Spill containment; additional required
Piping Construction	
- Type and Material	Underground fiberglass
- Cathodic Protection	None; not required
- Leak Prevention	None; required
Leak Detection	
- Tank	Groundwater monitoring; manual gauging; SPCC
- Piping	Groundwater monitoring; SPCC
- Site	Groundwater monitoring; SPCC
Integrity Testing	August 1996

6.86.5 Specific Tank Information

Tank ID V4022D - UST	
Year of Installation	1983
Size	6000-gallons
Contents	Vehicular Diesel
Throughput	12,300 gal/yr
Regulated - Federal	Regulated; 40 CFR 112; 40 CFR 280
Regulated - Florida	Regulated; FAC 62-761
Florida Registration	Registered
Status	In-Service
Tank Construction	
- Type and Material	Fiberglass; additional required
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Spill containment; additional required
Piping Construction	
- Type and Material	Underground fiberglass; additional required
- Cathodic Protection	None; not required
- Leak Prevention	None; required
Leak Detection	
- Tank	Groundwater monitoring; manual gauging; SPCC
- Piping	Groundwater monitoring; SPCC
- Site	Groundwater monitoring; SPCC
Integrity Testing	August 1996

6.86.6 Specific Tank Information

Tank ID V4022E - UST	
Year of Installation	Data not available
Size	1,000-gallons
Contents	Vehicular fuel
Throughput	0 gal/yr
Regulated - Federal	Regulated; 40 CFR 112; 40 CFR 280
Regulated - Florida	Regulated; FAC 62-761
Florida Registration	None; registration required
Status	Out-of-service (abandoned)
Tank Construction	
- Type and Material	Data not available
- Cathodic Protection	Data not available; required
- Spill/Overfill Prevention	Data not available; required
Piping Construction	
- Type and Material	Data not available
- Cathodic Protection	Data not available; required
- Leak Prevention	Data not available; required
Leak Detection	
- Tank	Data not available; required
- Piping	Data not available; required
- Site	Data not available; required
Integrity Testing	Data not available; required

6.86.7 Specific Tank Information

Tank ID V4022F - UST	
Year of Installation	Data not available
Size	1,000-gallons
Contents	Vehicular fuel
Throughput	0 gal/yr
Regulated - Federal	Regulated; 40 CFR 112; 40 CFR 280
Regulated - Florida	Regulated; FAC 62-761
Florida Registration	None; registration required
Status	Out -of-service (Abandoned)
Tank Construction	
- Type and Material	Data not available
- Cathodic Protection	Data not available; required
- Spill/Overfill Prevention	Data not available; required
Piping Construction	
- Type and Material	Data not available
- Cathodic Protection	Data not available; required
- Leak Prevention	Data not available; required
Leak Detection	
- Tank	Data not available; required
- Piping	Data not available; required
- Site	Data not available; required
Integrity Testing	Data not available; required

6.86.8 Specific Tank Information

Tank ID V4022G - UST	
Year of Installation	Data not available
Size	1,000-gallons
Contents	Vehicular fuel
Regulated - Federal	Regulated; 40 CFR 112; 40 CFR 280
Regulated- Florida	Regulated; FAC 62-761
Florida Registration	None; registration required
Status	Out-of-service (Abandoned)
Tank Construction	
- Type and Material	Data not available
- Cathodic Protection	Data not available
- Spill/Overfill Prevention	Data not available
Piping Construction	
- Type and Material	Data not available
- Cathodic Protection	Data not available
- Leak Prevention	Data not available
Leak Detection	
- Tank	Data not available
- Piping	Data not available
- Site	Data not available
Integrity Testing	Data not available

6.86.9 Regulatory Compliance Requirements

Tanks V4022A, B, C, and D

These tanks are scheduled for removal and replacement with vaulted tanks under Navy contract no. N62467-96-C-0849 (already funded).

Overfill protection is required for these tanks by December 31, 1998, if not removed. Estimated cost per tank $1,000.00.

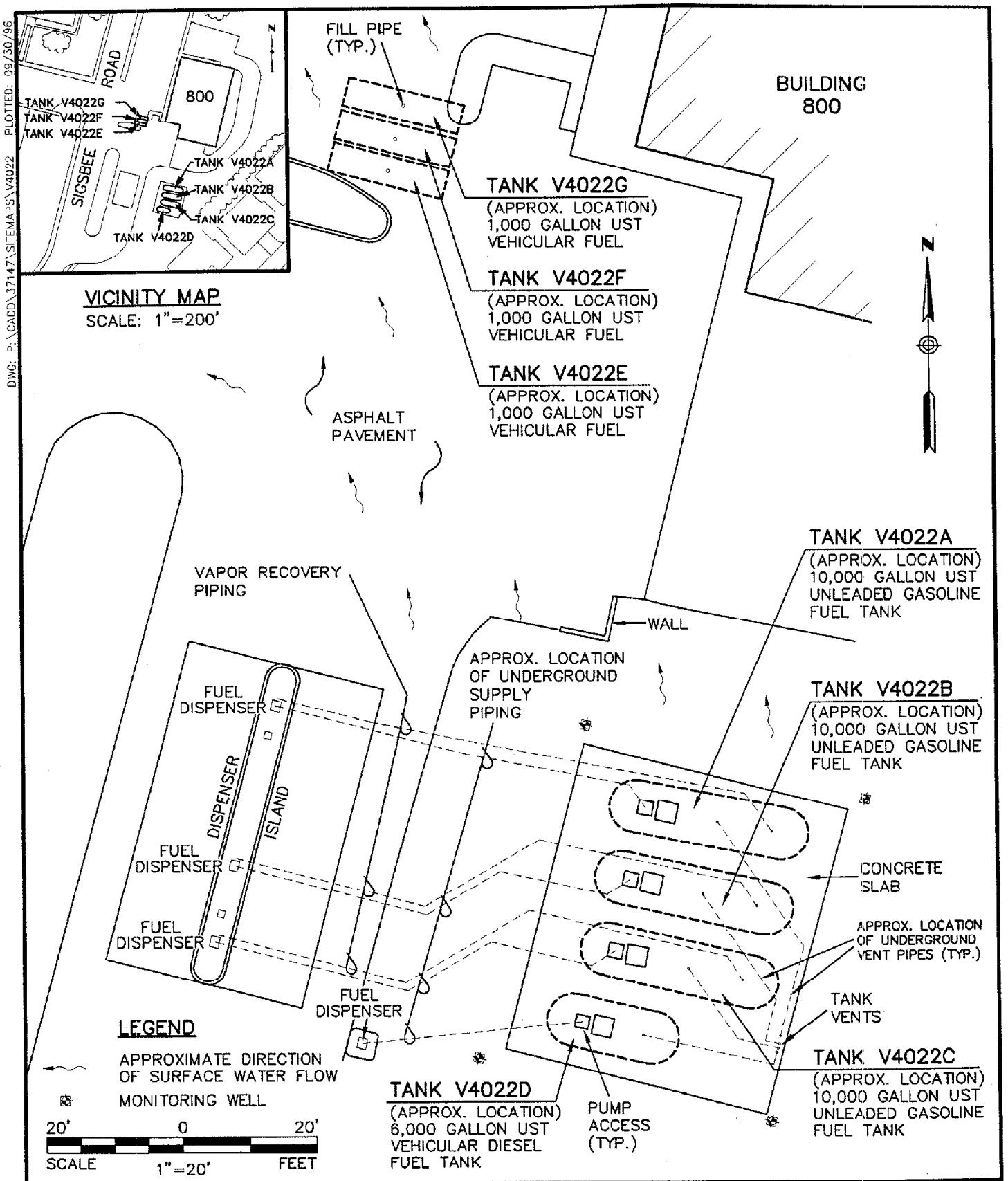
Provide inline leak detection for existing underground piping by December 31, 2000, if not removed. Estimated cost $3,000.00.

Secondary containment for tank and piping is required by December 31, 2009, if not removed. Estimated cost per tank $12,000.00. Estimated cost for piping $8,000.00.

Provide dispenser liners by December 31, 2000 if not removed. Estimated cost $2,500.00.

Tanks V4022E, F, and G

These tanks are scheduled for removal in FY96.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.86

SITE MAP OF TANKS V4022A THRU G
SIGSBEE PARK
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.87 Sigsbee Park Naval Exchange - Building V4111 (Tanks V4111A, V4111B and V4111C)

6.87.1 General Information

Building V4111, located on Sigsbee Road, houses the Navy Exchange and Commissary. There are two USTs, V4111A and V4111B, and one AST, V4111C, found on the south side of this building.

6.87.2 Specific Tank Information

Tank V4111A is a 550-gallon underground diesel fuel tank used to supply diesel fuel to an emergency generator day tank located on an elevated slab at the rear of the commissary. This tank has been equipped with fill level gauge and leak detection.

Tank ID V4111A - UST	
Year of Installation	1990
Size	550-gallons
Contents	Emergency Generator Diesel
Throughput	114 gal/yr
Regulated - Federal	Regulated; 40 CFR 112; 40 CFR 280
Regulated - Florida	Regulated; FAC 62-761
Florida Registration	Registered
Status	In-Service
Tank Construction	
- Type and Material	Double-walled fiberglass
- Cathodic Protection	None; N/A
- Spill/Overfill Prevention	Automatic shutoff overfill protection; spill containment
Piping Construction	
- Type and Material	Underground costed steel with fiberglass outer pipe
- Cathodic Protection	None; N/A
- Leak Prevention	Secondary containment
Leak Detection	
- Tank	Manual gauging; leak detection; level gauge; SPCC
- Piping	SPCC
- Site	SPCC
Integrity Testing	Data not available; not required

6.87.3 Specific Tank Information

The transformer fluid tank V4111B is located northwest of tank V4111A. This 200-gallon UST receives excess fluid from a transformer room sump located within building V4111. Fluid, mainly clear stormwater infiltration, observed in tank V4111B revealed no sign of oil sheen representative of releases of transformer fluids. No secondary containment exists for this tank.

Tank ID V4111B - UST	
Year of Installation	1990
Size	200-gallons
Contents	Unknown (serves as Emergency Spill Reservoir for Transformer Fluid)
Throughput	Data not available
Regulated - Federal	Unregulated
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Concrete None; not required None; not required
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Underground fiberglass None; not required None; not required
Leak Detection - Tank - Piping - Site	 None; not required None; not required None; not required
Integrity Testing	Data not available; not required

6.87.4 Specific Tank Information

Tank V4111C is the 25-gallon aboveground diesel fuel day tank with a level gauge. Diesel fuel received from tank V4111A is transferred from this tank to the site's emergency generator for use during electrical outages. No secondary containment exists for tank V4111C.

Tank ID V4111C - AST	
Year of Installation	Data not available
Size	25-gallons
Contents	Emergency Generator Diesel
Throughput	114 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Single-walled painted steel
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	None; required
Piping Construction	
- Type and Material	Aboveground unpainted steel
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	None; required
- Piping	None; required
- Site	None; required
Integrity Testing	Data not available; not required

6.87.5 Regulatory Compliance Requirements

Tank V4111A

Tank and piping are in compliance.

Tank V4111B

Tank V4111B is a liquid trap and is therefore exempt from state and federal regulation.

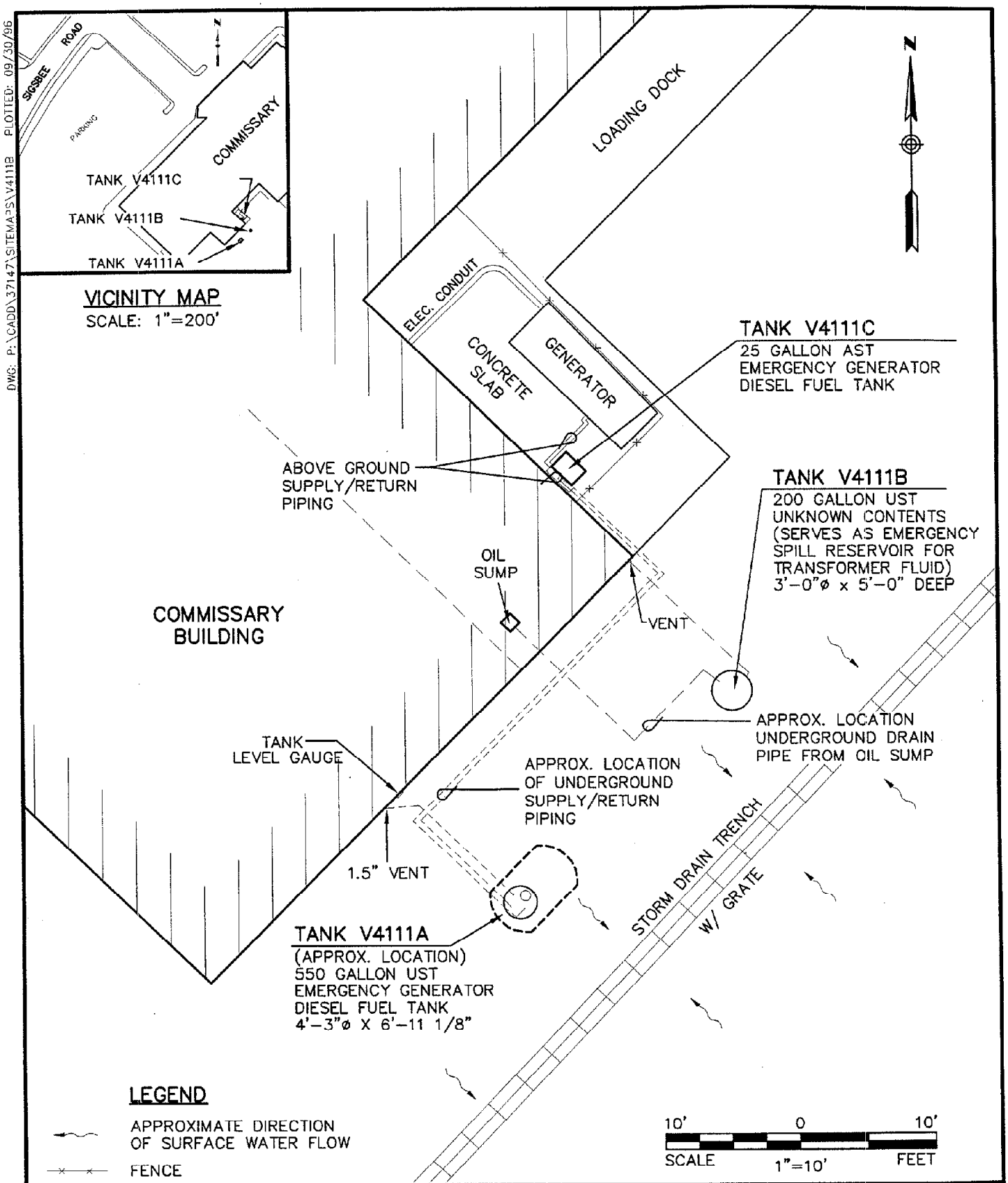
Recommend tank integrity be checked base on field observation of the content as described in 6.87.3. Estimated cost $1,000.00.

Tank V4111C

Provide secondary containment by January 1, 1998. Estimated cost $1,000.00.

Inspect tank, piping and site monthly and incorporate into SPCC Plan by January 1, 1998.

Recommend painting piping to provide corrosion protection. Estimated cost $100.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.87

SITE MAP OF TANKS V4111A, V4111B AND V4111C
SIGSBEE PARK
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.88 Navy Lodge - Building V4114 (Tank V4114)

6.88.1 General Information

The Navy Lodge building V4114 is located on Arthur Sawyer Road and southwest of the Sigsbee Park Marina. At this site there is a 550-gallon AST within an 8" deep concrete secondary containment found on the west side of building V4114. Diesel fuel from tank V4114 is used to provide fuel for the lodge's hot water heaters.

6.88.2 Specific Tank Information

Tank ID V4114 - AST	
Year of Installation	1990
Size	550-gallons
Contents	Heating Fuel
Throughput	1,392 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	Registered
Status	In-Service
Tank Construction	
- Type and Material	Single-walled coated steel on supports
- Cathodic Protection	None; N/A
- Spill/Overfill Prevention	Secondary containment (insufficient size); additional required
Piping Construction	
- Type and Material	Aboveground unpainted steel and underground steel
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	None; required
- Piping	None; required
- Site	None; required
Integrity Testing	Data not available; not required

6.88.3 Regulatory Compliance Requirements

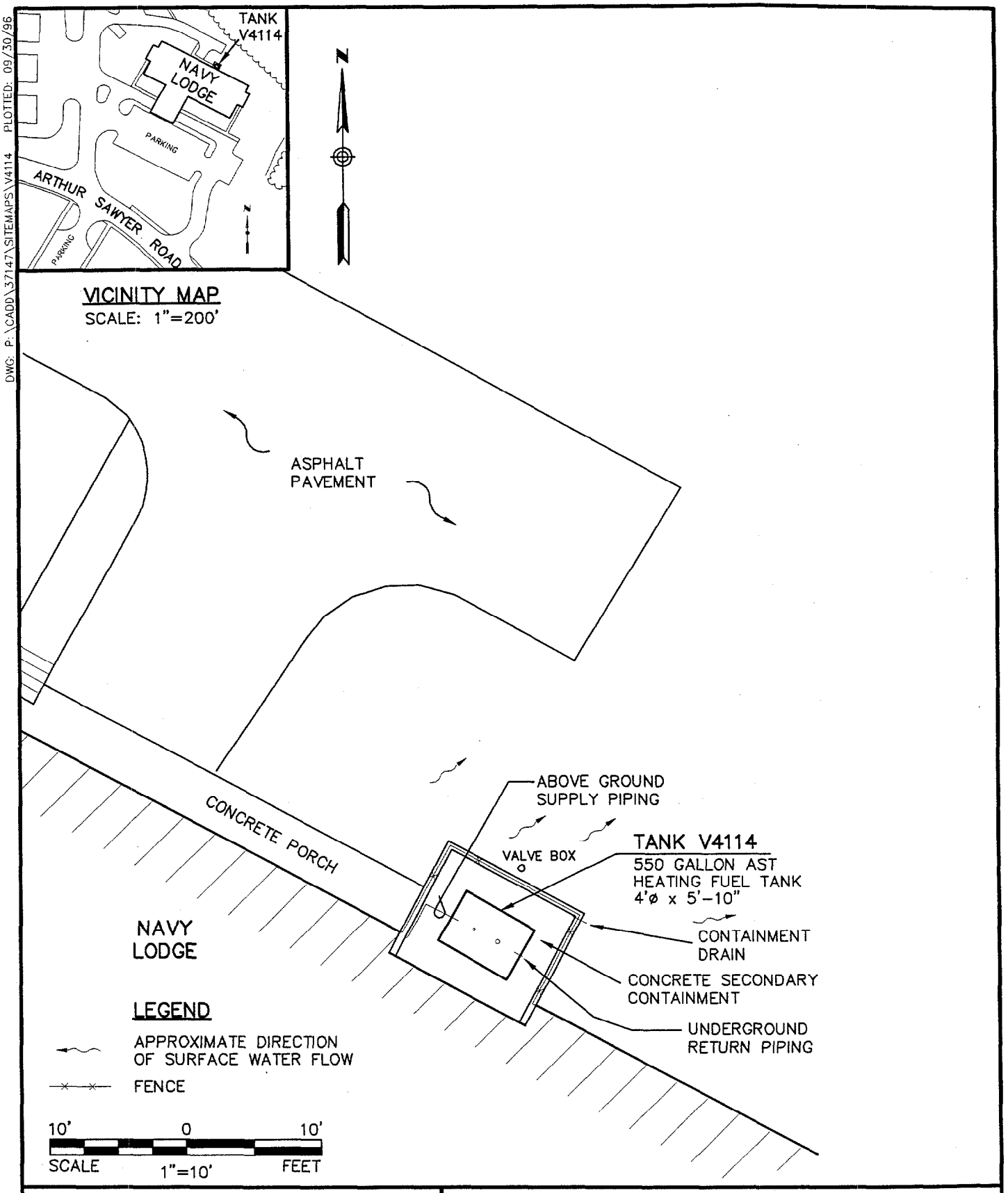
Tank V4114

Provide additional secondary containment volume and impervious liner by January 1, 1998. Estimated cost $1,500.00.

Inspect tank, piping and site monthly and incorporate into SPCC Plan by January 1, 1998.

Recommend painting piping to provide corrosion protection. Estimated cost $100.00.

Recommend installation of an anti-syphon valve on all aboveground piping routed outside secondary containment. Estimated cost $500.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.88

SITE MAP OF TANK V4114
SIGSBEE PARK
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

SADDLEBUNCH KEY

6.89 Saddle Bunch Transmission Site - Building 1561 (Tanks J1561 and J1561A)

6.89.1 General Information

The NCTAMS LANT transmitter site is approximately 15 miles northeast of Key West on Saddlebunch Key. Building J-1561 is located at the center of this complex and utilizes two ASTs as fuel sources for its emergency generators, J1561 and J1561A.

6.89.2 Specific Tank Information

Tank J1561 is a 10,000 AST inside a 4' deep valved concrete secondary containment and is located north of building J1561. Diesel fuel from this tank supplies fuel to an emergency generator found inside building J1561.

Tank ID J1561- AST	
Year of Installation	1994
Size	10,000-gallons
Contents	Emergency Generator Diesel
Throughput	5,325 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Regulated; FAC 62-762
Florida Registration	None; registration required
Status	In-Service
Tank Construction	
- Type and Material	Single-walled painted steel on supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Secondary containment; level gauge; manual gauging
Piping Construction	
- Type and Material	Aboveground painted steel (in contact with soil)
- Cathodic Protection	None; required
- Leak Prevention	None; required
Leak Detection	
- Tank	None; required
- Piping	None; required
- Site	None; required
Integrity Testing	Data not available; not required

6.89.3 Specific Tank Information

J1561A is a 100-gallon diesel fuel tank mounted in the base of an emergency generator inside building J1561. Diesel fuel received from tank J1561 feeds this tank that in turn supplies the facility's emergency generator with fuel. Use of the emergency generator is limited to testing and power outages. Tank J1561A has no secondary containment.

Tank ID J1561A - AST	
Year of Installation	1979
Size	100-gallons
Contents	Emergency Generator Diesel
Throughput	5,325 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Single-walled painted steel
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Contained within building
Piping Construction	
- Type and Material	N/A
- Cathodic Protection	N/A
- Leak Prevention	N/A
Leak Detection	
- Tank	None; required
- Piping	None; N/A
- Site	None; required
Integrity Testing	Data not available; not required

6.89.4 Regulatory Compliance Requirements

Tank J1561

Install pipe support to raise piping off ground by January 1, 1998. Estimated cost $500.00.

If pipe support option is not selected, do the following:
Provide double-walled pipe with interstitial monitoring or monitoring wells by January 1, 1998.
If monitoring wells are installed to satisfy the release detection requirement, provide either double-wall fiberglass pipe or cathodically protected steel pipe by December 31, 1999.
Estimated cost (double-walled piping with monitoring) $2,000.00.
Estimated cost (monitoring wells) $900.00.
Estimated cost (cathodic protected piping) $750.00.

Provide lock for secondary containment by December 31, 1999. Estimated cost $50.00.

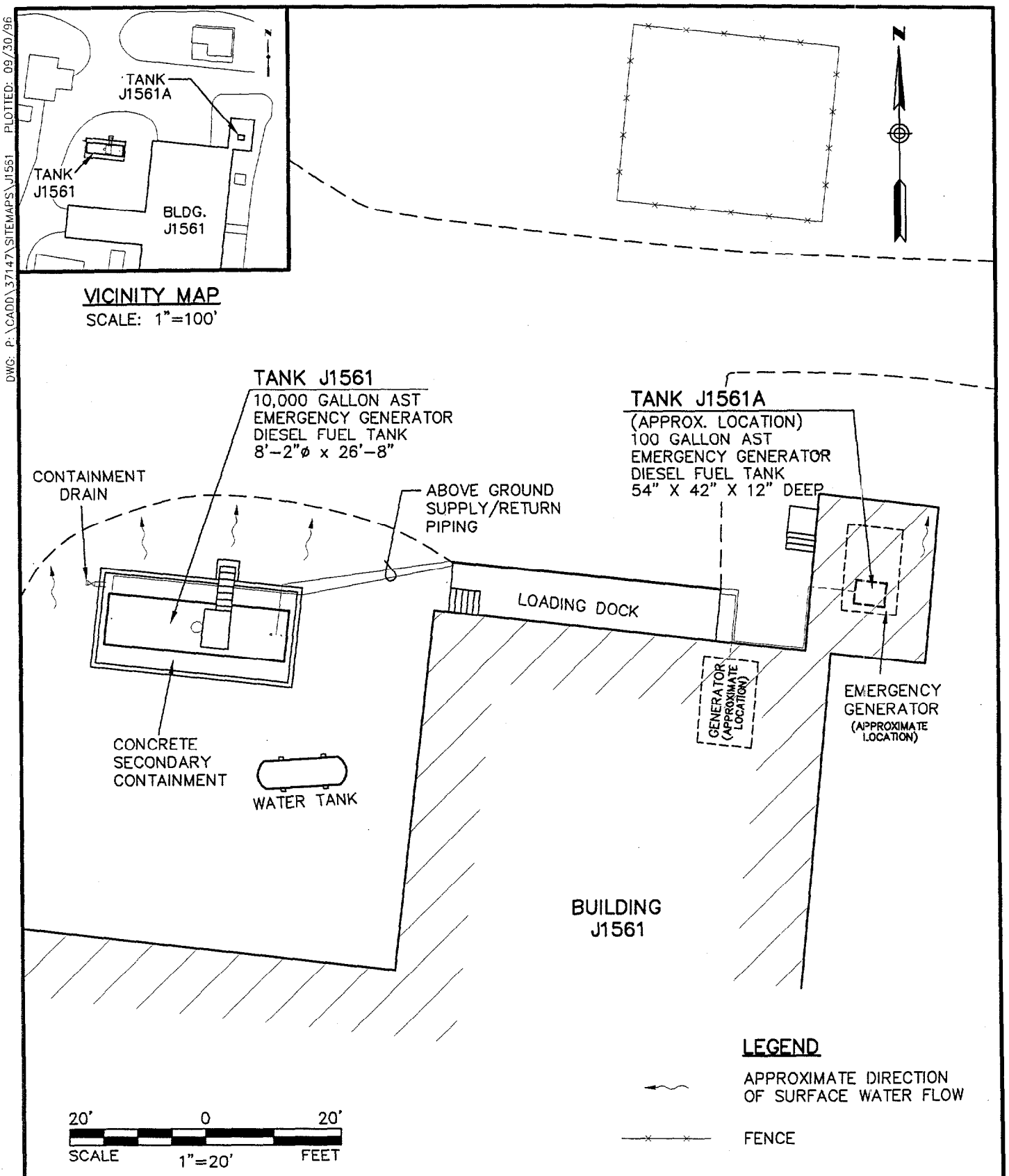
Install anti-syphon valve on all aboveground piping routed outside secondary containment by December 31, 1999. Estimated cost $500.00.

Inspect tank, piping and site monthly and incorporate into SPCC Plan by January 1, 1998.

Register tank with FDEP

Tank J1561A

Inspect tank and site monthly and incorporate into SPCC Plan by January 1, 1998.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.89

SITE MAP OF TANKS J1561 & J1561A
SADDLEBUNCH KEY
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

NAVAL REGIONAL MEDICAL CENTER

6.90 Medical Clinic - Building L-3 (Tanks L3A)

6.90.1 General Information

Tank L3A is a 3,000-gallon AST located north of building L3 on Wall Road of the Naval Regional Medical Clinic (NRMC). The NRMC is bounded to the east by the Atlantic Ocean. Building L3 is currently abandoned. Occupying a 3' deep valved concrete secondary containment, Tank L3A provides diesel fuel for the facility's emergency generators.

6.90.2 Specific Tank Information

Tank ID L3A- AST	
Year of Installation	1995
Size	3000-gallons
Contents	Emergency Generator Diesel
Throughput	3,704 gal/yr
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Regulated; FAC 62-762
Florida Registration	Registered
Status	In-Service
Tank Construction	
- Type and Material	Single-walled painted steel on supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	Secondary containment; manual gauging; additional required
Piping Construction	
- Type and Material	Aboveground unpainted steel
- Cathodic Protection	None; not required
- Leak Prevention	None; required
Leak Detection	
- Tank	None; required
- Piping	None; required
- Site	None; required
Integrity Testing	Data not available; not required

6.90.3 Regulatory Compliance Requirements

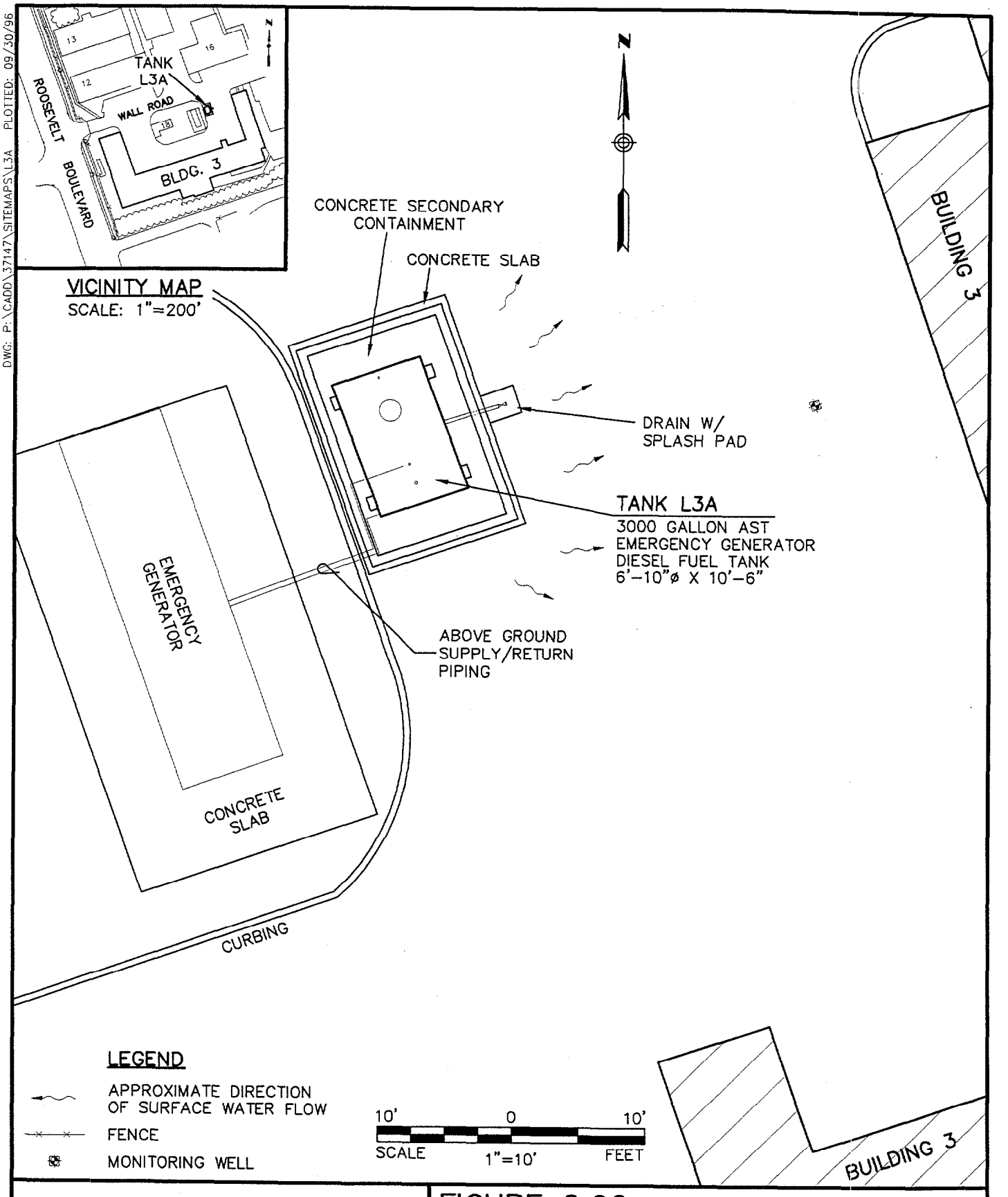
Tank L3A

Provide lock for secondary containment by December 31, 1999. Estimated cost $50.00.

Inspect tank, piping and site monthly and incorporate into SPCC Plan by January 1, 1998.

Install anti-syphon valve on all aboveground piping routed outside secondary containment by December 31, 1999. Estimated cost $500.00.

Recommend painting piping to provide corrosion protection. Estimated cost $100.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.90

SITE MAP OF TANK L3A
NAVAL REGIONAL MEDICAL CLINIC
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147

OCTOBER, 1996

6.91 Medical Clinic - Building L-1 (Tanks L19)

6.91.1 General Information

Building L1 is the main medical complex at the NRMC and provides medical services for active and retired military personnel. Tank L19 is on the south side of building L1 near the rear parking area. The NRMC is bounded to the east by the Atlantic Ocean. This 300-gallon AST contains diesel fuel used in the operation of an emergency generator found in a small building behind building L1. No secondary containment exists for tank L19.

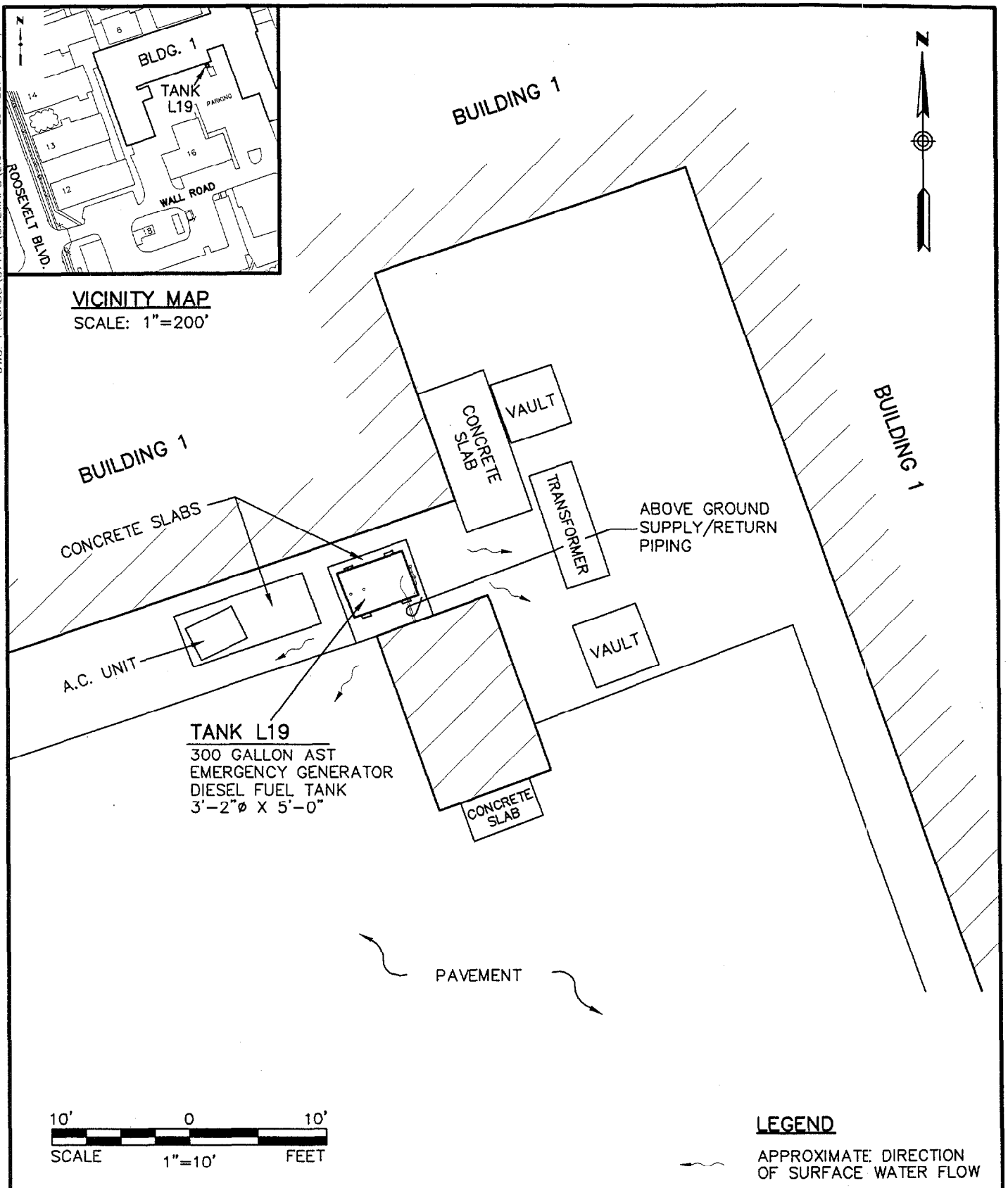
6.91.2 Specific Tank Information

Tank ID L19- AST	
Year of Installation	Data not available
Size	300-gallons
Contents	Emergency Generator Diesel
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Single-walled unpainted steel on supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	None; required
Piping Construction	
- Type and Material	Aboveground unpainted steel
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	None; required
- Piping	None; required
- Site	None; required
Integrity Testing	Data not available; not required

6.91.3 Regulatory Compliance Requirements

Tank L19

Tank L19 is scheduled for removal FY 96.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.91

SITE MAP OF TANK L19
NAVAL REGIONAL MEDICAL CLINIC
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

6.92 Medical Clinic - Building 47 (Tanks L47)

6.92.1 General Information

Tank L47 is found on the northwest side of Building L44 at the NRMC. Building L47 is abutted by a saltwater canal leading to the Atlantic Ocean. Tank L47 is a 300-gallon diesel fuel tank used to provide fuel for the Clinic's hot water heaters. Tank L47 has no secondary containment.

6.92.2 Specific Tank Information

Tank ID L47- AST	
Year of Installation	Data not available
Size	300-gallons
Contents	Heating Fuel
Throughput	Data not available
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	In-Service
Tank Construction	
- Type and Material	Single-walled unpainted steel on supports
- Cathodic Protection	None; not required
- Spill/Overfill Prevention	None; required
Piping Construction	
- Type and Material	Aboveground unpainted steel
- Cathodic Protection	None; not required
- Leak Prevention	None; not required
Leak Detection	
- Tank	None; required
- Piping	None; required
- Site	None; required
Integrity Testing	Data not available; required

6.92.3 Regulatory Compliance Requirements

Tank L47

Provide secondary containment with locking valve by January 1, 1998. Estimated cost

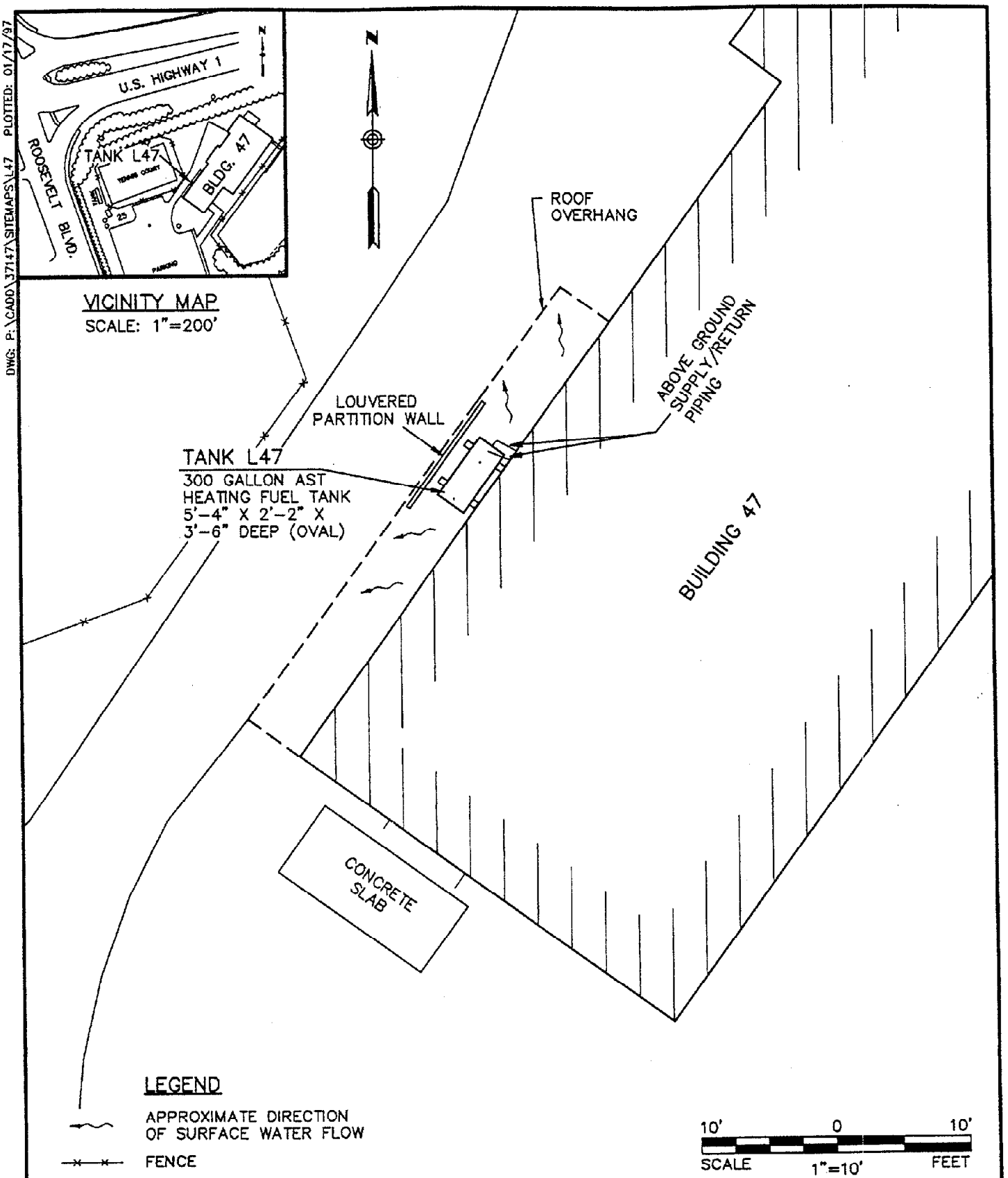
$1500.00.

Inspect tank, piping and site monthly and incorporate into SPCC Plan by January 1, 1998.

Recommend installation of an anti-syphon valve on all aboveground piping routed outside secondary containment. Estimated cost $500.00.

Recommend painting piping to provide corrosion protection. Estimated cost $100.00.

Recommend painting tank to provide corrosion protection. Estimated cost $400.00.



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.92
SITE MAP OF TANK L47
NAVAL REGIONAL MEDICAL CLINIC
NAVAL AIR STATION – KEY WEST, FLORIDA
RUST Project No. 37147 OCTOBER, 1996

HAWK MISSILE SITE

6.93 Geiger Key Hawk Missile Site (Tank G-01 and G-02)

6.93.1 General Information

The Geiger Key Hawk Missile Site is located approximately 4,000-feet southeast of the northeast end of Runway 7-25 on Boca Chica Road. The site is bordered on the south and east by the Atlantic Ocean and on the north by Boca Chica Road and a saltwater flat. No activities are currently conducted at this site. Two ASTs that formerly contained diesel fuel remain on site.

6.93.2 Specific Tank Information

Tank G-01 is a 2,000-gallon tank that is located on the south side of the site's Generator Building. The tank has been closed by removing a section of the tank's bottom and cleaning of the tank. Diesel fuel for generator consumption was stored in this tank during its operation. Tank G-01 has a 2'-9" deep concrete secondary containment.

Tank ID G-01- AST	
Year of Installation	Data not available
Size	2000-gallons
Contents	Emergency Generator Diesel
Throughput	N/A
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Regulated; FAC 62-761
Florida Registration	Registered
Status	Closed-in-place
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Single-walled unpainted steel on supports None; N/A Concrete secondary containment
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Underground None; N/A None; N/A

Tank ID G-01- AST	
Leak Detection - Tank - Piping - Site	 None; N/A None; N/A None; N/A
Integrity Testing	Data not available; N/A

6.93.3 Specific Tank Information

Tank G-02 a 300-gallon AST is found on the east side of the Ready Building. This tank has been closed by removing a section of the tank's bottom and cleaning of the tank. Diesel fuel was formerly stored in this tank for use in a generator. A 3' deep secondary containment is present at this site.

Tank ID G-02- AST	
Year of Installation	Data not available
Size	300-gallons
Contents	Emergency Generator Diesel
Throughput	N/A
Regulated - Federal	Regulated; 40 CFR 112
Regulated - Florida	Unregulated
Florida Registration	None; not required
Status	Closed-in-place
Tank Construction - Type and Material - Cathodic Protection - Spill/Overfill Prevention	 Single-walled unpainted steel on supports None; N/A None; N/A
Piping Construction - Type and Material - Cathodic Protection - Leak Prevention	 Data not available None; N/A None; N/A

Tank ID G-02- AST	
Leak Detection	
- Tank	None; N/A
- Piping	None; N/A
- Site	None; N/A
Integrity Testing	Data not available; N/A

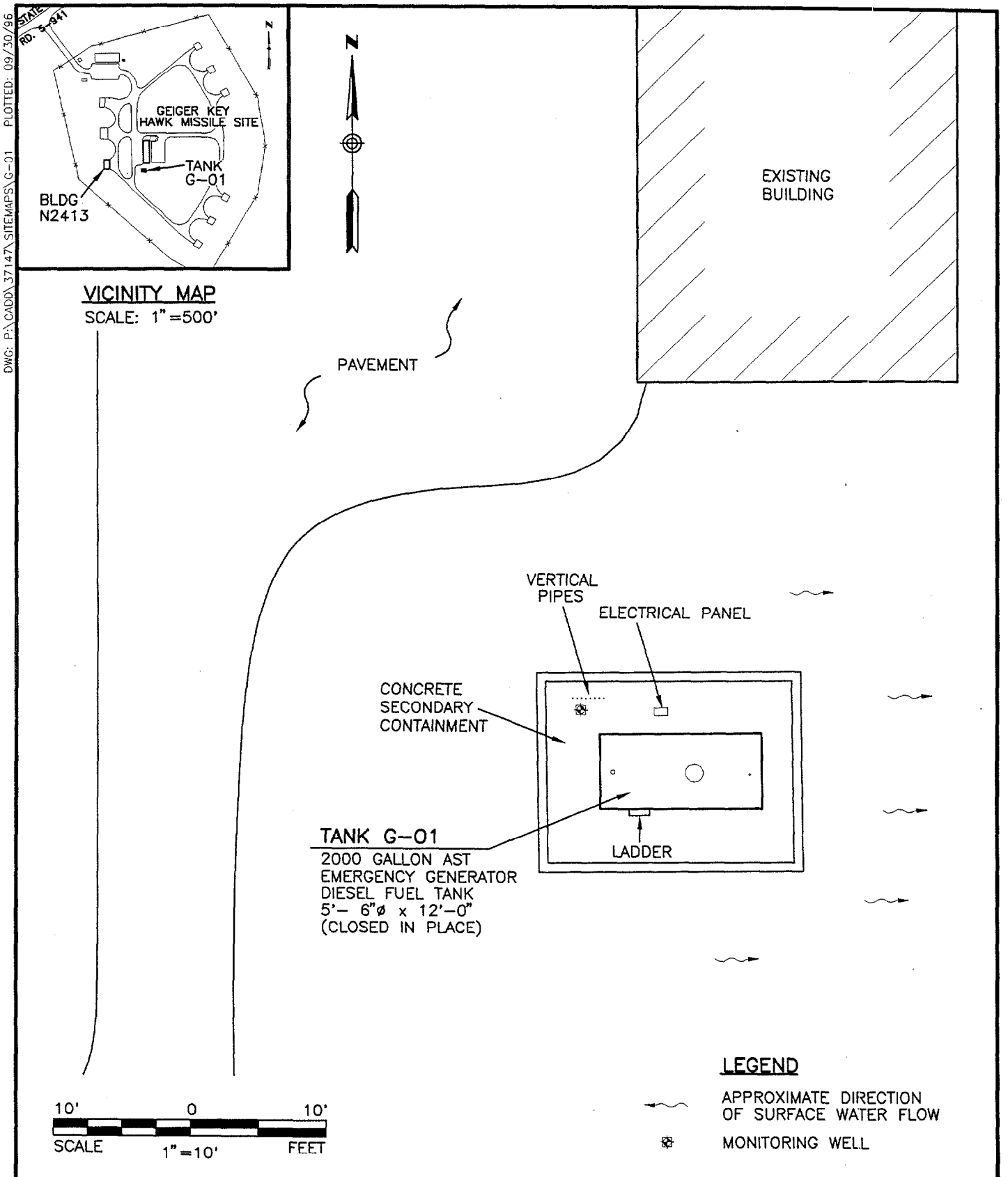
6.93.4 Regulatory Compliance Requirements

Tank G-01

Tank G-01 has been closed-in-place. Provide closure report for tank and piping. Estimated cost $1,000.00.

Tank G-02

Tank has been closed-in-place.



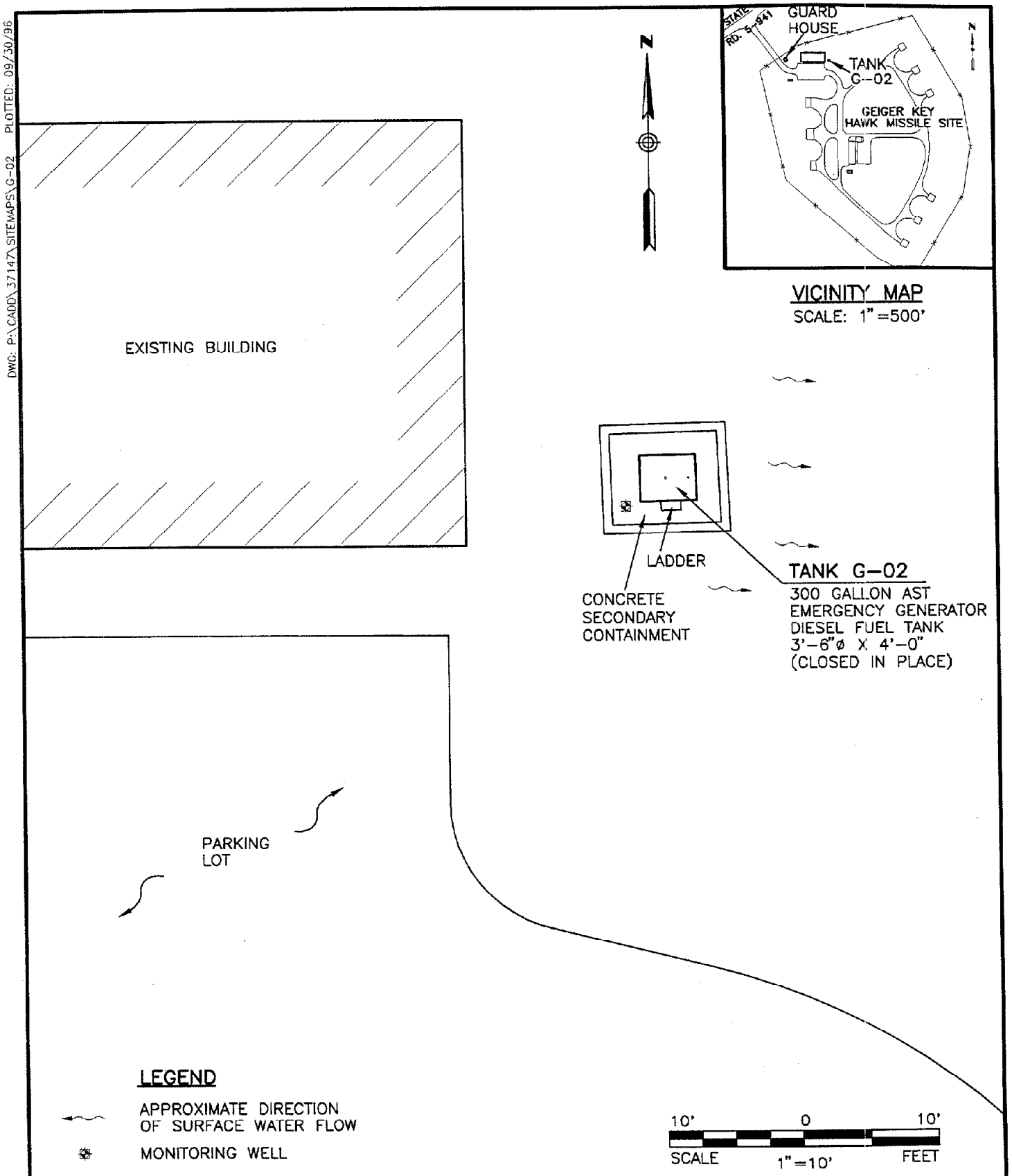
RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.93

SITE MAP OF TANK G-01
GEIGER KEY - HAWK MISSILE SITE
NAVAL AIR STATION - KEY WEST, FLORIDA

RUST Project No. 37147

OCTOBER, 1996



RUST ENVIRONMENT & INFRASTRUCTURE

FIGURE 6.93A

SITE MAP OF TANK G-02
GEIGER KEY – HAWK MISSILE SITE
NAVAL AIR STATION – KEY WEST, FLORIDA

RUST Project No. 37147 OCTOBER, 1996

7.0 TANK PROGRAM RECOMMENDATIONS

Following the regulatory reviews and compliance measure recommendations for each storage tank system identified at NAS Key West, an action schedule for implementation of these measures must be established. This section of the TMP provides the action schedule for proper management of the NAS storage tank systems. Program management recommendations are also provided in this section in addition to the required/recommended actions outlined in Section 6.0 and the action schedule contained in this Plan.

7.1 Tank Systems Action Schedule

The action schedule for NAS Key West was developed by sorting all of the storage tank systems by their regulatory requirement deadlines or milestones. These milestones are discussed in Section 6.0 and can be found in the applicable regulations provided in the appendices of this Plan. The following milestones have been identified for NAS Key West:

- January 1, 1998
- December 31, 1998
- December 31, 1999
- December 31, 2000
- December 31, 2009

The January 1, 1998 and December 31, 2000 milestones are not directly referenced in the applicable regulations, however. The January 1, 1998 milestone is a Plan guideline to satisfy Federal Regulation 40 CFR 112 , oil pollution prevention requirements. This guideline milestone was established to complete the required measures within six months after implementation of the Plan. An adjustment to this guideline milestone may be necessary depending on final implementation of this Plan and to allow proper planning and budgeting for the required actions. Per an agreement with FDEP and the Navy, all construction related upgrades to UST systems may be delayed until the year 2000, thus the December 31, 2000 milestone.

Each tank system was sorted by its regulatory milestone. Those tank systems needing required or recommended actions prior to January 1, 1998 were placed in Table 7.1, Action Schedule for Regulatory Requirements and TMP Recommendations, January 1, 1998 Milestone. Similarly, the remaining tank systems were divided accordingly; creating Tables 7.2 thru 7.5 for the other milestones. Table 7.6

TABLE 7.1
ACTION SCHEDULE FOR REGULATORY REQUIREMENTS AND TMP RECOMMENDATIONS
JANUARY 1, 1998 MILESTONE

Tank Number	Florida Regulated	Overall Tank Score	Env. Risk Score	Required / Recommended Action	Remarks and References
A986	No	2080	400	Exempt	Tank system needs further evaluation
A443	No	1390	90	Exempt	Tank system needs further evaluation
A419-A	Yes	1120	75	Closure and assessment	Navy contract
A419-B	Yes	1120	75	Closure and assessment	Navy contract
A419-C	Yes	1120	75	Closure and assessment	Navy contract
290-B	Yes	990	60	Replace UG piping with AG, Provide containment lock, Install anti-syphon valve, Relocate auto level gauge	1999
A418	Yes	960	60	Closure and assessment	Upgrades required if not closed
A328	Yes	620	80	Replace UG piping with AG, Provide containment lock, Install anti-syphon valve	1999
USDA1	Yes	396	280	Incorporate into USDA's SPCC	1998, 2009
USDA2	Yes	376	200	Incorporate into USDA's SPCC	1998, 2009
USDA3	Yes	376	200	Incorporate into USDA's SPCC	1998, 2009
A4165	Yes	324	60	Provide containment drain valve and lock, Incorporate into SPCC, Perform manual tank gauging, Install anti-syphon valve	1999
1279	Yes	314	20	Incorporate into SPCC	
149-1	Yes	250	60	Closure and assessment, Provide release detection for piping if not closed	Scheduled for removal '96; 1999
D1292B	Yes	248	160	Additional secondary containment required and provide impervious liner, Provide containment lock, Install anti-syphon valve, Install level gauge	1999
1279B	Yes	220	80	Replace UG piping with AG, Paint tank, Provide containment lock, Install anti-syphon valve	1999
290	Yes	220	40	Replace UG piping with AG, Provide containment lock, Install anti-syphon valve, Paint tank	1999
149-2	Yes	200	40	Closure and assessment, Provide release detection for piping if not closed	Scheduled for removal '96; 1999

TABLE 7.1
ACTION SCHEDULE FOR REGULATORY REQUIREMENTS AND TMP RECOMMENDATIONS
JANUARY 1, 1998 MILESTONE

Tank Number	Florida Regulated	Overall Tank Score	Env. Risk Score	Required / Recommended Action	Remarks and References
A4115	Yes	196	45	Relocate tank (install as new) and replace UG piping with AG, Provide impervious liner for secondary containment if not relocated, Provide containment lock, Install anti-syphon valve	1999
A902-B	Yes	150	40	Provide secondary containment and closure assessment, Perform manual tank gauging	1999
A925A	Yes	148	140	Install level gauge, Incorporate into SPCC, Install anti-syphon valve	1999
F02	Yes	116	100	Incorporate into SPCC, Install anti-syphon valve	1999
A4165A	Yes	105	40	Closure and assessment	Upgrades required if not closed
4163	Yes	92	120	Install impervious liner for secondary containment, Install level gauge, Install anti-syphon valve, Provide containment lock	1999
J1561	Yes	76	140	Provide pipe supports if piping not to be upgraded, Incorporate into SPCC, Provide containment lock, Install anti-syphon valve	1999
L3A	Yes	58	80	Incorporate into SPCC, Provide containment lock, Install anti-syphon valve	1999
F01	Yes	56	80	Incorporate into SPCC, Provide containment lock, Install anti-syphon valve	1999
F01A	Yes	26	20	Incorporate into SPCC	
F01B	Yes	26	20	Incorporate into SPCC	
F01C	Yes	26	20	Incorporate into SPCC	
F01D	Yes	12	20	Incorporate into SPCC	
A924A	Yes	0	0	Install level gauge, Incorporate into SPCC	
A937	No	402	40	Provide impervious liner for secondary containment	
A419-D	No	400	30	Provide secondary containment, Incorporate into SPCC	
A419-E	No	400	30	Provide secondary containment, Incorporate into SPCC	
A447	No	400	30	Incorporate into SPCC	
L47	No	390	40	Provide secondary containment, Incorporate into SPCC	

TABLE 7.1
ACTION SCHEDULE FOR REGULATORY REQUIREMENTS AND TMP RECOMMENDATIONS
JANUARY 1, 1998 MILESTONE

Tank Number	Florida Regulated	Overall Tank Score	Env. Risk Score	Required / Recommended Action	Remarks and References
290-D	No	384	20	Incorporate into SPCC	
A4010	No	362	40	Install anti-syphon valve, Incorporate into SPCC	
A4053A	No	362	40	Incorporate into SPCC	
A995	No	362	40	Incorporate into SPCC	
A229-A	No	362	30	Provide secondary containment	
A229-B	No	362	30	Provide secondary containment	
A1004A	No	346	20	Incorporate into SPCC	
A1004B	No	346	20	Incorporate into SPCC	
V4111C	No	346	20	Provide secondary containment, Incorporate into SPCC	
38	No	324	40	Provide secondary containment, Incorporate into SPCC	
C83	No	324	40	Provide secondary containment	
C59	No	316	40	Closure and assessment	Upgrades required if not closed
V1552C	No	312	20	Incorporate into SPCC if not removed	Removal recommended
290-E	No	308	20	Incorporate into SPCC	
A639	No	280	40	Remove or provide secondary containment	Navy contract
A625	No	226	40	Additional secondary containment required	
B48A	No	210	40	Incorporate into SPCC	
A634	No	208	40	Remove or provide secondary containment	Navy contract
B48	No	180	40	Provide secondary containment, Incorporate into SPCC	
V1274A	No	172	40	Provide secondary containment, Incorporate into SPCC	
A314	No	128	30	Remove or provide secondary containment	Navy contract
J1561A	No	112	20	Incorporate into SPCC	
290-C	No	100	40	Incorporate into SPCC	
AG103A	No	94	20	Provide secondary containment, Incorporate into SPCC	
AG104A	No	94	20	Provide secondary containment, Incorporate into SPCC	
AG233A	No	94	20	Provide secondary containment, Incorporate into SPCC	
AG234A	No	94	20	Provide secondary containment, Incorporate into SPCC	
AG263A	No	94	20	Provide secondary containment, Incorporate into SPCC	

TABLE 7.1
ACTION SCHEDULE FOR REGULATORY REQUIREMENTS AND TMP RECOMMENDATIONS
JANUARY 1, 1998 MILESTONE

Tank Number	Florida Regulated	Overall Tank Score	Env. Risk Score	Required / Recommended Action	Remarks and References
AG264A	No	94	20	Provide secondary containment, Incorporate into SPCC	
AG509A	No	94	20	Provide secondary containment, Incorporate into SPCC	
AG510A	No	94	20	Provide secondary containment, Incorporate into SPCC	
AG759A	No	94	20	Provide secondary containment, Incorporate into SPCC	
AG760A	No	94	20	Provide secondary containment, Incorporate into SPCC	
AG837A	No	94	20	Provide secondary containment, Incorporate into SPCC	
AG840A	No	94	20	Provide secondary containment, Incorporate into SPCC	
KW400	No	92	40	Additional secondary containment required for piping and sump - $5000; Incorporate into SPCC	
B27	No	84	40	Provide secondary containment, Incorporate into SPCC	
B28A	No	84	40	Provide secondary containment, Incorporate into SPCC	
A225	No	76	15	Incorporate into SPCC	
B28	No	64	40	Incorporate into SPCC	
V4114	No	64	40	Additional secondary containment required and provide impervious liner, Incorporate into SPCC	
C59A	No	54	20	Closure and assessment	Upgrades required if not closed
USDA4	No	54	40	Provide secondary containment, Incorporate into USDA's SPCC	
A935R	No	46	40	Incorporate into SPCC	
V1552B	No	38	40	Incorporate into SPCC	
A244A	No	38	30	Incorporate into SPCC	
C5	No	37	20	Incorporate into SPCC or close	Currently out of service
A4082	No	36	40	Incorporate into SPCC	
A940-3	No	36	2	Provide impervious liner for secondary containment	
A940-4	No	36	2	Provide impervious liner for secondary containment	
A940-5	No	36	2	Provide impervious liner for secondary containment	
A526A	No	28	30	Incorporate into SPCC	

TABLE 7.1
ACTION SCHEDULE FOR REGULATORY REQUIREMENTS AND TMP RECOMMENDATIONS
JANUARY 1, 1998 MILESTONE

Tank Number	Florida Regulated	Overall Tank Score	Env. Risk Score	Required / Recommended Action	Remarks and References
F15	No	28	20	Provide secondary containment, Incorporate into SPCC	

TABLE 7.2
ACTION SCHEDULE FOR REGULATORY REQUIREMENTS AND TMP RECOMMENDATIONS
DECEMBER 31, 1998 MILESTONE

Tank Number	Florida Regulated	Overall Tank Score	Env. Risk Score	Required / Recommended Action	Remarks and References
V4022A	Yes	430	280	Install overfill protection for tank if not removed	Navy contract, 2000, 2009
V4022B	Yes	430	280	Install overfill protection for tank if not removed	Navy contract, 2000, 2009
V4022C	Yes	430	280	Install overfill protection for tank if not removed	Navy contract, 2000, 2009
USDA1	Yes	396	280	Install spill containment and overfill protection for tank	1997, 2009
USDA2	Yes	376	200	Install spill containment and overfill protection for tank	1997, 2009
USDA3	Yes	376	200	Install spill containment and overfill protection for tank	1997, 2009
OW-1	Yes	294	200	Install spill containment and overfill protection for tank	2000, 2009
OW-102	Yes	294	200	Install spill containment and overfill protection for tank	2000, 2009
V4022D	Yes	280	240	Install overfill protection for tank if not removed	Navy contract, 2000, 2009

TABLE 7.3
ACTION SCHEDULE FOR REGULATORY REQUIREMENTS AND TMP RECOMMENDATIONS
DECEMBER 31, 1999 MILESTONE

Tank Number	Florida Regulated	Overall Tank Score	Env. Risk Score	Required / Recommended Action	Remarks and References
A938	Yes	1070	180	Provide secondary containment and closure assessment, Provide cathodic protection, Perform internal inspection of tank, Perform piping testing and provide cathodic protection	
A944	Yes	1070	180	Provide secondary containment and closure assessment, Provide cathodic protection, Perform internal inspection of tank, Perform piping testing and provide cathodic protection	
A230	Yes	1026	45	Closure and assessment	Navy contract
A945	Yes	1012	180	Provide secondary containment and closure assessment, Provide cathodic protection, Perform internal inspection of tank, Perform piping testing and provide cathodic protection	
290-B	Yes	990	60	Upgrade piping if not replaced, Provide containment lock, Install anti-syphon valve, Relocate auto level gauge (Upgrades moved to January 1, 1998)	1997
A958	Yes	896	180	Provide secondary containment and closure assessment, Provide cathodic protection, Perform internal inspection of tank, Perform piping testing and provide cathodic protection	
A328	Yes	620	80	Provide containment lock, Install anti-syphon valve (Upgrades moved to January 1, 1998)	1997
A924	Yes	540	160	Provide leak detection and cathodic protection for UG piping	Scheduled for removal '96; 2000
A925	Yes	540	160	Provide leak detection and cathodic protection for UG piping	Scheduled for removal '96; 2000
A959	Yes	448	180	Provide leak detection and cathodic protection for UG piping	Scheduled for removal '96; 2000
A4165	Yes	324	60	Perform manual tank gauging, Install anti-syphon valve (Upgrades moved to January 1, 1998)	1997
A325-1	Yes	296	160	Install level gauge, Install anti-syphon valve, Paint piping	
A1025	Yes	274	3	Paint piping, Install anti-syphon valve, Provide containment lock	
149-1	Yes	250	60	Closure and assessment (Closure moved to January 1, 1998)	Scheduled for removal '96; 1997

TABLE 7.3
ACTION SCHEDULE FOR REGULATORY REQUIREMENTS AND TMP RECOMMENDATIONS
DECEMBER 31, 1999 MILESTONE

Tank Number	Florida Regulated	Overall Tank Score	Env. Risk Score	Required / Recommended Action	Remarks and References
D1292B	Yes	248	160	Provide containment lock, Install anti-syphon valve, Install level gauge (Upgrades moved to January 1, 1998)	1997
1279B	Yes	220	80	Upgrade piping if not replaced, Paint tank, Provide containment lock, Install anti-syphon valve (Upgrades moved to January 1, 1998)	1997
290	Yes	220	40	Upgrade piping if not replaced, Provide containment lock, Install anti-syphon valve, Paint tank (Upgrades moved to January 1, 1998)	1997
A1103	Yes	218	40	Provide containment lock, Install anti-syphon valve, Paint piping	
149-2	Yes	200	40	Closure and assessment (Closure moved to January 1, 1998)	Scheduled for removal '96; 1997
A4115	Yes	196	45	Upgrade piping if not replaced, Provide containment lock, Install anti-syphon valve (Upgrades moved to January 1, 1998)	1997
A902-B	Yes	150	40	Perform manual tank gauging (Upgrade moved to January 1, 1998)	1997
A925A	Yes	148	140	Install anti-syphon valve (Upgrade moved to January 1, 1998)	1997
F02	Yes	116	100	Install anti-syphon valve (Upgrade moved to January 1, 1998)	1997
A902-C	Yes	110	40	Provide containment lock	
A1004	Yes	104	60	Provide containment lock, Install anti-syphon valve	
4163	Yes	92	120	Install anti-syphon valve, Provide containment lock (Upgrades moved to January 1, 1998)	1997
290-A	Yes	92	40	Provide containment lock, Paint piping, Paint tank, Install anti-syphon valve	
A994	Yes	92	40	Provide containment lock, Perform manual tank gauging, Install anti-syphon valve, Paint piping	
D29	Yes	84	40	Provide containment lock, Install anti-syphon valve	
J1561	Yes	76	140	Upgrade piping if not supported, Provide containment lock, Install anti-syphon valve (Upgrades moved to January 1, 1998)	1997

TABLE 7.3
ACTION SCHEDULE FOR REGULATORY REQUIREMENTS AND TMP RECOMMENDATIONS
DECEMBER 31, 1999 MILESTONE

Tank Number	Florida Regulated	Overall Tank Score	Env. Risk Score	Required / Recommended Action	Remarks and References
L3A	Yes	58	80	Containment lock, Anti-syphon valve (Upgrades moved to January 1, 1998)	1997
F01	Yes	56	80	Provide containment lock, Install anti-syphon valve (Upgrades moved to January 1, 1998)	1997

TABLE 7.4
ACTION SCHEDULE FOR REGULATORY REQUIREMENTS AND TMP RECOMMENDATIONS
DECEMBER 31, 2000 MILESTONE

Tank Number	Florida Regulated	Overall Tank Score	Env. Risk Score	Required / Recommended Action	Remarks and References
D1	Yes	1530	360	Upgrade piping or close	Scheduled for BRAC closure; 2009
D3	Yes	1530	360	Upgrade piping or close	Scheduled for BRAC closure; 2009
D25	Yes	1390	200	Upgrade piping or close	Navy contract; 2009
A929	Yes	1330	80	Closure and assessment	Navy contract
B43	Yes	775	80	Closure and assessment	Navy contract
D2	Yes	765	360	Upgrade piping or close	Scheduled for BRAC closure; 2009
D4	Yes	765	360	Upgrade piping or close	Navy contract; 2009
D6	Yes	740	360	Upgrade piping or close	Navy contract; 2009
D21	Yes	725	280	Upgrade piping or close	Navy contract; 2009
D26A	Yes	725	80	Upgrade tank and piping or close	Navy contract
D27	Yes	680	280	Upgrade tank and piping or close	Navy contract
V3005	Yes	604	200	Closure and assessment	Navy contract
A924	Yes	540	160	Closure and assessment	Scheduled for removal '96; 1999
A925	Yes	540	160	Closure and assessment	Scheduled for removal '96; 1999
A959	Yes	448	180	Closure and assessment	Scheduled for removal '96; 1999
V4022A	Yes	430	280	Provide inline leak detection for piping if not removed	Navy contract, 1998, 2009
V4022B	Yes	430	280	Provide inline leak detection for piping if not removed	Navy contract, 1998, 2009
V4022C	Yes	430	280	Provide inline leak detection for piping if not removed	Navy contract, 1998, 2009
A317-H	Yes	422	240	Closure and assessment	Navy contract
A317-I	Yes	422	240	Closure and assessment	Navy contract
A317-G	Yes	392	240	Closure and assessment	Navy contract
OW-1	Yes	294	200	Provide release detection for tank and replace UG piping	1998, 2009
OW-102	Yes	294	200	Provide release detection for tank and replace UG piping	1998, 2009
V4022D	Yes	280	240	Provide inline leak detection for piping if not removed	Navy contract, 1998, 2009
C12-A	Yes	271	280	Closure and assessment	Navy contract
C12-B	Yes	271	280	Closure and assessment	Navy contract
C12-C	Yes	271	240	Closure and assessment	Navy contract
C12-D	Yes	271	240	Closure and assessment	Navy contract
1279A	Yes	270	80	Closure and assessment	Navy contract

TABLE 7.5
ACTION SCHEDULE FOR REGULATORY REQUIREMENTS AND TMP RECOMMENDATIONS
DECEMBER 31, 2009 MILESTONE

Tank Number	Florida Regulated	Overall Tank Score	Env. Risk Score	Required / Recommended Action	Remarks and References
D1	Yes	1530	360	Closure and assessment	Scheduled for BRAC closure; 2000
D3	Yes	1530	360	Closure and assessment	Scheduled for BRAC closure; 2000
D25	Yes	1390	200	Closure and assessment	Navy contract; 2000
D2	Yes	765	360	Closure and assessment	Scheduled for BRAC closure; 2000
D4	Yes	765	360	Closure and assessment	Navy contract; 2000
D6	Yes	740	360	Closure and assessment	Navy contract; 2000
D21	Yes	725	280	Closure and assessment	Navy contract; 2000
V4022A	Yes	430	280	Provide secondary containment for tank and piping if not removed	Navy contract, 1998, 2000
V4022B	Yes	430	280	Provide secondary containment for tank and piping if not removed	Navy contract, 1998, 2000
V4022C	Yes	430	280	Provide secondary containment for tank and piping if not removed	Navy contract, 1998, 2000
USDA1	Yes	396	280	Provide secondary containment	1997, 1998
USDA2	Yes	376	200	Provide secondary containment	1997, 1998
USDA3	Yes	376	200	Provide secondary containment	1997, 1998
OW-1	Yes	294	200	Provide secondary containment	1998, 2000
OW-102	Yes	294	200	Provide secondary containment	1998, 2000
V4022D	Yes	280	240	Provide secondary containment for tank and piping if not removed	Navy contract, 1998, 2000

TABLE 7.6
LISTING OF TANK SYSTEMS
REQUIRING NO REGULATORY ACTION

Tank Number	Florida Regulated	Overall Tank Score	Env. Risk Score	Required / Recommended Action	Remarks and References
V4022E	Yes	980	280	Scheduled for removal	Scheduled for removal '96
V4022F	Yes	980	280	Scheduled for removal	Scheduled for removal '96
V4022G	Yes	980	280	Scheduled for removal	Scheduled for removal '96
V4111A	Yes	116	80	In compliance	
B14-A	Yes	0	0	Closed in place	
B14-B	Yes	0	0	Closed in place	
G-01	Yes	0	0	Closure report for tank and piping	Closed in place
G-02	Yes	0	0	Closed in place	
437	No	1310	60	Scheduled for removal	Navy contract
1350	No	1110	80	Scheduled for removal	Navy contract
1351	No	910	80	Scheduled for removal	Navy contract
438	No	655	60	Scheduled for removal	Navy contract
439	No	655	60	Scheduled for removal	Navy contract
PD1A	No	480	200	Exempt	
L19	No	400	40	Scheduled for removal	Scheduled for removal '96
OW102A	No	342	80	Exempt	
OW-1A	No	342	80	Exempt	
PD1B	No	326	80	Exempt	
A4054	No	324	40	Recommendation only	
A727	No	320	60	Recommendations only	
A638	No	310	40	Scheduled for removal	Navy contract
V1554A	No	310	20	Exempt	Recommend outlet pipe to discharge to sanitary sewer
A631	No	280	40	Recommendations only	
A132	No	260	30	Recommendations only	
C2076	No	252	40	Scheduled for removal	Navy contract
A630	No	230	40	Recommendations only	
A1006	No	220	40	Recommendations only	
A325-3	No	212	40	No Recommendations	Secondary containment deferred
A632	No	208	40	Recommendations only	
V4111B	No	204	80	Exempt	Recommend tank integrity be checked
A624	No	202	40	Recommendation only	
A1020	No	200	40	Recommendations only	
A1125	No	181	2	Recommendation only	Close
B43-A	No	177	20	Scheduled for removal	Navy contract
A827	No	164	40	Recommendation only	
A4011	No	148	40	Recommendation only	

TABLE 7.6
LISTING OF TANK SYSTEMS
REQUIRING NO REGULATORY ACTION

Tank Number	Florida Regulated	Overall Tank Score	Env. Risk Score	Required / Recommended Action	Remarks and References
F01E	No	86	80	Exempt	
KW600	No	86	80	Exempt	
D4169	No	72	40	No Recommendations	
V1554	No	62	20	Scheduled for removal	Navy contract
V988	No	52	20	Recommendation only	
1355	No	38	40	Recommendation only	
438-A	No	28	30	Recommendations only	
439-A	No	28	30	Recommendations only	
A1019A	No	18	20	Recommendation only	

is provided for those tank systems not listed in the action schedule. Some tank systems require multiple actions to be performed that fall into different milestones. These tank systems were listed on each applicable table. A reference to other milestone dates for a particular system is given in the "Remarks and References" column at the far right of each table. An example is tank A328 which requires actions by January 1, 1998 and December 31, 1999 and is thus identified on Table 7.1, January 1, 1998 milestone, stating a reference to 1999. In addition, Table 7.3, December 31, 1999 milestone, references the 1997 actions required.

After all the tank systems were sorted by milestones, each tank's Florida regulated status was entered onto the tables. The corresponding overall tank scores and environmental risk scores provided in Section 5.0 of this Plan were also added to the tables. These three criteria provide the final sorted order for Tables 7.1 thru 7.6. The sorting criteria followed in this manner:

1.) By Florida regulated status (regulated then unregulated)
2.) Overall tank score
3.) Environmental risk score

The final order of sorting provides a priority listing for replacement or retrofit of the tank systems within each identified milestone. Thus a tank system listed at the top of each table should be considered for action prior to ones below it.

The tank systems identified in Table 7.6 have no associated milestones for their recommended actions. These systems fall into one or more of the following categories:

- Tank and piping are in compliance;
- Tank system is exempt from regulation;
- Tank system is currently scheduled for removal or under Navy contract for removal;
- Tank system is closed in place; or
- Only non-required recommendations apply

Tank recommendations that are not required under any regulation should be accomplished by the Base as funding becomes available.

After final sorting of the tanks in each of the milestone tables, the action schedule as a whole was reviewed. Further recommendations were made which would benefit the management of these systems as well as obtain compliance. These recommendations included several required actions

being moved to an earlier milestone in cases where significant work was already required. Such is the case in Table 7.3, 1999 milestone. The recommended actions moved to an earlier date are denoted on the table with shading and are noted with "(Upgrades moved to ...)". Table 7.1 also identifies tanks A986 and A443 as top priority for actions in January 1, 1998. These tanks originally were placed on Table 7.6, having no required action. These tanks were moved due to a significant amount of data not being available, resulting in their high overall tank scores. These tanks, as well as any other tank systems with data unavailable should be re-evaluated and further assessed as to their priority for system upgrades if necessary.

Bulk piping at NAS Key West was not included in the action schedule of Tables 7.1 thru 7.5. There are three separate sections of bulk piping that must be addressed: The section from the Boca Chica Tank Farm to the Boca Chica Truck Fill Stand; from the Boca Chica Tank Farm to the Boca Chica Fuel Pier; and from Pier D2 to the Trumbo Point Tank Farm. These pipelines were evaluated separately from their associated tank systems. Only connected piping within the immediate vicinity of the tanks were included with the tank systems when rated and reviewed. However, these bulk pipelines contain a significant amount of product and are thus included as a separate entity. The requirements and recommendations for these piping systems are included in Section 6.0 of this Plan. The schedule for bulk piping closure or upgrade should coincide with recommended closure or upgrades to the associated tank system to maintain system integrity and minimize environmental impacts.

7.2 Tank Program Management Recommendations

In addition to the regulatory compliance measures and recommendations for each of the tank systems identified in the Base's action schedule, recommendations to improve the management of the tank program at NAS Key West have been developed in the following areas:

- Strategic value of each tank system based on throughput and mission served
- The implementation of release detection on non-regulated tank systems
- Tank consolidation and/or deletion
- Tank relocation due to unacceptable environmental risks
- Tank type changes (e.g. UST to AST)
- Administrative recommendations for improving the current management system

Current and future activities at NAS Key West are unknown with regard to command additions, relocations, or closings. It is known, however, that the overall trend of Base activities is moving in the direction of downsizing. During field investigations, hearsay information was provided by

personnel concerning command closings in the near future. It was also observed that numerous buildings utilizing tank systems contained little to no activity. However, no active tank systems are recommended to be closed at this time. Out of service systems are recommended to be closed. The uncertainty of future activities at NAS Key West and the Base's dependence upon emergency backup power lead to this recommendation. Many facilities on Base utilize emergency generators to maintain power for activities should a loss occur. These tank systems, despite having minimal throughput, are vital to current Base operations should emergency situations arise. However, these tank systems should be re-evaluated as changes occur, keeping tank management inline with Base activities.

No additional recommendations have been made regarding the implementation of release detection methods for non-regulated tanks. Section 6.0 of this Plan recommends that all ASTs, regulated and non-regulated, be incorporated into the Base's current SPCC Plan. The SPCC Plan incorporates the regulations of 40 CFR 112 and requires monthly visual inspection of each tank, associated piping, and immediate site. Regulated USTs on Base either currently have proper release detection, release detection is required or recommended in this Plan, or the tanks are scheduled for removal. The non-regulated USTs remaining consist of the following tanks:

- V4111B - Emergency transformer oil reservoir
- 437 and 1351 - Heating fuel tanks
- A443, A986, F01E, KW600, OW-1A, OW102A, and PD1B - Oil/water separators
- PD1A - Used oil pump station

V4111B is an emergency reservoir for transformer oil from within the Commissary. This reservoir tank should be emptied of its contents immediately after each use. Therefore, release detection is not necessary. The two heating fuel tanks are currently scheduled for removal, thus no release detection is recommended. Release detection for the remaining oil/water separators and the pump station is not feasible and not recommended.

Tank system consolidation for the purpose of eliminating or deleting other unnecessary systems has also been considered. These recommendations are discussed individually in the following paragraphs for those systems deemed feasible for consolidation. It is noted that neither tank farm, Boca Chica nor Trumbo Point, were considered for consolidation. Trumbo Point tank farm is currently being phased out of operation, while the Boca Chica tanks are so large that consolidation does not appear to be feasible. The following are consolidation recommendations for other systems.

- Tanks 940-3, 4, and 5 at the Boca Chica Fresh Water Pump House could be

consolidated into a single use tank which would be easier to maintain and comply with regulations. However, all of these tanks are currently in compliance with the exception of the secondary containment requiring an impervious liner. The tanks were installed in 1994 and are in excellent condition. Tank consolidation is not recommended for these tanks at this time.

- Tanks A229-A and -B at the Boca Chica Sprinkler System Pump House also could be consolidated into a single use tank. These tanks require secondary containment and painting of the piping is recommended for each. The system is designed to provide fuel under positive pressure to the pumps within the facility. To consolidate these tanks would not be cost effective due to the necessary positioning of the tank as well as the costs for replacement and disposal. These tanks also had low environmental ratings as shown in Section 5.0 of this Plan. Therefore, consolidation of these tanks is not recommended.

- Tanks 419-A, -B, and -C at the Power Plant are currently under Navy contract to be replaced with a single use vaulted tank. It is recommended that this replacement tank be installed near the generators it will serve.

- Tanks 419-D and -E also at the Power Plant are two 300 gallon emergency generator day tanks which serve the same generators as tanks 419-A, -B, and -C. The day tanks require secondary containment as well as additional non-regulatory recommendations. It is recommended that these two tanks be consolidated into one day tank with a much smaller fuel storage capacity. The current storage capacity of the day tanks is unnecessarily large since the majority of the fuel stored for use will come from the replacement vaulted tank mentioned above. This new day tank should be equipped with two pumps to provide fuel to the two generators independently when needed.

- Consolidation of the day tanks F01A, B, C, and D at the Compressor/Generator Building KW200 on Fleming Key is not practical. These tanks serve several different generators and compressors.

- Consolidation is recommended for tanks 290 and 290-A into a single use tank. These tanks are located on Truman Annex at the JIATFE facility. These tanks currently are located side by side in separate containments and serve two separate emergency generators. It is recommended that both generators be served by tank 290, the largest

storing 750 gallons. Annual throughput is only 164 gallons/year for each of the tanks currently. Consolidation into one tank will eliminate future maintenance of tank 290-A. It is recommended that all piping be rerouted to tank 290 and tank 290-A be assessed and closed.

During field investigations of the tanks at NAS Key West, no unacceptable environmental risks were observed. Therefore, no recommendations are made for tank relocation. Due to the remote locations of some of the facilities on Base, there exists some potential for environmental risks. Most of these facilities involve emergency generators necessary to provide backup power for facility operations. However, these environmental risks are minimized by the recommendation of all tanks being incorporated into the Base's SPCC Plan. The SPCC Plan requires secondary containment for all ASTs where feasible and monthly visual inspection of all tanks, piping, and immediate system sites.

No additional tank type changes are recommended for any tank system currently at NAS Key West. Presently, the majority of the existing USTs are either scheduled for removal or are under Navy contract for removal. Several existing USTs are scheduled for replacement with ASTs due to potential environmental impact and more stringent regulatory requirements. In addition, hydrant systems and drum storage are not recommended for NAS Key West. Hydrant systems require additional piping over a broad area which typically increase the environmental risks. Drum storage is not recommended due to the limited quantity which can be stored. Most tank systems at NAS Key West require an unknown quantity of fuel depending on the longevity of the emergency power need.

Finally, several recommendations are presented for improving the administrative management of the tank program at NAS Key West. These recommendations include maintaining written records of each tank system installed, regulated and non-regulated. These records should include dates of installation, construction information, manufacturer's documentation, inventory records, integrity testing records, certifications, dates of repairs, spill and/or leak history, release detection results, and closure assessment reports.

The TIMS database should be updated frequently to reflect interim compliance measures completed and to maintain a current listing and status of each tank system at NAS Key West. The SPCC Plan should also be updated to include all tank systems not currently incorporated. Many new systems have been identified as a result of this TMP as well as on going changes taking place in tank systems' status since the date of the SPCC Plan. The SPCC Plan is an integral part of maintaining regulatory compliance as well as preventing potential environmental impact due to leaks or spills. It is recommended that all state and federally regulated tank systems be registered with FDEP as soon as

possible. Any tanks systems that have been upgraded or revised since last being registered should be re-registered reflecting their current information.

It is recommended that a Base instruction be prepared and issued to establish administrative procedures for tank management. The instruction should require each individual who manages, operates, or is responsible for a tank system to provide current and updated tank system information to the Activity Tank Management Coordinator.

APPENDIX A

40 CFR 112
AND
40 CFR 280

40 CFR 112

EPA REGULATIONS ON OIL POLLUTION PREVENTION

(40 CFR 112; 38 FR 34164, Dec. 11, 1973; Revised through July 1, 1991; amended at 57 FR 52704, Nov. 4, 1992; 58 FR 45035, Aug. 25, 1993; 59 FR 34097, July 1, 1994; corrected at 59 FR 49006, Sept. 26, 1994; amended at 61 FR 9646, March 11, 1996)

TITLE 40—PROTECTION OF ENVIRONMENT

CHAPTER I—ENVIRONMENTAL PROTECTION AGENCY

SUBCHAPTER D—WATER PROGRAMS

PART 112—OIL POLLUTION PREVENTION

Authority: 33 U.S.C. 1321 and 1361; E.O. 12777 (October 18, 1991), 3 CFR, 1991 Comp., p. 351.

[Revised at 57 FR 52705, Nov. 4, 1992; 58 FR 45035, Aug. 25, 1993; 59 FR 34097, July 1, 1994; 59 FR 49006, Sept. 26, 1994]

Sec.

112.1 General applicability.
112.2 Definitions.
112.3 Requirements for preparation and implementation of Spill Prevention Control and Countermeasure Plans.
112.4 Amendment of SPCC Plans by Regional Administrator.
112.5 Amendment of Spill Prevention Control and Countermeasure Plans by owners and operators.
112.6 [Removed]
112.7 Guidelines for the preparation and implementation of a Spill Prevention Control and Countermeasure Plan.
112.20 Facility response plans.
112.21 Facility response training and drills/exercises.

Appendix A to Part 112—Memorandum of Understanding Between the Secretary of Transporation and the Administrator of the Environmental Protection Agency

Appendix B to Part 112—Memorandum of Understanding Among the Secretary of the Interior, Secretary of Transportation, and Administrator of the Environmental Protection Agency

Appendix C to Part 112—Substantial Harm Criteria

Appendix D to Part 112—Determination of a Worst Case Discharge Planning Volume

Appendix E to Part 112—Determination and Evaluation of Required Response Resources for Facility Response Plans

Appendix F to Part 112—Facility-Specific Response Plan

§112.1 General applicability.

(a) This part establishes procedures, methods and equipment and other requirements for equipment to prevent the discharge of oil from non-transportation-related onshore and offshore facilities into or upon the navigable waters of the United States or adjoining shorelines.

(b) Except as provided in paragraph (d) of this section, this part applies to owners or operators of non-transportation-related onshore and offshore facilities engaged in drilling, producing, gathering, storing, processing, refining, transferring, distributing or consuming oil and oil products, and which, due to their location, could reasonably be expected to discharge oil in harmful quantities, as defined in part 110 of this chapter, into or upon the navigable waters of the United States or adjoining shorelines.

(c) As provided in section 313 (86 Stat. 875) departments, agencies, and instrumentalities of the Federal government are subject to these regulations to the same extent as any person, except for the provisions of §112.6.

(d) This part does not apply to:

(1) Facilities, equipment or operations which are not subject to the jurisdiction of the Environmental Protection Agency, as follows:

(i) Onshore and offshore facilities, which, due to their location, could not reasonably be expected to discharge oil into or upon the navigable waters of the United States or adjoining shorelines. This determination shall be based solely upon a consideration of the geographical, locational aspects of the facility (such as proximity to navigable waters or adjoining shorelines, land contour, drainage, etc.) and shall exclude consideration of man-made features such as dikes, equipment or other structures which may serve to restrain, hinder, contain, or otherwise prevent a discharge of oil from reaching navigable waters of the United States or adjoining shorelines; and

(ii) Equipment or operations of vessels or transportation-related onshore and offshore facilities which are subject to authority and control of the Department of Transportation, as defined in the Memorandum of Understanding between the Secretary of Transportation and the Administrator of the Environmental Protection Agency, dated November 24, 1971, 36 FR 24000.

(2) Those facilities which, although otherwise subject to the jurisdiction of the Environmental Protection Agency, meet both of the following requirements:

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(i) The underground buried storage capacity of the facility is 42,000 gallons or less of oil, and

(ii) The storage capacity, which is not buried, of the facility is 1,320 gallons or less of oil, provided no single container has a capacity in excess of 660 gallons.

(e) This part provides for the preparation and implementation of Spill Prevention Control and Countermeasure Plans prepared in accordance with §112.7, designed to complement existing laws, regulations, rules, standards, policies and procedures pertaining to safety standards, fire prevention and pollution prevention rules, so as to form a comprehensive balanced Federal/State spill prevention program to minimize the potential for oil discharges. Compliance with this part does not in any way relieve the owner or operator of an onshore or an offshore facility from compliance with other Federal, State or local laws.

§112.2 Definitions.

For the purposes of this part:

Adverse weather means the weather conditions that make it difficult for response equipment and personnel to cleanup or remove spilled oil, and that will be considered when identifying response systems and equipment in a response plan for the applicable operating environment. Factors to consider include significant wave height as specified in Appendix E to this part, as appropriate, ice conditions, temperatures, weather-related visibility, and currents within the area in which the systems or equipment are intended to function.

[Added at 59 FR 34097, July 1, 1994]

Complex means a facility possessing a combination of transportation-related and non-transportation-related components that is subject to the jurisdiction of more than one Federal agency under section 311(j) of the Clean Water Act.

[Added at 59 FR 34097, July 1, 1994]

Contract or other approved means:

(1) A written contractual agreement with an oil spill removal organization(s) that identifies and ensures the availability of the necessary personnel and equipment within appropriate response times; and/or

(2) A written certification by the owner or operator that the necessary personnel and equipment resources, owned or operated by the facility owner or operator, are available to respond to a discharge within appropriate response times; and/or

(3) Active membership in a local or regional oil spill removal organization(s) that has identified and ensures adequate access through such membership to necessary personnel and equipment to respond to a discharge within appropriate response times in the specified geographic areas; and/or

(4) Other specific arrangements approved by the Regional Administrator upon request of the owner or operator.

[Added at 59 FR 34097, July 1, 1994]

Discharge includes but is not limited to, any spilling, leaking, pumping, pouring, emitting, emptying or dumping. For purposes of this part, the term "discharge" shall not include any discharge of oil which is authorized by a permit issued pursuant to section 13 of the River and Harbor Act of 1899 (30 Stat. 1121, 33 U.S.C. 407), or sections 402 or 405 of the FWPCA Amendments of 1972 (86 Stat. 816 et seq., 33 U.S.C. 1251 et seq.).

Fish and wildlife and sensitive environments means areas that may be identified by either their legal designation or by evaluations of Area Committees (for planning) or members of the Federal On-Scene Coordinator's spill response structure (during responses). These areas may include wetlands, National and State parks, critical habitats for endangered/threatened species, wilderness and natural resource areas, marine sanctuaries and estuarine reserves, conservation areas, preserves, wildlife areas, wildlife refuges, wild and scenic rivers, recreational areas, national forests, Federal and State lands that are research national areas, heritage program areas, land trust areas, and historical and archeological sites and parks. These areas may also include unique habitats such as: aquaculture sites and agricultural surface water intakes, bird nesting areas, critical biological resource areas, designated migratory routes, and designated seasonal habitats.

[Added at 59 FR 34097, July 1, 1994]

Injury means a measurable adverse change, either long- or short-term, in the chemical or physical quality or the viability of a natural resource resulting either directly or indirectly from exposure to a discharge of oil, or exposure to a product of reactions resulting from a discharge of oil.

[Added at 59 FR 34097, July 1, 1994]

Maximum extent practicable means the limitations used to determine oil spill planning resources and response times for on-water recovery, shoreline protection, and cleanup for worst case discharges from onshore non- transportation-related facilities in adverse weather. It considers the planned capability to respond to a worst case discharge in adverse weather, as contained in a response plan that meets the requirements in §112.20 or in a specific plan approved by the Regional Administrator.

[Added at 59 FR 34097, July 1, 1994]

Oil means oil of any kind or in any form, including, but not limited to petroleum, fuel oil, sludge, oil refuse and oil mixed with wastes other than dredged spoil.

Oil Spill Removal Organization means an entity that provides oil spill response resources, and includes any for-profit or not-for-profit contractor, cooperative, or in-house response resources that have been established in a geographic area to provide required response resources.

[Added at 59 FR 34097, July 1, 1994]

Onshore facility means any facility of any kind located in, on, or under any land within the United States, other than submerged lands, which is not a transportation-related facility.

Offshore facility means any facility of any kind located in, on, or under any of the navigable waters of the United States, which is not a transportation-related facility.

Owner or operator means any person owning or operating an onshore facility or an offshore facility, and in the case of any abandoned offshore facility, the person who owned or operated such facility immediately prior to such abandonment.

Person includes an individual, firm, corporation, association, and a partnership.

Regional Administrator, means the Regional Administrator of the Environmental Protection Agency, or his designee, in and for the Region in which the facility is located.

Transportation-related and *non-transportation-related* as applied to an onshore or offshore facility, are defined in the Memorandum of Understanding between the Secretary of Transportation and the Administrator of the Environmental Protection Agency, dated November 24, 1971, 36 FR 24080.

Spill event means a discharge of oil into or upon the navigable waters of the United States or adjoining shorelines in harmful quantities, as defined at 40 CFR part 110.

United States means the States, the District of Columbia, the Commonwealth of Puerto Rico, the Canal Zone, Guam, the Trust Territory of the Pacific Islands.

The term *navigable waters* of the United States means *navigable waters* as defined in section 502(7) of the FWPCA, and includes:

(1) All navigable waters of the United States, as defined in judicial decisions prior to passage of the 1972 Amendments to the FWPCA (Pub. L. 92-500), and tributaries of such waters;

(2) Interstate waters;

(3) Intrastate lakes, rivers, and streams which are utilized by interstate travelers for recreational or other purposes; and

(4) Intrastate lakes, rivers, and streams from which fish or shellfish are taken and sold in interstate commerce. Navigable waters do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA.

[Amended at 58 FR 45035, Aug. 25, 1993]

Vessel means every description of watercraft or other artificial contrivance used, or capable of being used as a means of transportation on water, other than a public vessel.

Worst case discharge for an onshore non-transportation-related facility means the largest foreseeable discharge in adverse weather conditions as determined using the worksheets in Appendix D to this part.

[Added at 59 FR 34097, July 1, 1994]

§112.3 Requirements for preparation and implementation of Spill Prevention Control and Countermeasure Plans.

[§112.3 added at 59 FR 34097, July 1, 1994]

(a) Owners or operators of onshore and offshore facilities in operation on or before the effective date of this part that have discharged or, due to their location, could reasonably be expected to discharge oil in harmful quantities, as defined in 40 CFR part 110, into or upon the navigable waters of the United States or adjoining shorelines, shall prepare a Spill Prevention Control and Countermeasure Plan (hereinafter "SPCC Plan"), in writing and in accordance with §112.7. Except as provided for in paragraph (f) of this section, such SPCC Plan shall be prepared within six months after the effective date of this part and shall be fully implemented as soon as possible, but not later than one year after the effective date of this part.

(b) Owners or operators of onshore and offshore facilities that become operational after the effective date of this part, and that have discharged or could reasonably be expected to discharge oil in harmful quantities, as defined in 40 CFR part 110, into or upon the navigable waters of the United States or adjoining shorelines, shall prepare an SPCC Plan in accordance with §112.7. Except as provided for in paragraph (f) of this section, such SPCC Plan shall be prepared within six months after the date such facility begins operations and shall be fully implemented as soon as possible, but not later than one year after such facility begins operations.

(c) Owners or operators of onshore and offshore mobile or portable facilities, such as onshore drilling or workover rigs, barge mounted offshore drilling or workover rigs, and portable fueling facilities shall prepare and implement an SPCC Plan as required by paragraphs (a), (b) and (d) of this section. The owners or operators of such facility need not prepare a new SPCC Plan each time the facility is moved to a new site. The SPCC Plan may be a general plan, prepared in accordance with §112.7, using good engineering practice. When the mobile or portable facility is moved, it must be located and installed using the spill prevention practices outlined in the SPCC Plan for the facility. No mobile or portable facility subject to this regulation shall operate unless the SPCC Plan has been implemented. The SPCC Plan shall only apply while the facility is in a fixed (non-transportation) operating mode.

(d) No SPCC Plan shall be effective to satisfy the requirements of this part unless it has been reviewed by a Registered Professional Engineer and certified to by such Professional Engineer. By means of this certification the engineer, having examined the facility and being familiar with the provisions of this part, shall attest that the SPCC Plan has been prepared in accordance with good engineering practices. Such certification shall in no way relieve the owner or operator of an onshore or offshore facility of his duty to prepare and fully implement such Plan in accordance with §112.7, as required by paragraphs (a), (b) and (c) of this section.

(e) Owners or operators of a facility for which an SPCC Plan is required pursuant to paragraph (a), (b) or (c) of this section shall maintain a complete copy of the Plan at such facility if the facility is normally attended at least 8 hours per day, or at the nearest field office if the facility is not so attended, and shall make such Plan available to the Regional Administrator for on-site review during normal working hours.

(f) Extensions of time.

(1) The Regional Administrator may authorize an extension of time for the preparation and full implementation of an SPCC Plan beyond the time permitted for the preparation and implementation of an SPCC Plan pursuant to paragraph (a), (b) or (c) of this section where he finds that the owner or operator of a facility subject to paragraphs (a), (b) or (c) of this section cannot fully comply with the requirements of this part as a result of either nonavailability of qualified personnel, or delays in construction or equipment delivery beyond the control and without the fault of such owner or operator or their respective agents or employees.

(2) Any owner or operator seeking an extension of time pursuant to paragraph (f)(1) of this section may submit a letter of request to the Regional Administrator. Such letter shall include:

(i) A complete copy of the SPCC Plan, if completed;

(ii) A full explanation of the cause for any such delay and the specific aspects of the SPCC Plan affected by the delay;

(iii) A full discussion of actions being taken or contemplated to minimize or mitigate such delay;

(iv) A proposed time schedule for the implementation of any corrective actions being taken or contemplated, including interim dates for completion of tests or studies, installation and operation of any necessary equipment or other preventive measures.

[Sec. 112.3(f)(2)(iv)]

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In addition, such owner or operator may present additional oral or written statements in support of his letter of request.

(3) The submission of a letter of request for extension of time pursuant to paragraph (f)(2) of this section shall in no way relieve the owner or operator from his obligation to comply with the requirements of §112.3 (a), (b) or (c). Where an extension of time is authorized by the Regional Administrator for particular equipment or other specific aspects of the SPCC Plan, such extension shall in no way affect the owner's or operator's obligation to comply with the requirements of §112.3 (a), (b) or (c) with respect to other equipment or other specific aspects of the SPCC Plan for which an extension of time has not been expressly authorized.

§112.4 Amendment of SPCC Plans by Regional Administrator.

(a) Notwithstanding compliance with §112.3, whenever a facility subject to §112.3 (a), (b) or (c) has: Discharged more than 1,000 U.S. gallons of oil into or upon the navigable waters of the United States or adjoining shorelines in a single spill event, or discharged oil in harmful quantities, as defined in 40 CFR part 110, into or upon the navigable waters of the United States or adjoining shorelines in two spill events, reportable under section 311(b)(5) of the FWPCA, occurring within any twelve month period, the owner or operator of such facility shall submit to the Regional Administrator, within 60 days from the time such facility becomes subject to this section, the following:

(1) Name of the facility;

(2) Name(s) of the owner or operator of the facility;

(3) Location of the facility;

(4) Date and year of initial facility operation;

(5) Maximum storage or handling capacity of the facility and normal daily throughput;

(6) Description of the facility, including maps, flow diagrams, and topographical maps;

(7) A complete copy of the SPCC Plan with any amendments;

(8) The cause(s) of such spill, including a failure analysis of system or subsystem in which the failure occurred;

(9) The corrective actions and/or countermeasures taken, including an adequate description of equipment repairs and/or replacements;

(10) Additional preventive measures taken or contemplated to minimize the possibility of recurrence;

(11) Such other information as the Regional Administrator may reasonably require pertinent to the Plan or spill event.

(b) Section 112.4 shall not apply until the expiration of the time permitted for the preparation and implementation of an SPCC Plan pursuant to §112.3 (a), (b), (c) and (f).

(c) A complete copy of all information provided to the Regional Administrator pursuant to paragraph (a) of this section shall be sent at the same time to the State agency in charge of water pollution control activities in and for the State in which the facility is located. Upon receipt of such information such State agency may conduct a review and make recommendations to the Regional Administrator as to further procedures, methods, equipment and other requirements for equipment necessary to prevent and to contain discharges of oil from such facility.

(d) After review of the SPCC Plan for a facility subject to paragraph (a) of this section, together with all other information submitted by the owner or operator of such facility, and by the State agency under paragraph (c) of this section, the Regional Administrator may require the owner or operator of such facility to amend the SPCC Plan if he finds that the Plan does not meet the requirements of this part or that the amendment of the Plan is necessary to prevent and to contain discharges of oil from such facility.

(e) When the Regional Administrator proposes to require an amendment to the SPCC Plan, he shall notify the facility operator by certified mail addressed to, or by personal delivery to, the facility owner or operator, that he proposes to require an amendment to the Plan, and shall specify the terms of such amendment. If the facility owner or operator is a corporation, a copy of such notice shall also be mailed to the registered agent, if any, of such corporation in the State where such facility is located. Within 30 days from receipt of such notice, the facility owner or operator may submit written information, views, and arguments on the amendment. After considering all relevant material presented, the Regional Administrator shall notify the facility owner or operator of any amendment required or shall rescind the notice. The amendment required by the Regional Administrator shall become part of the Plan 30 days after such notice, unless the Regional Administrator, for good cause, shall specify another effective date. The owner or operator of the facility shall implement the amendment of the Plan as soon as possible, but not later than six months after the amendment becomes part of the Plan, unless the Regional Administrator specifies another date.

(f) An owner or operator may appeal a decision made by the Regional Administrator requiring an amendment to an SPCC Plan. The appeal shall be made to the Administrator of the United States Environmental Protection Agency and must be made in writing within 30 days of receipt of the notice from the Regional Administrator requiring the amendment. A complete copy of the appeal must be sent to the Regional Administrator at the time the appeal is made. The appeal shall contain a clear and concise statement of the issues and points of fact in the case. It may also contain additional information from the owner or operator, or from any other person. The Administrator or his designee may request additional information from the owner or operator, or from any other person. The Administrator or his designee shall render a decision within 60 days of receiving the appeal and shall notify the owner or operator of his decision.

§112.5 Amendment of Spill Prevention Control and Countermeasure Plans by owners or operators.

(a) Owners or operators of facilities subject to §112.3 (a), (b) or (c) shall amend the SPCC Plan for such facility in accordance with §112.7 whenever there is a change in facility design, construction, operation or maintenance which materially affects the facility's potential for the discharge of oil into or upon the navigable waters of the United States or adjoining shore lines. Such amendments shall be fully implemented as soon as possible, but not later than six months after such change occurs.

(b) Notwithstanding compliance with paragraph (a) of this section, owners and operators of facilities subject to §112.3 (a), (b) or (c) shall complete a review and evaluation of the SPCC Plan at least once every three years from the date such facility becomes subject to this part. As a result of this review and evaluation, the owner or operator shall amend the SPCC

[Sec. 112.5(b)]

Plan within six months of the review to include more effective prevention and control technology if:

(1) Such technology will significantly reduce the likelihood of a spill event from the facility, and

(2) if such technology has been field-proven at the time of the review.

(c) No amendment to an SPCC Plan shall be effective to satisfy the requirements of this section unless it has been certified by a Professional Engineer in accordance with §112.3(d).

§112.6 [Removed]

[§112.6 revised at 57 FR 52705, Nov. 4, 1992; removed at 61 FR 9647, March 11, 1996]

§112.7 Guidelines for the preparation and implementation of a Spill Prevention Control and Countermeasure Plan.

The SPCC Plan shall be a carefully thought-out plan, prepared in accordance with good engineering practices, and which has the full approval of management at a level with authority to commit the necessary resources. If the plan calls for additional facilities or procedures, methods, or equipment not yet fully operational, these items should be discussed in separate paragraphs, and the details of installation and operational start-up should be explained separately. The complete SPCC Plan shall follow the sequence outlined below, and include a discussion of the facility's conformance with the appropriate guidelines listed:

(a) A facility which has experienced one or more spill events within twelve months prior to the effective date of this part should include a written description of each such spill, corrective action taken and plans for preventing recurrence.

(b) Where experience indicates a reasonable potential for equipment failure (such as tank overflow, rupture, or leakage), the plan should include a prediction of the direction, rate of flow, and total quantity of oil which could be discharged from the facility as a result of each major type of failure.

(c) Appropriate containment and/or diversionary structures or equipment to prevent discharged oil from reaching a navigable water course should be provided. One of the following preventive systems or its equivalent should be used as a minimum:

(1) *Onshore facilities:*

(i) Dikes, berms or retaining walls sufficiently impervious to contain spilled oil;

(ii) Curbing;

(iii) Culverting, gutters or other drainage systems;

(iv) Weirs, booms or other barriers;

(v) Spill diversion ponds;

(vi) Retention ponds;

(vii) Sorbent materials.

(2) Offshore facilities:

(i) Curbing, drip pans;

(ii) Sumps and collection systems.

(d) When it is determined that the installation of structures or equipment listed in §112.7(c) to prevent discharged oil from reaching the navigable waters is not practicable from any onshore or offshore facility, the owner or operator should clearly demonstrate such impracticability and provide the following:

(1) A strong oil spill contingency plan following the provision of 40 CFR part 109.

(2) A written commitment of manpower, equipment and materials required to expeditiously control and remove any harmful quantity of oil discharged.

(e) In addition to the minimal prevention standards listed under §112.7(c), sections of the Plan should include a complete discussion of conformance with the following applicable guidelines, other effective spill prevention and containment procedures (or, if more stringent, with State rules, regulations and guidelines):

(1) *Facility drainage (onshore); (excluding production facilities).*

(i) Drainage from diked storage areas should be restrained by valves or other positive means to prevent a spill or other excessive leakage of oil into the drainage system or inplant effluent treatment system, except where plan systems are designed to handle such leakage. Diked areas may be emptied by pumps or ejectors; however, these should be manually activated and the condition of the accumulation should be examined before starting to be sure no oil will be discharged into the water.

(ii) Flapper-type drain valves should not be used to drain diked areas. Valves used for the drainage of diked areas should, as far as practical, be of manual, open-and-closed design. When plant drainage drains directly into water courses and not into wastewater treatment plants, retained storm water should be inspected as provided in paragraphs (e)(2)(iii) (B), (C) and (D) of this section before drainage.

(iii) Plant drainage systems from undiked areas should, if possible, flow into ponds, lagoons or catchment basins, designed to retain oil or return it to the facility. Catchment basins should not be located in areas subject to periodic flooding.

(iv) If plant drainage is not engineered as above, the final discharge of all in-plant ditches should be equipped with a diversion system that could, in the event of an uncontrolled spill, return the oil to the plant.

(v) Where drainage waters are treated in more than one treatment unit, natural hydraulic flow should be used. If pump transfer is needed, two "lift" pumps should be provided, and at least one of the pumps should be permanently installed when such treatment is continuous. In any event, whatever techniques are used facility drainage systems should be adequately engineered to prevent oil from reaching navigable waters in the event of equipment failure or human error at the facility.

(2) *Bulk storage tanks (onshore); (excluding production facilities).*

(i) No tank should be used for the storage of oil unless its material and construction are compatible with the material stored and conditions of storage such as pressure and temperature, etc.

(ii) All bulk storage tank installations should be constructed so that a secondary means of containment is provided for the entire contents of the largest single tank plus sufficient freeboard to allow for precipitation. Diked areas should be sufficiently impervious to contain spilled oil. Dikes, containment curbs, and pits are commonly employed for this purpose, but they may not always be appropriate. An alternative system could consist of a complete drainage trench enclosure arranged so that a spill could terminate and be safely confined in an in-plant catchment basin or holding pond.

(iii) Drainage of rainwater from the diked area into a storm drain or an effluent discharge that empties into an open water course, lake, or pond, and bypassing the in-plant treatment system may be acceptable if:

(A) The bypass valve is normally sealed closed.

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(B) Inspection of the run-off rain water ensures compliance with applicable water quality standards and will not cause a harmful discharge as defined in 40 CFR part 110.

(C) The bypass valve is opened, and resealed following drainage under responsible supervision.

(D) Adequate records are kept of such events.

(iv) Buried metallic storage tanks represent a potential for undetected spills. A new buried installation should be protected from corrosion by coatings, cathodic protection or other effective methods compatible with local soil conditions. Such buried tanks should at least be subjected to regular pressure testing.

(v) Partially buried metallic tanks for the storage of oil should be avoided, unless the buried section of the shell is adequately coated, since partial burial in damp earth can cause rapid corrosion of metallic surfaces, especially at the earth/air interface.

(vi) Aboveground tanks should be subject to periodic integrity testing, taking into account tank design (floating roof, etc.) and using such techniques as hydrostatic testing, visual inspection or a system of non-destructive shell thickness testing. Comparison records should be kept where appropriate, and tank supports and foundations should be included in these inspections. In addition, the outside of the tank should frequently be observed by operating personnel for signs of deterioration, leaks which might cause a spill, or accumulation of oil inside diked areas.

(vii) To control leakage through defective internal heating coils, the following factors should be considered and applied, as appropriate.

(A) The steam return or exhaust lines from internal heating coils which discharge into an open water course should be monitored for contamination, or passed through a settling tank, skimmer, or other separation or retention system.

(B) The feasibility of installing an external heating system should also be considered.

(viii) New and old tank installations should, as far as practical, be fail-safe engineered or updated into a fail-safe engineered installation to avoid spills. Consideration should be given to providing one or more of the following devices:

(A) High liquid level alarms with an audible or visual signal at a constantly manned operation or surveillance station; in smaller plants an audible air vent may suffice.

(B) Considering size and complexity of the facility, high liquid level pump cutoff devices set to stop flow at a predetermined tank content level.

(C) Direct audible or code signal communication between the tank gauger and the pumping station.

(D) A fast response system for determining the liquid level of each bulk storage tank such as digital computers, telepulse, or direct vision gauges or their equivalent.

(E) Liquid level sensing devices should be regularly tested to insure proper operation.

(ix) Plant effluents which are discharged into navigable waters should have disposal facilities observed frequently enough to detect possible system upsets that could cause an oil spill event.

(x) Visible oil leaks which result in a loss of oil from tank seams, gaskets, rivets and bolts sufficiently large to cause the accumulation of oil in diked areas should be promptly corrected.

(xi) Mobile or portable oil storage tanks (onshore) should be positioned or located so as to prevent spilled oil from reaching navigable waters. A secondary means of containment, such as dikes or catchment basins, should be furnished for the largest single compartment or tank. These facilities should be located where they will not be subject to periodic flooding or washout.

(3) *Facility transfer operations, pumping, and in-plant process (onshore); (excluding production facilities).*

(i) Buried piping installations should have a protective wrapping and coating and should be cathodically protected if soil conditions warrant. If a section of buried line is exposed for any reason, it should be carefully examined for deterioration. If corrosion damage is found, additional examination and corrective action should be taken as indicated by the magnitude of the damage. An alternative would be the more frequent use of exposed pipe corridors or galleries.

(ii) When a pipeline is not in service, or in standby service for an extended time the terminal connection at the transfer point should be capped or blank-flanged, and marked as to origin.

(iii) Pipe supports should be properly designed to minimize abrasion and corrosion and allow for expansion and contraction.

(iv) All aboveground valves and pipelines should be subjected to regular examinations by operating personnel at which time the general condition of items, such as flange joints, expansion joints, valve glands and bodies, catch pans, pipeline supports, locking of valves, and metal surfaces should be assessed. In addition, periodic pressure testing may be warranted for piping in areas where facility drainage is such that a failure might lead to a spill event.

(v) Vehicular traffic granted entry into the facility should be warned verbally or by appropriate signs to be sure that the vehicle, because of its size, will not endanger above ground piping.

(4) *Facility tank car and tank truck loading/unloading rack (onshore).*

(i) Tank car and tank truck loading/unloading procedures should meet the minimum requirements and regulation established by the Department of Transportation.

(ii) Where rack area drainage does not flow into a catchment basin or treatment facility designed to handle spills, a quick drainage system should be used for tank truck loading and unloading areas. The containment system should be designed to hold at least maximum capacity of any single compartment of a tank car or tank truck loaded or unloaded in the plant.

(iii) An interlocked warning light or physical barrier system, or warning signs, should be provided in loading/unloading areas to prevent vehicular departure before complete disconnect of flexible or fixed transfer lines.

(iv) Prior to filling and departure of any tank car or tank truck, the lowermost drain and all outlets of such vehicles should be closely examined for leakage, and if necessary, tightened, adjusted, or replaced to prevent liquid leakage while in transit.

(5) *Oil production facilities (onshore).*

(i) *Definition.* An onshore production facility may include all wells, flowlines, separation equipment, storage facilities, gathering lines, and auxiliary non-transportation-related equipment and facilities

[Sec. 112.7(e)(5)(i)]

in a single geographical oil or gas field operated by a single operator.

(ii) *Oil production facility (onshore) drainage.*

(A) At tank batteries and central treating stations where an accidental discharge of oil would have a reasonable possibility of reaching navigable waters, the dikes or equivalent required under §112.7(c)(1) should have drains closed and sealed at all times except when rainwater is being drained. Prior to drainage, the diked area should be inspected as provided in paragraphs (e)(2)(iii) (B), (C), and (D) of this section. Accumulated oil on the rainwater should be picked up and returned to storage or disposed of in accordance with approved methods.

(B) Field drainage ditches, road ditches, and oil traps, sumps or skimmers, if such exist, should be inspected at regularly scheduled intervals for accumulation of oil that may have escaped from small leaks. Any such accumulations should be removed.

(iii) *Oil production facility (onshore) bulk storage tanks.*

(A) No tank should be used for the storage of oil unless its material and construction are compatible with the material stored and the conditions of storage.

(B) All tank battery and central treating plant installations should be provided with a secondary means of containment for the entire contents of the largest single tank if feasible, or alternate systems such as those outlined in §112.7(c)(1). Drainage from undiked areas should be safely confined in a catchment basin or holding pond.

(C) All tanks containing oil should be visually examined by a competent person for condition and need for maintenance on a scheduled periodic basis. Such examination should include the foundation and supports of tanks that are above the surface of the ground.

(D) New and old tank battery installations should, as far as practical, be fail-safe engineered or updated into a fail-safe engineered installation to prevent spills. Consideration should be given to one or more of the following:

(*1*) Adequate tank capacity to assure that a tank will not overfill should a pumper/gauger be delayed in making his regular rounds.

(*2*) Overflow equalizing lines between tanks so that a full tank can overflow to an adjacent tank.

(*3*) Adequate vacuum protection to prevent tank collapse during a pipeline run.

(*4*) High level sensors to generate and transmit an alarm signal to the computer where facilities are a part of a computer production control system.

(iv) *Facility transfer operations, oil production facility (onshore).*

(A) All above ground valves and pipelines should be examined periodically on a scheduled basis for general condition of items such as flange joints, valve glands and bodies, drip pans, pipeline supports, pumping well polish rod stuffing boxes, bleeder and gauge valves.

(B) Salt water (oil field brine) disposal facilities should be exained often, particularly following a sudden change in atmospheric temperature to detect possible system upsets that could cause an oil discharge.

(C) Production facilities should have a program of flowline maintenance to prevent spills from this source. The program should include periodic examinations, corrosion protection, flowline replacement, and adequate records, as appropriate, for the individual facility.

(6) *Oil drilling and workover facilities (onshore).*

(i) Mobile drilling or workover equipment should be positioned or located so as to prevent spilled oil from reaching navigable waters.

(ii) Depending on the location, catchment basins or diversion structures may be necessary to intercept and contain spills of fuel, crude oil, or oily drilling fluids.

(iii) Before drilling below any casing string or during workover operations, a blowout prevention (BOP) assembly and well control system should be installed that is capable of controlling any well head pressure that is expected to be encountered while that BOP assembly is on the well. Casing and BOP installations should be in accordance with State regulatory agency requirements.

(7) *Oil drilling, production, or workover facilities (offshore).*

(i) Definition: "An oil drilling, production or workover facility (offshore)" may include all drilling or workover equipment, wells, flowlines, gathering lines, platforms, and auxiliary nontransportation-related equipment and facilities in a single geographical oil or gas field operated by a single operator.

(ii) Oil drainage collection equipment should be used to prevent and control small oil spillage around pumps, glands, valves, flanges, expansion joints, hoses, drain lines, separators, treaters, tanks, and allied equipment. Drains on the facility should be controlled and directed toward a central collection sump or equivalent collection system sufficient to prevent discharges of oil into the navigable waters of the United States. Where drains and sumps are not practicable oil contained in collection equipment should be removed as often as necessary to prevent overflow.

(iii) For facilities employing a sump system, sump and drains should be adequately sized and a spare pump or equivalent method should be available to remove liquid from the sump and assure that oil does not escape. A regular scheduled preventive maintenance inspection and testing program should be employed to assure reliable operation of the liquid removal system and pump start-up device. Redundant automatic sump pumps and control devices may be required on some installations.

(iv) In areas where separators and treaters are equipped with dump valves whose predominant mode of failure is in the closed position and pollution risk is high, the facility should be specially equipped to prevent the escape of oil. This could be accomplished by extending the flare line to a diked area if the separator is near shore, equipping it with a high liquid level sensor that will automatically shut-in wells producing to the separator, parallel redundant dump valves, or other feasible alternatives to prevent oil discharges.

(v) Atmospheric storage or surge tanks should be equipped with high liquid level sensing devices or other acceptable alternatives to prevent oil discharges.

(vi) Pressure tanks should be equipped with high and low pressure sensing devices to activate an alarm and/or control the flow or other acceptable alternatives to prevent oil discharges.

(vii) Tanks should be equipped with suitable corrosion protection.

(viii) A written procedure for inspecting and testing pollution prevention equipment and systems should be prepared and maintained at the facility. Such proce-

[Sec. 112.7(e)(7)(viii)]

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dures should be included as part of the SPCC Plan.

(ix) Testing and inspection of the pollution prevention equipment and systems at the facility should be conducted by the owner or operator on a scheduled periodic basis commensurate with the complexity, conditions and circumstances of the facility or other appropriate regulations.

(x) Surface and subsurface well shut-in valves and devices in use at the facility should be sufficiently described to determine method of activation or control, e.g., pressure differential, change in fluid or flow conditions, combination of pressure and flow, manual or remote control mechanisms. Detailed records for each well, while not necessarily part of the plan should be kept by the owner or operator.

(xi) Before drilling below any casing string, and during workover operations a blowout preventer (BOP) assembly and well control system should be installed that is capable of controlling any wellhead pressure that is expected to be encountered while that BOP assembly is on the well. Casing and BOP installations should be in accordance with State regulatory agency requirements.

(xii) Extraordinary well control measures should be provided should emergency conditions, including fire, loss of control and other abnormal conditions, occur. The degree of control system redundancy should vary with hazard exposure and probable consequences of failure. It is recommended that surface shut-in systems have redundant or "fail close" valving. Subsurface safety valves may not be needed in producing wells that will not flow but should be installed as required by applicable State regulations.

(xiii) In order that there will be no misunderstanding of joint and separate duties and obligations to perform work in a safe and pollution free manner, written instructions should be prepared by the owner or operator for contractors and subcontractors to follow whenever contract activities include servicing a well or systems appurtenant to a well or pressure vessel. Such instructions and procedures should be maintained at the offshore production facility. Under certain circumstances and conditions such contractor activities may require the presence at the facility of an authorized representative of the owner or operator who would intervene when necessary to prevent a spill event.

(xiv) All manifolds (headers) should be equipped with check valves on individual flowlines.

(xv) If the shut-in well pressure is greater than the working pressure of the flowline and manifold valves up to and including the header valves associated with that individual flowline, the flowline should be equipped with a high pressure sensing device and shut-in valve at the wellhead unless provided with a pressure relief system to prevent over pressuring.

(xvi) All pipelines appurtenant to the facility should be protected from corrosion. Methods used, such as protective coatings or cathodic protection, should be discussed.

(xvii) Sub-marine pipelines appurtenant to the facility should be adequately protected against environmental stresses and other activities such as fishing operations.

(xviii) Sub-marine pipelines appurtenant to the facility should be in good operating condition at all times and inspected on a scheduled periodic basis for failures. Such inspections should be documented and maintained at the facility.

(8) *Inspections and records.* Inspections required by this part should be in accordance with written procedures developed for the facility by the owner or operator. These written procedures and a record of the inspections, signed by the appropriate supervisor or inspector, should be made part of the SPCC Plan and maintained for a period of three years.

(9) *Security (excluding oil production facilities).*

(i) All plants handling, processing, and storing oil should be fully fenced, and entrance gates should be locked and/or guarded when the plant is not in production or is unattended.

(ii) The master flow and drain valves and any other valves that will permit direct outward flow of the tank's content to the surface should be securely locked in the closed position when in non-operating or non-standby status.

(iii) The starter control on all oil pumps should be locked in the "off" position or located at a site accessible only to authorized personnel when the pumps are in a non-operating or non-standby status.

(iv) The loading/unloading connections of oil pipelines should be securely capped or blank-flanged when not in service or standby service for an extended time. This security practice should also apply to pipelines that are emptied of liquid content either by draining or by inert gas pressure.

(v) Facility lighting should be commensurate with the type and location of the facility. Consideration should be given to: (A) Discovery of spills occurring during hours of darkness, both by operating personnel, if present, and by non-operating personnel (the general public, local police, etc.) and (B) prevention of spills occurring through acts of vandalism.

(10) *Personnel, training and spill prevention procedures.*

(i) Owners or operators are responsible for properly instructing their personnel in the operation and maintenance of equipment to prevent the discharges of oil and applicable pollution control laws, rules and regulations.

(ii) Each applicable facility should have a designated person who is accountable for oil spill prevention and who reports to line management.

(iii) Owners or operators should schedule and conduct spill prevention briefings for their operating personnel at intervals frequent enough to assure adequate understanding of the SPCC Plan for that facility. Such briefings should highlight and describe known spill events or failures, malfunctioning components, and recently developed precautionary measures.

§112.20 Facility response plans.

[§112.20 added at 59 FR 34097, July 1, 1994]

(a) The owner or operator of any non-transportation-related onshore facility that, because of its location, could reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines shall prepare and submit a facility response plan to the Regional Administrator, according to the following provisions:

(1) For the owner or operator of a facility in operation on or before February 18, 1993 who is required to prepare and submit a response plan under 33 U.S.C. 1321(j)(5), the Oil Pollution Act of 1990 (Pub. L. 101-380, 33 U.S.C. 2701 *et seq.*) requires the submission of a response plan that satisfies the requirements of 33 U.S.C. 1321(j)(5) no later than February 18, 1993.

[Sec. 112.20(a)(1)]

(i) The owner or operator of an existing facility that was in operation on or before February 18, 1993 who submitted a response plan by February 18, 1993 shall revise the response plan to satisfy the requirements of this section and resubmit the response plan or updated portions of the response plan to the Regional Administrator by February 18, 1995.

(ii) The owner or operator of an existing facility in operation on or before February 18, 1993 who failed to submit a response plan by February 18, 1993 shall prepare and submit a response plan that satisfies the requirements of this section to the Regional Administrator before August 30, 1994.

(2) The owner or operator of a facility in operation on or after August 30, 1994 that satisfies the criteria in paragraph (f)(1) of this section or that is notified by the Regional Administrator pursuant to paragraph (b) of this section shall prepare and submit a facility response plan that satisfies the requirements of this section to the Regional Administrator.

(i) For a facility that commenced operations after February 18, 1993 but prior to August 30, 1994, and is required to prepare and submit a response plan based on the criteria in paragraph (f)(1) of this section, the owner or operator shall submit the response plan or updated portions of the response plan, along with a completed version of the response plan cover sheet contained in Appendix F to this part, to the Regional Administrator prior to August 30, 1994.

(ii) For a newly constructed facility that commences operation after August 30, 1994, and is required to prepare and submit a response plan based on the criteria in paragraph (f)(1) of this section, the owner or operator shall submit the response plan, along with a completed version of the response plan cover sheet contained in Appendix F to this part, to the Regional Administrator prior to the start of operations (adjustments to the response plan to reflect changes that occur at the facility during the start-up phase of operations must be submitted to the Regional Administrator after an operational trial period of 60 days).

(iii) For a facility required to prepare and submit a response plan after August 30, 1994, as a result of a planned change in design, construction, operation, or maintenance that renders the facility subject to the criteria in paragraph (f)(1) of this section, the owner or operator shall submit the response plan, along with a completed version of the response plan cover sheet contained in Appendix F to this part, to the Regional Administrator before the portion of the facility undergoing change commences operations (adjustments to the response plan to reflect changes that occur at the facility during the start-up phase of operations must be submitted to the Regional Administrator after an operational trial period of 60 days).

(iv) For a facility required to prepare and submit a response plan after August 30, 1994, as a result of an unplanned event or change in facility characteristics that renders the facility subject to the criteria in paragraph (f)(1) of this section, the owner or operator shall submit the response plan, along with a completed version of the response plan cover sheet contained in Appendix F to this part, to the Regional Administrator within six months of the unplanned event or change.

(3) In the event the owner or operator of a facility that is required to prepare and submit a response plan uses an alternative formula that is comparable to one contained in Appendix C to this part to evaluate the criterion in paragraph (f)(1)(ii)(B) or (f)(1)(ii)(C) of this section, the owner or operator shall attach documentation to the response plan cover sheet contained in Appendix F to this part that demonstrates the reliability and analytical soundness of the alternative formula.

(b) (1) The Regional Administrator may at any time require the owner or operator of any non-transportation-related onshore facility to prepare and submit a facility response plan under this section after considering the factors in paragraph (f)(2) of this section. If such a determination is made, the Regional Administrator shall notify the facility owner or operator in writing and shall provide a basis for the determination. If the Regional Administrator notifies the owner or operator in writing of the requirement to prepare and submit a response plan under this section, the owner or operator of the facility shall submit the response plan to the Regional Administrator within six months of receipt of such written notification.

(2) The Regional Administrator shall review plans submitted by such facilities to determine whether the facility could, because of its location, reasonably be expected to cause significant and substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines.

(c) The Regional Administrator shall determine whether a facility could, because of its location, reasonably be expected to cause significant and substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines, based on the factors in paragraph (f)(3) of this section. If such a determination is made, the Regional Administrator shall notify the owner or operator of the facility in writing and:

(1) Promptly review the facility response plan;

(2) Require amendments to any response plan that does not meet the requirements of this section;

(3) Approve any response plan that meets the requirements of this section; and

(4) Review each response plan periodically thereafter on a schedule established by the Regional Administrator provided that the period between plan reviews does not exceed five years.

(d) (1) The owner or operator of a facility for which a response plan is required under this part shall revise and resubmit revised portions of the response plan within 60 days of each facility change that materially may affect the response to a worst case discharge, including:

(i) A change in the facility's configuration that materially alters the information included in the response plan;

(ii) A change in the type of oil handled, stored, or transferred that materially alters the required response resources;

(iii) A material change in capabilities of the oil spill removal organization(s) that provide equipment and personnel to respond to discharges of oil described in paragraph (h)(5) of this section;

(iv) A material change in the facility's spill prevention and response equipment or emergency response procedures; and

(v) Any other changes that materially affect the implementation of the response plan.

(2) Except as provided in paragraph (d)(1) of this section, amendments to personnel and telephone number lists included in the response plan and a change in the oil spill removal organization(s) that

[Sec. 112.20(d)(2)]

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does not result in a material change in support capabilities do not require approval by the Regional Administrator. Facility owners or operators shall provide a copy of such changes to the Regional Administrator as the revisions occur.

(3) The owner or operator of a facility that submits changes to a response plan as provided in paragraph (d)(1) or (d)(2) of this section shall provide the EPA-issued facility identification number (where one has been assigned) with the changes.

(4) The Regional Administrator shall review for approval changes to a response plan submitted pursuant to paragraph (d)(1) of this section for a facility determined pursuant to paragraph (f)(3) of this section to have the potential to cause significant and substantial harm to the environment.

(e) If the owner or operator of a facility determines pursuant to paragraph (a)(2) of this section that the facility could not, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines, the owner or operator shall complete and maintain at the facility the certification form contained in Appendix C to this part and, in the event an alternative formula that is comparable to one contained in Appendix C to this part is used to evaluate the criterion in paragraph (f)(1)(ii)(B) or (f)(1)(ii)(C) of this section, the owner or operator shall attach documentation to the certification form that demonstrates the reliability and analytical soundness of the comparable formula and shall notify the Regional Administrator in writing that an alternative formula was used.

(f) (1) A facility could, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines pursuant to paragraph (a)(2) of this section, if it meets any of the following criteria applied in accordance with the flowchart contained in Attachment C-I to Appendix C to this part:

(i) The facility transfers oil over water to or from vessels and has a total oil storage capacity greater than or equal to 42,000 gallons; or

(ii) The facility's total oil storage capacity is greater than or equal to 1 million gallons, and one of the following is true:

(A) The facility does not have secondary containment for each aboveground storage area sufficiently large to contain the capacity of the largest aboveground oil storage tank within each storage area plus sufficient freeboard to allow for precipitation;

(B) The facility is located at a distance (as calculated using the appropriate formula in Appendix C to this part or a comparable formula) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments. For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III of the "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (see Appendix E to this part, section 10, for availability) and the applicable Area Contingency Plan prepared pursuant to section 311(j)(4) of the Clean Water Act;

(C) The facility is located at a distance (as calculated using the appropriate formula in Appendix C to this part or a comparable formula) such that a discharge from the facility would shut down a public drinking water intake; or

(D) The facility has had a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years.

(2) (i) To determine whether a facility could, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines pursuant to paragraph (b) of this section, the Regional Administrator shall consider the following:

(A) Type of transfer operation;

(B) Oil storage capacity;

(C) Lack of secondary containment;

(D) Proximity to fish and wildlife and sensitive environments and other areas determined by the Regional Administrator to possess ecological value;

(E) Proximity to drinking water intakes;

(F) Spill history; and

(G) Other site-specific characteristics and environmental factors that the Regional Administrator determines to be relevant to protecting the environment from harm by discharges of oil into or on navigable waters or adjoining shorelines.

(ii) Any person, including a member of the public or any representative from a Federal, State, or local agency who believes that a facility subject to this section could, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines may petition the Regional Administrator to determine whether the facility meets the criteria in paragraph (f)(2)(i) of this section. Such petition shall include a discussion of how the factors in paragraph (f)(2)(i) of this section apply to the facility in question. The RA shall consider such petitions and respond in an appropriate amount of time.

(3) To determine whether a facility could, because of its location, reasonably be expected to cause significant and substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines, the Regional Administrator may consider the factors in paragraph (f)(2) of this section as well as the following:

(i) Frequency of past spills;

(ii) Proximity to navigable waters;

(iii) Age of oil storage tanks; and

(iv) Other facility-specific and Region-specific information, including local impacts on public health.

(g) (1) All facility response plans shall be consistent with the requirements of the National Oil and Hazardous Substance Pollution Contingency Plan (40 CFR part 300) and applicable Area Contingency Plans prepared pursuant to section 311(j)(4) of the Clean Water Act. The facility response plan should be coordinated with the local emergency response plan developed by the local emergency planning committee under section 303 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (42 U.S.C. 11001 et seq.). Upon request, the owner or operator should provide a copy of the facility response plan to the local emergency planning committee or State emergency response commission.

(2) The owner or operator shall review relevant portions of the National Oil and Hazardous Substances Pollution Contingency Plan and applicable Area Contingency Plan annually and, if necessary, revise the facility response plan to ensure consistency with these plans.

(3) The owner or operator shall review and update the facility response plan periodically to reflect changes at the facility.

[Sec. 112.20(g)(3)]

(h) A response plan shall follow the format of the model facility-specific response plan included in Appendix F to this part, unless an equivalent response plan has been prepared to meet State or other Federal requirements. A response plan that does not follow the specified format in Appendix F to this part shall have an emergency response action plan as specified in paragraphs (h)(1) of this section and be supplemented with a cross-reference section to identify the location of the elements listed in paragraphs (h)(2) through (h)(10) of this section. To meet the requirements of this part, a response plan shall address the following elements, as further described in Appendix F to this part:

(1) *Emergency response action plan.* The response plan shall include an emergency response action plan in the format specified in paragraphs (h)(1)(i) through (viii) of this section that is maintained in the front of the response plan, or as a separate document accompanying the response plan, and that includes the following information:

(i) The identity and telephone number of a qualified individual having full authority, including contracting authority, to implement removal actions;

(ii) The identity of individuals or organizations to be contacted in the event of a discharge so that immediate communications between the qualified individual identified in paragraph (h)(1) of this section and the appropriate Federal officials and the persons providing response personnel and equipment can be ensured;

(iii) A description of information to pass to response personnel in the event of a reportable spill;

(iv) A description of the facility's response equipment and its location;

(v) A description of response personnel capabilities, including the duties of persons at the facility during a response action and their response times and qualifications;

(vi) Plans for evacuation of the facility and a reference to community evacuation plans, as appropriate;

(vii) A description of immediate measures to secure the source of the discharge, and to provide adequate containment and drainage of spilled oil; and

(viii) A diagram of the facility.

(2) *Facility information:* The response plan shall identify and discuss the location and type of the facility, the identity and tenure of the present owner and operator, and the identity of the qualified individual identified in paragraph (h)(1) of this section.

(3) *Information about emergency response.* The response plan shall include:

(i) The identity of private personnel and equipment necessary to remove to the maximum extent practicable a worst case discharge and other discharges of oil described in paragraph (h)(5) of this section, and to mitigate or prevent a substantial threat of a worst case discharge (To identify response resources to meet the facility response plan requirements of this section, owners or operators shall follow Appendix E to this part or, where not appropriate, shall clearly demonstrate in the response plan why use of Appendix E of this part is not appropriate at the facility and make comparable arrangements for response resources);

(ii) Evidence of contracts or other approved means for ensuring the availability of such personnel and equipment;

(iii) The identity and the telephone number of individuals or organizations to be contacted in the event of a discharge so that immediate communications between the qualified individual identified in paragraph (h)(1) of this section and the appropriate Federal official and the persons providing response personnel and equipment can be ensured;

(iv) A description of information to pass to response personnel in the event of a reportable spill;

(v) A description of response personnel capabilities, including the duties of persons at the facility during a response action and their response times and qualifications;

(vi) A description of the facility's response equipment, the location of the equipment, and equipment testing;

(vii) Plans for evacuation of the facility and a reference to community evacuation plans, as appropriate;

(viii) A diagram of evacuation routes; and

(ix) A description of the duties of the qualified individual identified in paragraph (h)(1) of this section, that include:

(A) Activate internal alarms and hazard communication systems to notify all facility personnel;

(B) Notify all response personnel, as needed;

(C) Identify the character, exact source, amount, and extent of the release, as well as the other items needed for notification;

(D) Notify and provide necessary information to the appropriate Federal, State, and local authorities with designated response roles, including the National Response Center, State Emergency Response Commission, and Local Emergency Planning Committee;

(E) Assess the interaction of the spilled substance with water and/or other substances stored at the facility and notify response personnel at the scene of that assessment;

(F) Assess the possible hazards to human health and the environment due to the release. This assessment must consider both the direct and indirect effects of the release (i.e., the effects of any toxic, irritating, or asphyxiating gases that may be generated, or the effects of any hazardous surface water runoffs from water or chemical agents used to control fire and heat-induced explosion);

(G) Assess and implement prompt removal actions to contain and remove the substance released;

(H) Coordinate rescue and response actions as previously arranged with all response personnel;

(I) Use authority to immediately access company funding to initiate cleanup activities; and

(J) Direct cleanup activities until properly relieved of this responsibility.

(4) *Hazard evaluation.* The response plan shall discuss the facility's known or reasonably identifiable history of discharges reportable under 40 CFR part 110 for the entire life of the facility and shall identify areas within the facility where discharges could occur and what the potential effects of the discharges would be on the affected environment. To assess the range of areas potentially affected, owners or operators shall, where appropriate, consider the distance calculated in paragraph (f)(1)(ii) of this section to determine whether a facility could, because of its location, reasonably be expected to cause substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines.

(5) *Response planning levels.* The response plan shall include discussion of specific planning scenarios for:

[Sec. 112.20(h)(5)]

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(i) A worst case discharge, as calculated using the appropriate worksheet in Appendix D to this part. In cases where the Regional Administrator determines that the worst case discharge volume calculated by the facility is not appropriate, the Regional Administrator may specify the worst case discharge amount to be used for response planning at the facility. For complexes, the worst case planning quantity shall be the larger of the amounts calculated for each component of the facility;

(ii) A discharge of 2,100 gallons or less, provided that this amount is less than the worst case discharge amount. For complexes, this planning quantity shall be the larger of the amounts calculated for each component of the facility; and

(iii) A discharge greater than 2,100 gallons and less than or equal to 36,000 gallons or 10 percent of the capacity of the largest tank at the facility, whichever is less, provided that this amount is less than the worst case discharge amount. For complexes, this planning quantity shall be the larger of the amounts calculated for each component of the facility.

(6) *Discharge detection systems.* The response plan shall describe the procedures and equipment used to detect discharges.

(7) *Plan implementation.* The response plan shall describe:

(i) Response actions to be carried out by facility personnel or contracted personnel under the response plan to ensure the safety of the facility and to mitigate or prevent discharges described in paragraph (h)(5) of this section or the substantial threat of such discharges;

(ii) A description of the equipment to be used for each scenario;

(iii) Plans to dispose of contaminated cleanup materials; and

(iv) Measures to provide adequate containment and drainage of spilled oil.

(8) *Self-inspection, drills/exercises, and response training.* The response plan shall include:

(i) A checklist and record of inspections for tanks, secondary containment, and response equipment;

(ii) A description of the drill/exercise program to be carried out under the response plan as described in §112.21;

(iii) A description of the training program to be carried out under the response plan as described in §112.21; and

(iv) Logs of discharge prevention meetings, training sessions, and drills/exercises. These logs may be maintained as an annex to the response plan.

(9) *Diagrams.* The response plan shall include site plan and drainage plan diagrams.

(10) *Security systems.* The response plan shall include a description of facility security systems.

(11) *Response plan cover sheet.* The response plan shall include a completed response plan cover sheet provided in Section 2.0 of Appendix F to this part.

(i) (1) In the event the owner or operator of a facility does not agree with the Regional Administrator's determination that the facility could, because of its location, reasonably be expected to cause substantial harm or significant and substantial harm to the environment by discharging oil into or on the navigable waters or adjoining shorelines, or that amendments to the facility response plan are necessary prior to approval, such as changes to the worst case discharge planning volume, the owner or operator may submit a request for reconsideration to the Regional Administrator and provide additional information and data in writing to support the request. The request and accompanying information must be submitted to the Regional Administrator within 60 days of receipt of notice of the Regional Administrator's original decision. The Regional Administrator shall consider the request and render a decision as rapidly as practicable.

(2) In the event the owner or operator of a facility believes a change in the facility's classification status is warranted because of an unplanned event or change in the facility's characteristics (i.e., substantial harm or significant and substantial harm), the owner or operator may submit a request for reconsideration to the Regional Administrator and provide additional information and data in writing to support the request. The Regional Administrator shall consider the request and render a decision as rapidly as practicable.

(3) After a request for reconsideration under paragraph (i)(1) or (i)(2) of this section has been denied by the Regional Administrator, an owner or operator may appeal a determination made by the Regional Administrator. The appeal shall be made to the EPA Administrator and shall be made in writing within 60 days of receipt of the decision from the Regional Administrator that the request for reconsideration was denied. A complete copy of the appeal must be sent to the Regional Administrator at the time the appeal is made. The appeal shall contain a clear and concise statement of the issues and points of fact in the case. It also may contain additional information from the owner or operator, or from any other person. The EPA Administrator may request additional information from the owner or operator, or from any other person. The EPA Administrator shall render a decision as rapidly as practicable and shall notify the owner or operator of the decision.

§112.21 Facility response training and drills/exercises.

[§112.21 added at 59 FR 34097, July 1, 1994]

(a) The owner or operator of any facility required to prepare a facility response plan under §112.20 shall develop and implement a facility response training program and a drill/exercise program that satisfy the requirements of this section. The owner or operator shall describe the programs in the response plan as provided in §112.20(h)(8).

(b) The facility owner or operator shall develop a facility response training program to train those personnel involved in oil spill response activities. It is recommended that the training program be based on the USCG's Training Elements for Oil Spill Response, as applicable to facility operations. An alternative program can also be acceptable subject to approval by the Regional Administrator.

(1) The owner or operator shall be responsible for the proper instruction of facility personnel in the procedures to respond to discharges of oil and in applicable oil spill response laws, rules, and regulations.

(2) Training shall be functional in nature according to job tasks for both supervisory and non-supervisory operational personnel.

(3) Trainers shall develop specific lesson plans on subject areas relevant to facility personnel involved in oil spill response and cleanup.

(c) The facility owner or operator shall develop a program of facility response drills/exercises, including evaluation pro-

cedures. A program that follows the National Preparedness for Response Exercise Program (PREP) (see Appendix E to this part, section 10, for availability) will be deemed satisfactory for purposes of this section. An alternative program can also be acceptable subject to approval by the Regional Administrator.

Appendix A to Part 112—Memorandum of Understanding Between the Secretary of Transportation and the Administrator of the Environmental Protection Agency

[Former Appendix redesignated as Appendix A to Part 112 at 59 FR 34097, July 1, 1994]

SECTION II—DEFINITIONS

The Environmental Protection Agency and the Department of Transportation agree that for the purposes of Executive Order 11548, the term:

(1) "Non-transportation-related onshore and offshore facilities" means:

(A) Fixed onshore and offshore oil well drilling facilities including all equipment and appurtenances related thereto used in drilling operations for exploratory or development wells, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(B) Mobile onshore and offshore oil well drilling platforms, barges, trucks, or other mobile facilities including all equipment and appurtenances related thereto when such mobile facilities are fixed in position for the purpose of drilling operations for exploratory or development wells, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(C) Fixed onshore and offshore oil production structures, platforms, derricks, and rigs including all equipment and appurtenances related thereto, as well as completed wells and the wellhead separators, oil separators, and storage facilities used in the production of oil, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(D) Mobile onshore and offshore oil production facilities including all equipment and appurtenances related thereto as well as completed wells and wellhead equipment, piping from wellheads to oil separators, oil separators, and storage facilities used in the production of oil when such mobile facilities are fixed in position for the purpose of oil production operations, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(E) Oil refining facilities including all equipment and appurtenances related thereto as well as in-plant processing units, storage units, piping, drainage systems and waste treatment units used in the refining of oil, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(F) Oil storage facilities including all equipment and appurtenances related thereto as well as fixed bulk plant storage, terminal oil storage facilities, consumer storage, pumps and drainage systems used in the storage of oil, but excluding inline or breakout storage tanks needed for the continuous operation of a pipeline system and any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(G) Industrial, commercial, agricultural or public facilities which use and store oil, but excluding any terminal facility, unit or process integrally associated with the handling or transferring of oil in bulk to or from a vessel.

(H) Waste treatment facilities including in-plant pipelines, effluent discharge lines, and storage tanks, but excluding waste treatment facilities located on vessels and terminal storage tanks and appurtenances for the reception of oily ballast water or tank washings from vessels and associated systems used for off-loading vessels.

(I) Loading racks, transfer hoses, loading arms and other equipment which are appurtenant to a nontransportation-related facility or terminal facility and which are used to transfer oil in bulk to or from highway vehicles or railroad cars.

(J) Highway vehicles and railroad cars which are used for the transport of oil exclusively within the confines of a nontransportation-related facility and which are not intended to transport oil in interstate or intrastate commerce.

(K) Pipeline systems which are used for the transport of oil exclusively within the confines of a nontransportation-related facility or terminal facility and which are not intended to transport oil in interstate or intrastate commerce, but excluding pipeline systems used to transfer oil in bulk to or from a vessel.

(2) "Transportation-related onshore and offshore facilities" means:

(A) Onshore and offshore terminal facilities including transfer hoses, loading arms and other equipment and appurtenances used for the purpose of handling or transferring oil in bulk to or from a vessel as well as storage tanks and appurtenances for the reception of oily ballast water or tank washings from vessels, but excluding terminal waste treatment facilities and terminal oil storage facilities.

(B) Transfer hoses, loading arms and other equipment appurtenant to a nontransportation-related facility which is used to transfer oil in bulk to or from a vessel.

(C) Interstate and intrastate onshore and offshore pipeline systems including pumps and appurtenances related thereto as well as in-line or breakout storage tanks needed for the continuous operation of a pipeline system, and pipelines from onshore and offshore oil production facilities, but excluding onshore and offshore piping from wellheads to oil separators and pipelines which are used for the transport of oil exclusively within the confines of a nontransportation-related facility or terminal facility and which are not intended to transport oil in interstate or intrastate commerce or to transfer oil in bulk to or from a vessel.

(D) Highway vehicles and railroad cars which are used for the transport of oil in interstate or intrastate commerce and the equipment and appurtenances related thereto, and equipment used for the fueling of locomotive units, as well as the rights-of-way on which they operate. Excluded are highway vehicles and railroad cars and motive power used exclusively within the confines of a nontransportation-related facility or terminal facility and which are not intended for use in interstate or intrastate commerce.

Appendix B to Part 112—Memorandum of Understanding Among the Secretary of the Interior, Secretary of Transportation, and Administrator of the Environmental Protection Agency

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[Appendix B added at 59 FR 34097, July 1, 1994]

Purpose

This Memorandum of Understanding (MOU) establishes the jurisdictional responsibilities for offshore facilities, including pipelines, pursuant to section 311(j)(1)(c), (j)(5), and (j)(6)(A) of the Clean Water Act (CWA), as amended by the Oil Pollution Act of 1990 (Public Law 101-380). The Secretary of the Department of the Interior (DOI), Secretary of the Department of Transportation (DOT), and Administrator of the Environmental Protection Agency (EPA) agree to the division of responsibilities set forth below for spill prevention and control, response planning, and equipment inspection activities pursuant to those provisions.

Background

Executive Order (E.O.) 12777 (56 FR 54757) delegates to DOI, DOT, and EPA various responsibilities identified in section 311(j) of the CWA. Sections 2(b)(3), 2(d)(3), and 2(e)(3) of E.O. 12777 assigned to DOI spill prevention and control, contingency planning, and equipment inspection activities associated with offshore facilities. Section 311(a)(11) defines the term "offshore facility" to include facilities of any kind located in, on, or under navigable waters of the United States. By using this definition, the traditional DOI role of regulating facilities on the Outer Continental Shelf is expanded by E.O. 12777 to include inland lakes, rivers, streams, and any other inland waters.

Responsibilities

Pursuant to section 2(i) of E.O. 12777, DOI redelegates, and EPA and DOT agree to assume, the functions vested in DOI by sections 2(b)(3), 2(d)(3), and 2(e)(3) of E.O. 12777 as set forth below. For purposes of this MOU, the term "coast line" shall be defined as in the Submerged Lands Act (43 U.S.C. 1301(c)) to mean "the line of ordinary low water along that portion of the coast which is in direct contact with the open sea and the line marking the seaward limit of inland waters."

1. To EPA, DOI redelegates responsibility for non-transportation-related offshore facilities located landward of the coast line.

2. To DOT, DOI redelegates responsibility for transportation-related facilities, including pipelines, located landward of the coast line. The DOT retains jurisdiction for deepwater ports and their associated seaward pipelines, as delegated by E.O. 12777.

3. The DOI retains jurisdiction over facilities, including pipelines, located seaward of the coast line, except for deepwater ports and associated seaward pipelines delegated by E.O. 12777 to DOT.

Effective Date

This MOU is effective on the date of the final execution by the indicated signatories.

Limitations

1. The DOI, DOT, and EPA may agree in writing to exceptions to this MOU on a facility-specific basis. Affected parties will receive notification of the exceptions.

2. Nothing in this MOU is intended to replace, supersede, or modify any existing agreements between or among DOI, DOT, or EPA.

Modification and Termination

Any party to this agreement may propose modifications by submitting them in writing to the heads of the other agency/department. No modification may be adopted except with the consent of all parties. All parties shall indicate their consent to or disagreement with any proposed modification within 60 days of receipt. Upon the request of any party, representatives of all parties shall meet for the purpose of considering exceptions or modifications to this agreement. This MOU may be terminated only with the mutual consent of all parties.

Dated: November 8, 1993.
Bruce Babbitt,
Secretary of the Interior.
Dated: December 14, 1993.
Federico Pen<lisc;255≤AE6a,
Secretary of Transportation.
Dated: February 3, 1994.
Carol M. Browner,
Administrator, Environmental Protection Agency.

Appendix C to Part 112—Substantial Harm Criteria

[Appendix C added at 59 FR 34097, July 1, 1994]

1.0 Introduction

The flowchart provided in Attachment C-I to this appendix shows the decision tree with the criteria to identify whether a facility "could reasonably be expected to cause substantial harm to the environment by discharging into or on the navigable waters or adjoining shorelines." In addition, the Regional Administrator has the discretion to identify facilities that must prepare and submit facility-specific response plans to EPA.

1.1 Definitions

1.1.1 *Great Lakes* means Lakes Superior, Michigan, Huron, Erie, and Ontario, their connecting and tributary waters, the Saint Lawrence River as far as Saint Regis, and adjacent port areas.

1.1.2Higher Volume Port Areas include

(1) Boston, MA;
(2) New York, NY;
(3) Delaware Bay and River to Philadelphia, PA;
(4) St. Croix, VI;
(5) Pascagoula, MS;
(6) Mississippi River from Southwest Pass, LA to Baton Rouge, LA;
(7) Louisiana Offshore Oil Port (LOOP), LA;
(8) Lake Charles, LA;
(9) Sabine-Neches River, TX;
(10) Galveston Bay and Houston Ship Channel, TX;
(11) Corpus Christi, TX;
(12) Los Angeles/Long Beach Harbor, CA;
(13) San Francisco Bay, San Pablo Bay, Carquinez Strait, and Suisun Bay to Antioch, CA;
(14) Straits of Juan de Fuca from Port Angeles, WA to and including Puget Sound, WA;
(15) Prince William Sound, AK; and
(16) Others as specified by the Regional Administrator for any EPA Region.

1.1.3 Inland Area means the area shoreward of the boundary lines defined in 46 CFR part 7, except in the Gulf of Mexico. In the Gulf of Mexico, it means the area shoreward of the lines of demarcation (COLREG lines as defined in 33 CFR 80.740—80.850). The inland area does not include the Great Lakes.

1.1.4 Rivers and Canals means a body of water confined within the inland area, including the Intracoastal Waterways and other waterways artificially created for

navigating that have project depths of 12 feet or less.

2.0 Description of Screening Criteria for the Substantial Harm Flowchart

A facility that has the potential to cause substantial harm to the environment in the event of a discharge must prepare and submit a facility-specific response plan to EPA in accordance with Appendix F to this part. A description of the screening criteria for the substantial harm flowchart is provided below:

2.1 *Non-Transportation-Related Facilities With a Total Oil Storage Capacity Greater Than or Equal to 42,000 Gallons Where Operations Include Over-Water Transfers of Oil.* A non-transportation-related facility with a total oil storage capacity greater than 42,000 gallons that transfers oil over water to or from vessels must submit a response plan to EPA. Daily oil transfer operations at these types of facilities occur between barges and vessels and onshore bulk storage tanks over open water. These facilities are located adjacent to navigable water.

2.2 *Lack of Adequate Secondary Containment at Facilities With a Total Oil Storage Capacity Greater Than or Equal to 1 Million Gallons.* Any facility with a total oil storage capacity greater than or equal to 1 million gallons without secondary containment sufficiently large to contain the capacity of the largest aboveground oil storage tank within each area plus sufficient freeboard to allow for precipitation must submit a response plan to EPA. Secondary containment structures that meet the standard of good engineering practice for the purposes of this part include berms, dikes, retaining walls, curbing, culverts, gutters, or other drainage systems.

2.3 *Proximity to Fish and Wildlife and Sensitive Environments at Facilities With a Total Oil Storage Capacity Greater Than or Equal to 1 Million Gallons.* A facility with a total oil storage capacity greater than or equal to 1 million gallons must submit its response plan if it is located at a distance such that a discharge from the facility could cause injury (as defined at 40 CFR 112.2) to fish and wildlife and sensitive environments. For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (see Appendix E to this part, section 10, for availability) and the applicable Area Contingency Plan. Facility owners or operators must determine the distance at which an oil spill could cause injury to fish and wildlife and sensitive environments using the appropriate formula presented in Attachment C-III to this appendix or a comparable formula.

2.4 *Proximity to Public Drinking Water Intakes at Facilities with a Total Storage Oil Capacity Greater Than or Equal to 1 Million Gallons.* A facility with a total storage capacity greater than or equal to 1 million gallons must submit its response plan if it is located at a distance such that a discharge from the facility would shut down a public drinking water intake, which is analogous to a public water system as described at 40 CFR 143.2(c). The distance at which an oil spill from an SPCC-regulated facility would shut down a public drinking water intake shall be calculated using the appropriate formula presented in Attachment C-III to this appendix or a comparable formula.

2.5 *Facilities That Have Experienced Reportable Oil Spills in an Amount Greater Than or Equal to 10,000 Gallons Within the Past 5 Years and That Have a Total Oil Storage Capacity Greater Than or Equal to 1 Million Gallons.* A facility's oil spill history within the past 5 years shall be considered in the evaluation for substantial harm. Any facility with a total oil storage capacity greater than or equal to 1 million gallons that has experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the past 5 years must submit a response plan to EPA.

3.0 Certification for Facilities That Do Not Pose Substantial Harm

If the facility does not meet the substantial harm criteria listed in Attachment C-I to this appendix, the owner or operator shall complete and maintain at the facility the certification form contained in Attachment C-II to this appendix. In the event an alternative formula that is comparable to the one in this appendix is used to evaluate the substantial harm criteria, the owner or operator shall attach documentation to the certification form that demonstrates the reliability and analytical soundness of the comparable formula and shall notify the Regional Administrator in writing that an alternative formula was used.

4.0 References

Chow, V.T. 1959. Open Channel Hydraulics. McGraw Hill.

USCG IFR (58 FR 7353, February 5, 1993). This document is available through EPA's rulemaking docket as noted in Appendix E to this part, section 10.

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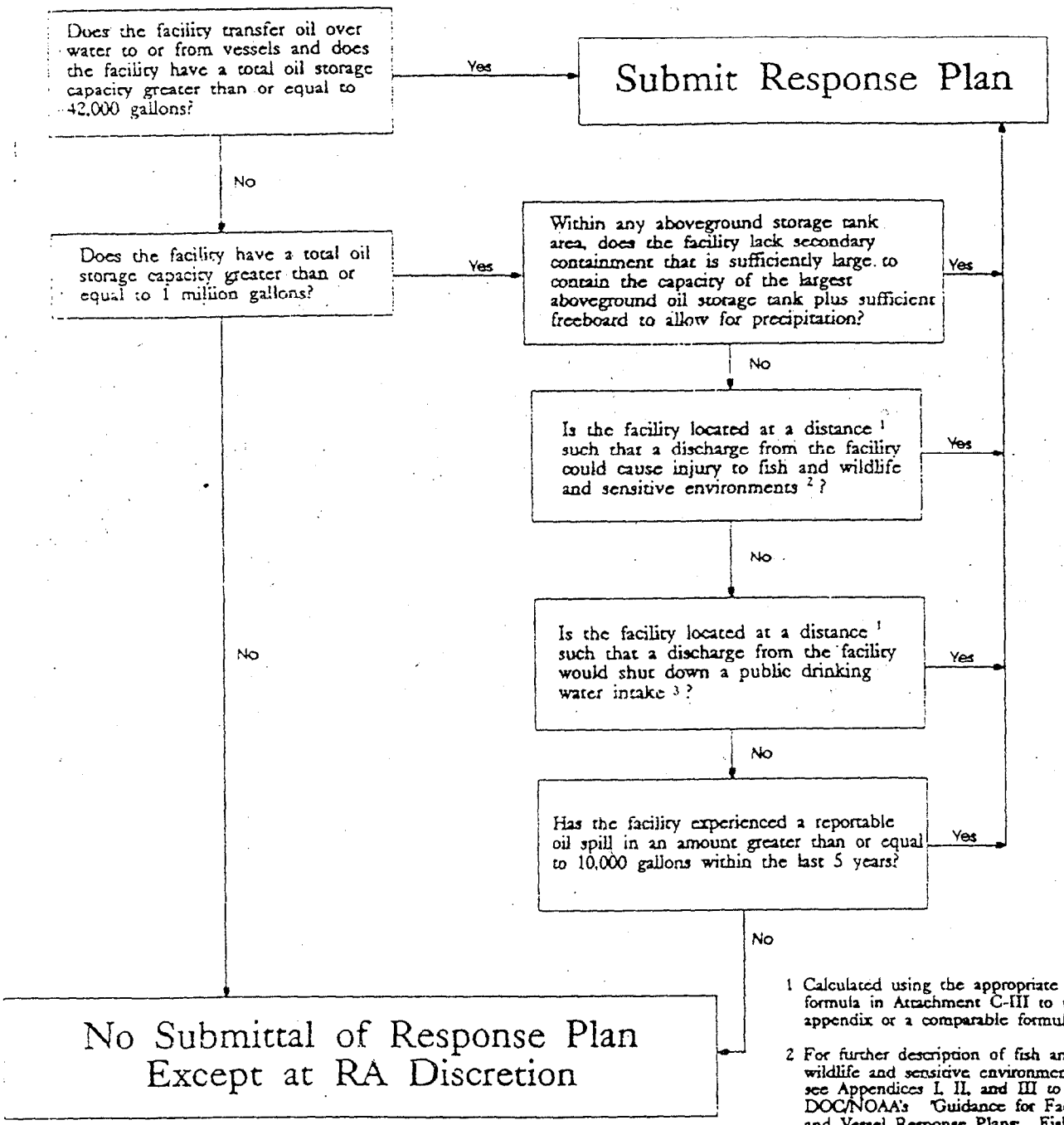
Attachments to Appendix C Attachment C - 1

Flowchart of Criteria for Substantial Harm



1 Calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula.

2 For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (59 FR 14713, March 29, 1994) and the applicable Area Contingency Plan.

3 Public drinking water intakes are analogous to public water systems as described at 40 CFR 143.2(c).

[Part 112, Appendix C]

Attachment C-II—Certification of the Applicability of the Substantial Harm Criteria

Facility Name: _____

Facility Addresses: _____

1. Does the facility transfer oil over water to or from vessels and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

Yes _____ No _____

2. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground oil storage tank area?

Yes _____ No _____

3. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula[1]) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (see Appendix E to this part, section 10, for availability) and the applicable Area Contingency Plan.

Yes _____ No _____

4. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula) such that a discharge from the facility would shut down a public drinking water intake[2]

Yes _____ No _____

5. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?

Yes _____ No _____

Certification

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Signature

_____

Signature

_____

Name (please type or print)

_____

Title

_____

Date

Attachment C-III—Calculation of the Planning Distance

1.0 Introduction

1.1 The facility owner or operator must evaluate whether the facility is located at a distance such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments or disrupt operations at a public drinking water intake. To quantify that distance, EPA considered oil transport mechanisms over land and on still, tidal influence, and moving navigable waters. EPA has determined that the primary concern for calculation of a planning distance is the transport of oil in navigable waters during adverse weather conditions. Therefore, two formulas have been developed to determine distances for planning purposes from the point of discharge at the facility to the potential site of impact on moving and still waters, respectively. The formula for oil transport on moving navigable water is based on the velocity of the water body and the time interval for arrival of response resources. The still water formula accounts for the spread of discharged oil over the surface of the water. The method to determine oil transport on tidal influence areas is based on the type of oil spilled and the distance down current during ebb tide and up current during flood tide to the point of maximum tidal influence.

1.2 EPA's formulas were designed to be simple to use. However, facility owners or operators may calculate planning distances using more sophisticated formulas, which take into account broader scientific or engineering principles, or local conditions. Such comparable formulas may result in different planning distances than EPA's formulas. In the event that an alternative formula that is comparable to one contained in this appendix is used to evaluate the criterion in 40 CFR 112.20(f)(1)(ii)(B) or (f)(1)(ii)(C)), the owner or operator shall attach documentation to the response plan cover sheet contained in Appendix F to this part that demonstrates the reliability and analytical soundness of the alternative formula and shall notify the Regional Administrator in writing that an alternative formula was used.[1]

1.3 A regulated facility may meet the criteria for the potential to cause substantial harm to the environment without having to perform a planning distance calculation. For facilities that meet the substantial harm criteria because of inadequate secondary containment or oil spill history, as listed in the flowchart in Attachment C-I to this appendix, calculation of the planning distance is unnecessary. For facilities that do not meet the substantial harm criteria for secondary containment or oil spill history as listed in the flowchart, calculation of a planning distance for proximity to fish and wildlife and sensitive environments and public drinking water intakes is required, unless it is clear without performing the calculation (e.g., the facility is located in a wetland) that these areas would be impacted.

1.4 A facility owner or operator who must perform a planning distance calculation on navigable water is only required to do so for the type of navigable water conditions (i.e., moving water, still water, or tidal- influenced water) applicable to the

[1]If a comparable formula is used documentation of the reliability and analytical soundness of the comparable formula must be attached to this form.

[2]For the purposes of 40 CFR part 112, public drinking water intakes are analogous to public water systems as described at 40 CFR 143.2(c).

[1]For persistent oils or non-persistent oils, a worst case trajectory model (i.e., an alternative formula) may be substituted for the distance formulas described in still, moving, and tidal waters, subject to Regional Administrator's review of the model. An example of an alternative formula that is comparable to the one contained in this appendix would be a worst case trajectory calculation based on credible adverse winds, currents, and/or river stages, over a range of seasons, weather conditions, and river stages. Based on historical information or a spill trajectory model, the Agency may require that additional fish and wildlife and sensitive environments or public drinking water intakes also be protected.

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facility. If a facility owner or operator determines that more than one type of navigable water condition applies, then the facility owner or operator is required to perform a planning distance calculation for each navigable water type to determine the greatest single distance that oil may be transported. As a result, the final planning distance for oil transport on water shall be the greatest individual distance rather than a summation of each calculated planning distance.

1.5 The planning distance formula for transport on moving waterways contains three variables: the velocity of the navigable water (v), the response time interval (t), and a conversion factor (c). The velocity, v, is determined by using the Chezy-Manning equation, which, in this case, models the flood flow rate of water in open channels. The Chezy-Manning equation contains three variables which must be determined by facility owners or operators. Manning's Roughness Coefficient (for flood flow rates), n, can be determined from Table 1of this attachment. The hydraulic radius, r, can be estimated using the average mid-channel depth from charts provided by the sources listed in Table 2 of this attachment. The average slope of the river, s, can be determined using topographic maps that can be ordered from the U.S. Geological Survey, as listed in Table 2of this attachment.

1.6 Table 3 of this attachment contains specified time intervals for estimating the arrival of response resources at the scene of a discharge. Assuming no prior planning, response resources should be able to arrive at the discharge site within 12 hours of the discovery of any oil discharge in Higher Volume Port Areas and within 24 hours in Great Lakes and all other river, canal, inland, and nearshore areas. The specified time intervals in Table 3 of Appendix C are to be used only to aid in the identification of whether a facility could cause substantial harm to the environment. Once it is determined that a plan must be developed for the facility, the owner or operator shall reference Appendix E to this part to determine appropriate resource levels and response times. The specified time intervals of this appendix include a 3-hour time period for deployment of boom and other response equipment. The Regional Administrator may identify additional areas as appropriate.

2.0 Oil Transport on Moving Navigable Waters

2.1 The facility owner or operator must use the following formula or a comparable formula as described in §112.20(a)(3) to calculate the planning distance for oil transport on moving navigable water:

d=v x t x c; where

d: the distance downstream from a facility within which fish and wildlife and sensitive environments could be injured or a public drinking water intake would be shut down in the event of an oil discharge (in miles);

v: the velocity of the river/navigable water of concern (in ft/sec) as determined by Chezy-Manning's equation (see below and Tables 1and 2 of this attachment);

t: the time interval specified in Table 3 based upon the type of water body and location (in hours); and

c: constant conversion factor 0.68 sec·\ mile/hr·ft (3600 sec/hr ÷ 5280 ft/mile).

2.2 Chezy-Manning's equation is used to determine velocity:

$v=1.5/n \times r^{2/3} \times s^{1/2}$; where ×

v=the velocity of the river of concern (in ft/sec);

n=Manning's Roughness Coefficient from Table 1 of this attachment;

r=the hydraulic radius; the hydraulic radius can be approximated for parabolic channels by multiplying the average mid-channel depth of the river (in feet) by 0.667 (sources for obtaining the mid-channel depth are listed in Table 2of this attachment); and

s=the average slope of the river (unitless) obtained from U.S. Geological Survey topographic maps at the address listed in Table 2of this attachment.

TABLE 1.—MANNING'S ROUGHNESS COEFFICIENT FOR NATURAL STREAMS

[Note: Coefficients are presented for high flow rates at or near flood stage.]

Stream description	Roughness coefficient (n)
Minor Streams (Top Width <100 ft.)	
Clean:	
Straight	0.03
Winding	.04
Sluggish (Weedy, deep pools):	
No trees or brush	.06

TABLE 1.—MANNING'S ROUGHNESS COEFFICIENT FOR NATURAL STREAMS—Contd.

[Note: Coefficients are presented for high flow rates at or near flood stage.]

Stream description	Roughness coefficient (n)
Trees and/or brush	.10
Major Streams (Top Width >100 ft.)	
Regular section:	
(No boulders/brush)	.035
Irregular section:	
(Brush)	.05

TABLE 2.—SOURCES OF R AND S FOR THE CHEZY-MANNING EQUATION

All of the charts and related publications for navigational waters may be ordered from:
Distribution Branch
(N/CG33)
National Ocean Service
Riverdale, Maryland 20737–1199
Phone: (301) 436–6990
There will be a charge for materials ordered and a VISA or Mastercard will be accepted.

The mid-channel depth to be used in the calculation of the hydraulic radius (r) can be obtained directly from the following sources:

Charts of Canadian Coastal and Great Lakes Waters:
Canadian Hydrographic Service
Department of Fisheries and Oceans Institute
P.O. Box 8080
1675 Russell Road
Ottawa, Ontario KIG 3H6
Canada
Phone: (613) 998–4931

Charts and Maps of Lower Mississippi River (Gulf of Mexico to Ohio River and St. Francis, White, Big Sunflower, Atchafalaya, and other rivers):
U.S. Army Corps of Engineers
Vicksburg District
P.O. Box 60
Vicksburg, Mississippi 39180
Phone: (601) 634–5000

Charts of Upper Mississippi River and Illinois Waterway to Lake Michigan:
U.S. Army Corps of Engineers
Rock Island District
P.O. Box 2004
Rock Island, Illinois 61204
Phone: (309) 794–5552

Charts of Missouri River:
U.S. Army Corps of Engineers
Omaha District
6014 U.S. Post Office and Courthouse
Omaha, Nebraska 68102
Phone: (402) 221–3900

Charts of Ohio River:
U.S. Army Corps of Engineers
Ohio River Division
P.O. Box 1159

TABLE 2.—SOURCES OF R AND S FOR THE CHEZY-MANNING EQUATION—Contd.

Cincinnati, Ohio 45201
Phone: (513) 684-3002
Charts of Tennessee Valley Authority Reservoirs, Tennessee River and Tributaries:
Tennessee Valley Authority
Maps and Engineering Section
416 Union Avenue
Knoxville, Tennessee 37902
Phone: (615) 632-2921
Charts of Black Warrior River, Alabama River, Tombigbee River, Apalachicola River and Pearl River:
U.S. Army Corps of Engineers
Mobile District
P.O. Box 2288
Mobile, Alabama 36628-0001
Phone: (205) 690-2511

The average slope of the river (s) may be obtained from topographic maps:
U.S. Geological Survey
Map Distribution
Federal Center
Bldg. 41
Box 25286
Denver, Colorado 80225

Additional information can be obtained from the following sources:
1. The State's Department of Natural Resources (DNR) or the State's Aids to Navigation office;
2. A knowledgeable local marina operator; or
3. A knowledgeable local water authority (e.g., State water commission)

2.3 The average slope of the river (s) can be determined from the topographic maps using the following steps:

(1) Locate the facility on the map.

(2) Find the Normal Pool Elevation at the point of discharge from the facility into the water (A).

(3) Find the Normal Pool Elevation of the public drinking water intake or fish and wildlife and sensitive environment located downstream (B) (Note: The owner or operator should use a minimum of 20 miles downstream as a cutoff to obtain the average slope if the location of a specific public drinking water intake or fish and wildlife and sensitive environment is unknown).

(4) If the Normal Pool Elevation is not available, the elevation contours can be used to find the slope. Determine elevation of the water at the point of discharge from the facility (A). Determine the elevation of the water at the appropriate distance downstream (B). The formula presented below can be used to calculate the slope.

(5) Determine the distance (in miles) between the facility and the public drinking water intake or fish and wildlife and sensitive environments (C).

(6) Use the following formula to find the slope, which will be a unitless value: Average Slope=[(A—B) (ft)/C (miles)] ×[1 mile/5280 feet]

2.4 If it is not feasible to determine the slope and mid-channel depth by the Chezy-Manning equation, then the river velocity can be approximated on- site. A specific length, such as 100 feet, can be marked off along the shoreline. A float can be dropped into the stream above the mark, and the time required for the float to travel the distance can be used to determine the velocity in feet per second. However, this method will not yield an average velocity for the length of the stream, but a velocity only for the specific location of measurement. In addition, the flow rate will vary depending on weather conditions such as wind and rainfall. It is recommended that facility owners or operators repeat the measurement under a variety of conditions to obtain the most accurate estimate of the surface water velocity under adverse weather conditions.

2.5 The planning distance calculations for moving and still navigable waters are based on worst case discharges of persistent oils. Persistent oils are of concern because they can remain in the water for significant periods of time and can potentially exist in large quantities downstream. Owners or operators of facilities that store persistent as well as non-persistent oils may use a comparable formula. The volume of oil discharged is not included as part of the planning distance calculation for moving navigable waters. Facilities that will meet this substantial harm criterion are those with facility capacities greater than or equal to 1 million gallons. It is assumed that these facilities are capable of having an oil discharge of sufficient quantity to cause injury to fish and wildlife and sensitive environments or shut down a public drinking water intake. While owners or operators of transfer facilities that store greater than or equal to 42,000 gallons are not required to use a planning distance formula for purposes of the substantial harm criteria, they should use a planning distance calculation in the development of facility-specific response plans.

TABLE 3.—SPECIFIED TIME INTERVALS

Operating areas	Substantial harm planning time (hrs)
Higher volume port area.	12 hour arrival+3 hour deployment=15 hours.
Great Lakes.	24 hour arrival+3 hour deployment=27 hours.
All other rivers and canals, inland, and near-shore areas.	24 hour arrival+3 hour deployment=27 hours.

2.6 *Example of the Planning Distance Calculation for Oil Transport on Moving Navigable Waters.* The following example provides a sample calculation using the planning distance formula for a facility discharging oil into the Monongahela River:

(1) Solve for v by evaluating n, r, and s for the Chezy-Manning equation:

Find the roughness coefficient, n, on Table 1 of this attachment for a regular section of a major stream with a top width greater than 100 feet. The top width of the river can be found from the topographic map.

n=0.035.

Find slope, s, where A=727 feet, B=710 feet, and C=25 miles.

Solving:

s=[(727 ft—710 ft)/25 miles] x [1 mile/5280 feet]=1.3×10^{-4}

The average mid-channel depth is found by averaging the mid-channel depth for each mile along the length of the river between the facility and the public drinking water intake or the fish or wildlife or sensitive environment (or 20 miles downstream if applicable). This value is multiplied by 0.667 to obtain the hydraulic radius. The mid-channel depth is found by obtaining values for r and s from the sources shown in Table 2for the Monongahela River.

Solving:

r=0.667×20 feet=13.33 feet

Solve for v using:

$v=1.5/n\times r^{2/3}\times s^{1/2}$:

$v=[1.5/0.035]\times(13.33)^{2/3}\times(1.3\times10^{-4})^{1/2}$

v=2.73 feet/second

(2) Find t from Table 3 of this attachment. The Monongahela River's resource response time is 27 hours.

(3) Solve for planning distance, d:

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d=v x t x c

d=(2.73 ft/sec)×(27 hours)×(0.68 sec·\ mile/hr·ft)

d=50 miles

Therefore, 50 miles downstream is the appropriate planning distance for this facility.

3.0 Oil Transport on Still Water

3.1 For bodies of water including lakes or ponds that do not have a measurable velocity, the spreading of the oil over the surface must be considered. Owners or operators of facilities located next to still water bodies may use a comparable means of calculating the planning distance. If a comparable formula is used, documentation of the reliability and analytical soundness of the comparable calculation must be attached to the response plan cover sheet.

3.2 *Example of the Planning Distance Calculation for Oil Transport on Still Water.* To assist those facilities which could potentially discharge into a still body of water, the following analysis was performed to provide an example of the type of formula that may be used to calculate the planning distance. For this example, a worst case discharge of 2,000,000 gallons is used.

(1) The surface area in square feet covered by an oil spill on still water, A1, can be determined by the following formula,[2] where V is the volume of the spill in gallons and C is a constant conversion factor:

$A_1=10^5 \times V^{3/4} \times C$

C=0.1643

$A_1=10^5(2{,}000{,}000 \text{ gallons})^{3/4}(0.1643)$

$A_1=8.7410^8 \text{ ft}^2$

(2) The spreading formula is based on the theoretical condition that the oil will spread uniformly in all directions forming a circle. In reality, the outfall of the discharge will direct the oil to the surface of the water where it intersects the shoreline. Although the oil will not spread uniformly in all directions, it is assumed that the discharge will spread from the shoreline into a semi-circle (this assumption does not account for winds or wave action).

(3) The area of a circle=r^2

(4) To account for the assumption that oil will spread in a semi-circular shape, the area of a circle is divided by 2 and is designated as A_2.

$A_2=(r^2)/2$

Solving for the radius, r, using the relationship $A_1=A_2$: $8.74\times10^8 \text{ ft}^2=(r^2)/2$

Therefore, r=23,586 ft

r=23,586 ft÷5,280 ft/mile=4.5 miles

Assuming a 20 knot wind under storm conditions:

1 knot=1.15 miles/hour

20 knots×1.15 miles/hour/knot=23 miles/hr

Assuming that the oil slick moves at 3 percent of the wind's speed:[3]

23 miles/hour×0.03=0.69 miles/hour

(5) To estimate the distance that the oil will travel, use the times required for response resources to arrive at different geographic locations as shown in Table 3 of this attachment.

For example:

For Higher Volume Port Areas: 15 hrs×0.69 miles/hr=10.4 miles

For Great Lakes and all other areas: 27 hrs×0.69 miles/hr=18.6 miles

(6) The total distance that the oil will travel from the point of discharge, including the distance due to spreading, is calculated as follows:

Higher Volume Port Areas: d=10.4+4.5 miles or approximately 15 miles

Great Lakes and all other areas: d=18.6+4.5 miles or approximately 23 miles

4.0 Oil Transport on Tidal-Influence Areas

4.1 The planning distance method for tidal influence navigable water is based on worst case discharges of persistent and non-persistent oils. Persistent oils are of primary concern because they can potentially cause harm over a greater distance. For persistent oils discharged into tidal waters, the planning distance is 15 miles from the facility down current during ebb tide and to the point of maximum tidal influence or 15 miles, whichever is less, during flood tide.

4.2 For non-persistent oils discharged into tidal waters, the planning distance is 5 miles from the facility down current during ebb tide and to the point of maximum tidal influence or 5 miles, whichever is less, during flood tide.

4.3 *Example of Determining the Planning Distance for Two Types of Navigable Water Conditions.* Below is an example of how to determine the proper planning distance when a facility could impact two types of navigable water conditions: moving water and tidal water.

(1) Facility X stores persistent oil and is located downstream from locks along a slow moving river which is affected by tides. The river velocity, v, is determined to be 0.5 feet/second from the Chezy-Manning equation used to calculate oil transport on moving navigable waters. The specified time interval, t, obtained from Table 3 of this attachment for river areas is 27 hours. Therefore, solving for the planning distance, d:

d=v x t x c

d=(0.5 ft/sec) x (27 hours) x (0.68 sec·\ mile/hr·ft)

d=9.18 miles.

(2) However, the planning distance for maximum tidal influence down current during ebb tide is 15 miles, which is greater than the calculated 9.18 miles. Therefore, 15 miles downstream is the appropriate planning distance for this facility.

5.0 Oil Transport Over Land

5.1 Facility owners or operators must evaluate the potential for oil to be transported over land to navigable waters of the United States. The owner or operator must evaluate the likelihood that portions of a worst case discharge would reach navigable waters via open channel flow or from sheet flow across the land, or be prevented from reaching navigable waters when trapped in natural or man-made depressions excluding secondary containment structures.

5.2 As discharged oil travels over land, it may enter a storm drain or open concrete channel intended for drainage. It is assumed that once oil reaches such an inlet, it will flow into the receiving navigable water. During a storm event, it is highly probable that the oil will either flow into the drainage structures or follow the natural contours of the land and flow into the navigable water. Expected minimum and maximum velocities are provided as examples of open concrete channel and pipe flow. The ranges listed below reflect minimum and maximum velocities

[2]Huang, J.C. and Monastero, F.C., 1982. *Review of the State-of-the-Art of Oil Pollution Models.* Final report submitted to the American Petroleum Institute by Raytheon Ocean Systems, Co., East Providence, Rhode Island.

[3]*Oil Spill Prevention & Control.* National Spill Control School, Corpus Christi State University, Thirteenth Edition, May 1990.

used as design criteria.[4] The calculation below demonstrates that the time required for oil to travel through a storm drain or open concrete channel to navigable water is negligible and can be considered instantaneous. The velocities are:

For open concrete channels:
maximum velocity=25 feet per second
minimum velocity=3 feet per second

For storm drains:
maximum velocity=25 feet per second
minimum velocity=2 feet per second

5.3 Assuming a length of 0.5 mile from the point of discharge through an open concrete channel or concrete storm drain to a navigable water, the travel times (distance/velocity) are:

1.8 minutes at a velocity of 25 feet per second
14.7 minutes at a velocity of 3 feet per second
22.0 minutes for at a velocity of 2 feet per second

5.4 The distances that shall be considered to determine the planning distance are illustrated in Figure C-I of this attachment. The relevant distances can be described as follows:

D1=Distance from the nearest opportunity for discharge, X_1, to a storm drain or an open concrete channel leading to navigable water.

D2=Distance through the storm drain or open concrete channel to navigable water.

D3=Distance downstream from the outfall within which fish and wildlife and sensitive environments could be injured or a public drinking water intake would be shut down as determined by the planning distance formula.

D4=Distance from the nearest opportunity for discharge, X_2, to fish and wildlife and sensitive environments not bordering navigable water.

5.5 A facility owner or operator whose nearest opportunity for discharge is located within 0.5 mile of a navigable water must complete the planning distance calculation (D3) for the type of navigable water near the facility or use a comparable formula.

5.6 A facility that is located at a distance greater than 0.5 mile from a navigable water must also calculate a planning distance (D3) if it is in close proximity (i.e., D1 is less than 0.5 mile and other factors are conducive to oil travel over land) to storm drains that flow to navigable waters. Factors to be considered in assessing oil transport over land to storm drains shall include the topography of the surrounding area, drainage patterns, man-made barriers (excluding secondary containment structures), and soil distribution and porosity. Storm drains or concrete drainage channels that are located in close proximity to the facility can provide a direct pathway to navigable waters, regardless of the length of the drainage pipe. If D1 is less than or equal to 0.5 mile, a discharge from the facility could pose substantial harm because the time to travel the distance from the storm drain to the navigable water (D2) is virtually instantaneous.

5.7 A facility's proximity to fish and wildlife and sensitive environments not bordering a navigable water, as depicted as D4 in Figure C-I of this attachment, must also be considered, regardless of the distance from the facility to navigable waters. Factors to be considered in assessing oil transport over land to fish and wildlife and sensitive environments should include the topography of the surrounding area, drainage patterns, man-made barriers (excluding secondary containment structures), and soil distribution and porosity.

5.8 If a facility is not found to pose substantial harm to fish and wildlife and sensitive environments not bordering navigable waters via oil transport on land, then supporting documentation should be maintained at the facility. However, such documentation should be submitted with the response plan if a facility is found to pose substantial harm.

[4] The design velocities were obtained from Howard County, Maryland Department of Public Works' Storm Drainage Design Manual.

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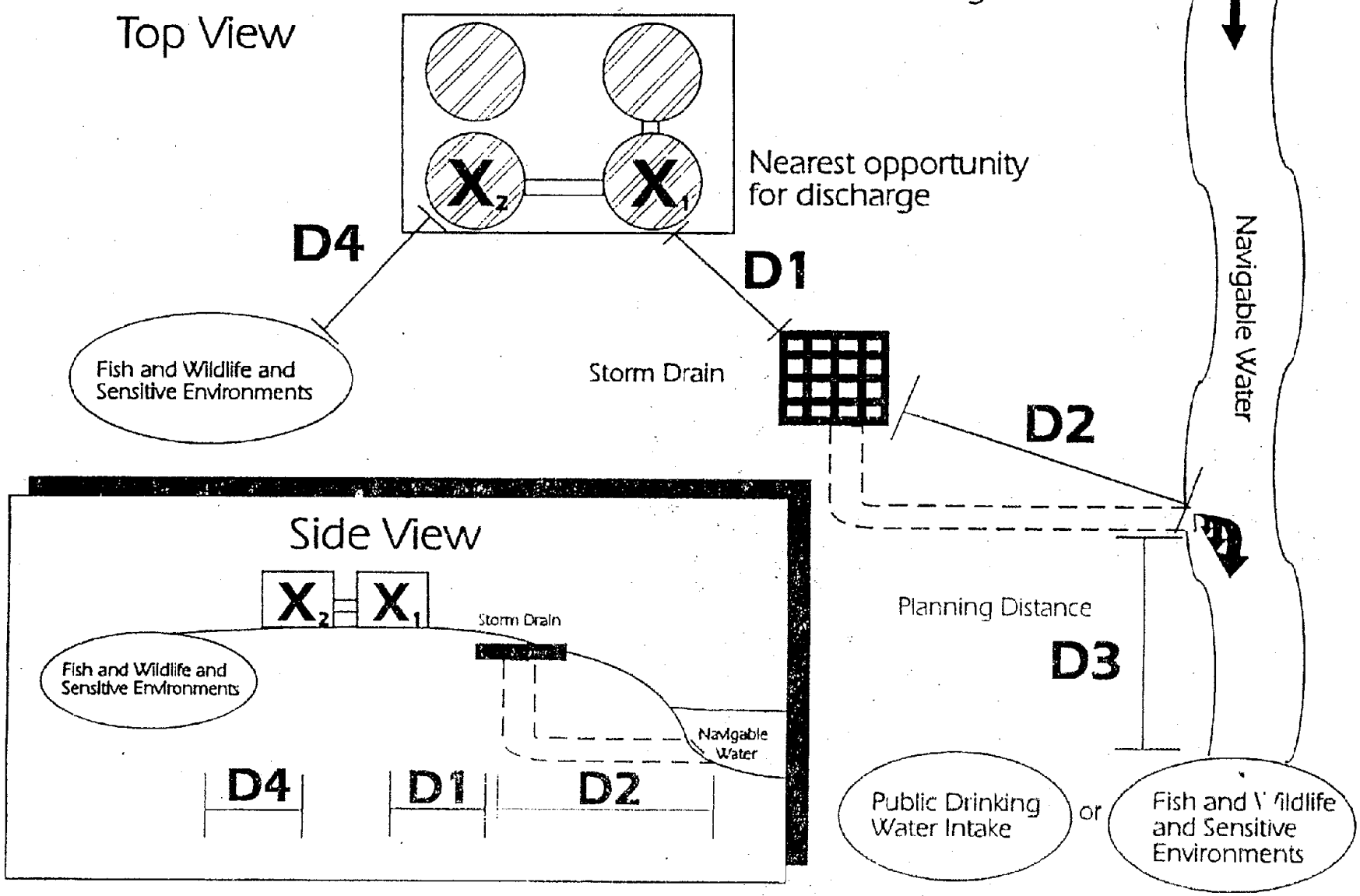
Figure C - 1

Distances that Shall Be Considered to Determine the Planning Distance



** Not to scale **

Appendix D to Part 112—Determination of a Worst Case Discharge Planning Volume

[Appendix D added at 59 FR 34097, July 1, 1994]

1.0 Instructions

1.1 An owner or operator is required to complete this worksheet if the facility meets the criteria, as presented in Appendix C to this part, or it is determined by the RA that the facility could cause substantial harm to the environment. The calculation of a worst case discharge planning volume is used for emergency planning purposes, and is required in 40 CFR 112.20 for facility owners or operators who must prepare a response plan. When planning for the amount of resources and equipment necessary to respond to the worst case discharge planning volume, adverse weather conditions must be taken into consideration. An owner or operator is required to determine the facility's worst case discharge planning volume from either Part A of this appendix for an onshore storage facility, or Part B of this appendix for an onshore production facility. The worksheet considers the provision of adequate secondary containment at a facility.

1.2 For onshore storage facilities and production facilities, permanently manifolded oil storage tanks are defined as tanks that are designed, installed, and/or operated in such a manner that the multiple tanks function as one storage unit (i.e., multiple tank volumes are equalized). In a worst case discharge scenario, a single failure could cause the discharge of the contents of more than one tank. The owner or operator must provide evidence in the response plan that tanks with common piping or piping systems are not operated as one unit. If such evidence is provided and is acceptable to the RA, the worst case discharge planning volume would be based on the capacity of the largest oil storage tank within a common secondary containment area or the largest oil storage tank within a single secondary containment area, whichever is greater. For permanently manifolded tanks that function as one oil storage unit, the worst case discharge planning volume would be based on the combined oil storage capacity of all manifolded tanks or the capacity of the largest single oil storage tank within a secondary containment area, whichever is greater. For purposes of this rule, permanently manifolded tanks that are separated by internal divisions for each tank are considered to be single tanks and individual manifolded tank volumes are not combined.

1.3 For production facilities, the presence of exploratory wells, production wells, and oil storage tanks must be considered in the calculation. Part B of this appendix takes these additional factors into consideration and provides steps for their inclusion in the total worst case discharge planning volume. Onshore oil production facilities may include all wells, flowlines, separation equipment, storage facilities, gathering lines, and auxiliary non-transportation-related equipment and facilities in a single geographical oil or gas field operated by a single operator. Although a potential worst case discharge planning volume is calculated within each section of the worksheet, the final worst case amount depends on the risk parameter that results in the greatest volume.

1.4 Marine transportation-related transfer facilities that contain fixed aboveground onshore structures used for bulk oil storage are jointly regulated by EPA and the U.S. Coast Guard (USCG), and are termed "complexes." Because the USCG also requires response plans from transportation-related facilities to address a worst case discharge of oil, a separate calculation for the worst case discharge planning volume for USCG-related facilities is included in the USCG IFR (see Appendix E to this part, section 10, for availability). All complexes that are jointly regulated by EPA and the USCG must compare both calculations for worst case discharge planning volume derived by using the EPA and USCG methodologies and plan for whichever volume is greater.

PART A: WORST CASE DISCHARGE PLANNING VOLUME CALCULATION FOR ONSHORE STORAGE FACILITIES [1]

Part A of this worksheet is to be completed by the owner or operator of an SPCC-regulated facility (excluding oil production facilities) if the facility meets the criteria as presented in Appendix C to this part, or if it is determined by the RA that the facility could cause substantial harm to the environment. If you are the owner or operator of a production facility, please proceed to Part B of this worksheet.

[1] "Storage facilities" represent all facilities subject to this part, excluding oil production facilities.

A.1 SINGLE-TANK FACILITIES

For facilities containing only one aboveground oil storage tank, the worst case discharge planning volume equals the capacity of the oil storage tank. If adequate secondary containment (sufficiently large to contain the capacity of the aboveground oil storage tank plus sufficient freeboard to allow for precipitation) exists for the oil storage tank, multiply the capacity of the tank by 0.8.

(1) FINAL WORST CASE VOLUME:

_____ GAL

(2) Do not proceed further.

A.2 SECONDARY CONTAINMENT—MULTIPLE-TANK FACILITIES

Are *all* aboveground oil storage tanks or groups of aboveground oil storage tanks at the facility *without* adequate secondary containment? [2]

_____ (Y/N)

A.2.1 If the answer is yes, the final worst case discharge planning volume equals the *total aboveground oil storage capacity at the facility.*

(1) FINAL WORST CASE VOLUME:

_____ GAL

(2) Do not proceed further.

A.2.2 If the answer is no, calculate the total aboveground oil storage capacity of tanks without adequate secondary containment. If *all* aboveground oil storage tanks or groups of aboveground oil storage tanks at the facility have adequate secondary containment, ENTER "0" (zero).

_____ GAL

A.2.3 Calculate the capacity of the largest single aboveground oil storage tank within an adequate secondary containment area or the combined capacity of a group of aboveground oil storage tanks permanently manifolded together, whichever is greater, PLUS THE VOLUME FROM QUESTION A.2.2.

FINAL WORST CASE VOLUME:[3]

_____ GAL

[A.2.3 corrected at 59 FR 49006, Sept. 26, 1994]

[2] Secondary containment is defined in 40 CFR 112.7(e)(2). Acceptable methods and structures for containment are also given in 40 CFR 112.7(c)(1).

[3] All complexes that are jointly regulated by EPA and the USCG must also calculate the worst case discharge planning volume for the transportation-related portions of the facility and plan for whichever volume is greater.

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PART B: WORST CASE DISCHARGE PLANNING VOLUME CALCULATION FOR ONSHORE PRODUCTION FACILITIES

Part B of this worksheet is to be completed by the owner or operator of an SPCC-regulated oil production facility if the facility meets the criteria presented in Appendix C to this part, or if it is determined by the RA that the facility could cause substantial harm. A production facility consists of all wells (producing and exploratory) and related equipment in a single geographical oil or gas field operated by a single operator.

B.1 SINGLE-TANK FACILITIES

B.1.1 For facilities containing only one aboveground oil storage tank, the worst case discharge planning volume equals the capacity of the aboveground oil storage tank plus the production volume of the well with the highest output at the facility. If adequate secondary containment (sufficiently large to contain the capacity of the aboveground oil storage tank plus sufficient freeboard to allow for precipitation) exists for the storage tank, multiply the capacity of the tank by 0.8.

B.1.2 For facilities with production wells producing by pumping, if the rate of the well with the highest output is known and the number of days the facility is unattended can be predicted, then the production volume is equal to the pumping rate of the well multiplied by the greatest number of days the facility is unattended.

B.1.3 If the pumping rate of the well with the highest output is estimated or the maximum number of days the facility is unattended is estimated, then the production volume is determined from the pumping rate of the well multiplied by 1.5 times the greatest number of days that the facility has been or is expected to be unattended.

B.1.4 Attachment D-1 to this appendix provides methods for calculating the production volume for exploratory wells and production wells producing under pressure.

(1) FINAL WORST CASE VOLUME: _____ GAL

(2) Do not proceed further.

B.2 SECONDARY CONTAINMENT—MULTIPLE-TANK FACILITIES

Are *all* aboveground oil storage tanks or groups of aboveground oil storage tanks at the facility *without* adequate secondary containment?

_____ (Y/N)

B.2.1 If the answer is yes, the final worst case volume equals the total aboveground oil storage capacity without adequate secondary containment plus the production volume of the well with the highest output at the facility.

(1) For facilities with production wells producing by pumping, if the rate of the well with the highest output is known and the number of days the facility is unattended can be predicted, then the production volume is equal to the pumping rate of the well multiplied by the greatest number of days the facility is unattended.

(2) If the pumping rate of the well with the highest output is estimated or the maximum number of days the facility is unattended is estimated, then the production volume is determined from the pumping rate of the well multiplied by 1.5 times the greatest number of days that the facility has been or is expected to be unattended.

(3) Attachment D-1 to this appendix provides methods for calculating the production volumes for exploratory wells and production wells producing under pressure.

(A) FINAL WORST CASE VOLUME:

_____ GAL

(B) Do not proceed further.

B.2.2 If the answer is no, calculate the total aboveground oil storage capacity of tanks without adequate secondary containment. If *all* aboveground oil storage tanks or groups of aboveground oil storage tanks at the facility have adequate secondary containment, ENTER "0" (zero).

_____ GAL

B.2.3 Calculate the capacity of the largest single aboveground oil storage tank within an adequate secondary containment area or the combined capacity of a group of aboveground oil storage tanks permanently manifolded together, whichever is greater, plus the production volume of the well with the highest output, PLUS THE VOLUME FROM QUESTION B.2.2. Attachment D-1 provides methods for calculating the production volumes for exploratory wells and production wells producing under pressure.

[B.2.3 corrected at 59 FR 49006, Sept. 26, 1994]

(1) FINAL WORST CASE VOLUME:[4]

_____ GAL

(2) Do not proceed further.

Attachments to Appendix D

Attachment D-I—Methods to Calculate Production Volumes for Production Facilities With Exploratory Wells or Production Wells Producing Under Pressure

1.0 Introduction

The owner or operator of a production facility with exploratory wells or production wells producing under pressure shall compare the well rate of the highest output well (rate of well), in barrels per day, to the ability of response equipment and personnel to recover the volume of oil that could be discharged (rate of recovery), in barrels per day. The result of this comparison will determine the method used to calculate the production volume for the production facility. This production volume is to be used to calculate the worst case discharge planning volume in Part B of this appendix.

2.0 Description of Methods

2.1 Method A

If the well rate would overwhelm the response efforts (i.e., rate of well/rate of recovery ≥ 1), then the production volume would be the 30-day forecasted well rate for a well 10,000 feet deep or less, or the 45-day forecasted well rate for a well deeper than 10,000 feet.

(1) For wells 10,000 feet deep or less:
Production volume=30 days × rate of well.

(2) For wells deeper than 10,000 feet:
Production volume=45 days × rate of well.

2.2 Method B

2.2.1 If the rate of recovery would be greater than the well rate (i.e., rate of well/rate of recovery <1), then the production volume would equal the sum of two terms:

Production volume=discharge volume_1 + discharge volume_2

2.2.2 The first term represents the volume of the oil discharged from the well between the time of the blowout and the time the response resources are on scene and recovering oil (discharge volume_1).

[4]All complexes that are jointly regulated by EPA and the USCG must also calculate the worst case discharge planning volume for the transportation-related portions of the facility and plan for whichever volume is greater.

Discharge $volume_1$=(days unattended+days to respond) × (rate of well)

2.2.3 The second term represents the volume of oil discharged from the well after the response resources begin operating until the spill is stopped, adjusted for the recovery rate of the response resources (discharge $volume_2$).

(1) For wells 10,000 feet deep or less:

Discharge $volume_2$=[30 days—(days unattended + days to respond)] × (rate of well) × (rate of well/rate of recovery)

(2) For wells deeper than 10,000 feet:

Discharge $volume_2$=[45 days—(days unattended + days to respond)] × (rate of well) × (rate of well/rate of recovery)

3.0 Example

3.1 A facility consists of two production wells producing under pressure, which are both less than 10,000 feet deep. The well rate of well A is 5 barrels per day, and the well rate of well B is 10 barrels per day. The facility is unattended for a maximum of 7 days. The facility operator estimates that it will take 2 days to have response equipment and personnel on scene and responding to a blowout, and that the projected rate of recovery will be 20 barrels per day.

(1) First, the facility operator determines that the highest output well is well B. The facility operator calculates the ratio of the rate of well to the rate of recovery:

10 barrels per day/20 barrels per day=0.5 Because the ratio is less than one, the facility operator will use Method B to calculate the production volume.

(2) The first term of the equation is:

Discharge $volume_1$=(7 days + 2 days) × (10 barrels per day)=90 barrels

(3) The second term of the equation is:

Discharge $volume_2$=[30 days—(7 days + 2 days)] × (10 barrels per day) × (0.5)=105 barrels

(4) Therefore, the production volume is:

Production volume=90 barrels + 105 barrels=195 barrels

3.2 If the recovery rate was 5 barrels per day, the ratio of rate of well to rate of recovery would be 2, so the facility operator would use Method A. The production volume would have been:

30 days × 10 barrels per day=300 barrels

Appendix E to Part 112—Determination and Evaluation of Required Response Resources for Facility Response Plans

[Appendix E added at 59 FR 34097, July 1, 1994]

1.0 Purpose and Definitions

1.1 The purpose of this appendix is to describe the procedures to identify response resources to meet the requirements of §112.20. To identify response resources to meet the facility response plan requirements of 40 CFR 112.20(h), owners or operators shall follow this appendix or, where not appropriate, shall clearly demonstrate in the response plan why use of this appendix is not appropriate at the facility and make comparable arrangements for response resources.

1.2 Definitions.

1.2.1 *Nearshore* is an operating area defined as extending seaward 12 miles from the boundary lines defined in 46 CFR part 7, except in the Gulf of Mexico. In the Gulf of Mexico, it means the area extending 12 miles from the line of demarcation (COLREG lines) defined in 49 CFR 80.740 and 80.850.

1.2.2 *Non-persistent oils* or *Group 1 oils* include:

(1) A petroleum-based oil that, at the time of shipment, consists of hydrocarbon fractions:

(A) At least 50 percent of which by volume, distill at a temperature of 340 degrees C (645 degrees F); and

(B) At least 95 percent of which by volume, distill at a temperature of 370 degrees C (700 degrees F); and

(2) A non-petroleum oil with a specific gravity less than 0.8.

1.2.3 *Non-petroleum oil* is oil of any kind that is not petroleum-based. It includes, but is not limited to, animal and vegetable oils.

1.2.4 *Ocean* means the nearshore area.

1.2.5 *Operating area* means Rivers and Canals, Inland, Nearshore, and Great Lakes geographic location(s) in which a facility is handling, storing, or transporting oil.

1.2.6 *Operating environment* means Rivers and Canals, Inland, Great Lakes, or Ocean. These terms are used to define the conditions in which response equipment is designed to function.

1.2.7 *Persistent oils* include:

(1) A petroleum-based oil that does not meet the distillation criteria for a non-persistent oil. Persistent oils are further classified based on specific gravity as follows:

(A) Group 2—specific gravity less than 0.85;

(B) Group 3—specific gravity equal to or greater than 0.85 and less than 0.95;

(C) Group 4—specific gravity equal to or greater than 0.95 and less than 1.0; or

(D) Group 5—specific gravity equal to or greater than 1.0.

(2) A non-petroleum oil with a specific gravity of 0.8 or greater. These oils are further classified based on specific gravity as follows:

(A) Group 2—specific gravity equal to or greater than 0.8 and less than 0.85;

(B) Group 3—specific gravity equal to or greater than 0.85 and less than 0.95;

(C) Group 4—specific gravity equal to or greater than 0.95 and less than 1.0; or

(D) Group 5—specific gravity equal to or greater than 1.0.

1.2.8 Other definitions are included in §112.2 and section 1.1 of Appendix C.

[1.2.8 corrected at 59 FR 49006, Sept. 26, 1994]

2.0 Equipment Operability and Readiness

2.1 All equipment identified in a response plan must be designed to operate in the conditions expected in the facility's geographic area (i.e., operating environment). These conditions vary widely based on location and season. Therefore, it is difficult to identify a single stockpile of response equipment that will function effectively in each geographic location (i.e., operating area).

2.2 Facilities handling, storing, or transporting oil in more than one operating environment as indicated in Table 1 of this appendix must identify equipment capable of successfully functioning in each operating environment.

2.3 When identifying equipment for the response plan (based on the use of this appendix), a facility owner or operator must consider the inherent limitations of the operability of equipment components and response systems. The criteria in Table 1 of this appendix shall be used to evaluate the operability in a given environment. These criteria reflect the general conditions in certain operating environments.

2.3.1 The Regional Administrator may require documentation that the boom identified in a facility response plan meets the criteria in Table 1 of this appendix. Absent acceptable documentation, the

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Regional Administrator may require that the boom be tested to demonstrate that it meets the criteria in Table 1 of this appendix. Testing must be in accordance with ASTM F 715, ASTM F 989, or other tests approved by EPA as deemed appropriate (see Appendix E to this part, section 10, for general availability of documents).

2.4 Table 1 of this appendix lists criteria for oil recovery devices and boom. All other equipment necessary to sustain or support response operations in an operating environment must be designed to function in the same conditions. For example, boats that deploy or support skimmers or boom must be capable of being safely operated in the significant wave heights listed for the applicable operating environment.

2.5 A facility owner or operator shall refer to the applicable Area Contingency Plan (ACP), where available, to determine if ice, debris, and weather-related visibility are significant factors to evaluate the operability of equipment. The ACP may also identify the average temperature ranges expected in the facility's operating area. All equipment identified in a response plan must be designed to operate within those conditions or ranges.

2.6 This appendix provides information on response resource mobilization and response times. The distance of the facility from the storage location of the response resources must be used to determine whether the resources can arrive on-scene within the stated time. A facility owner or operator shall include the time for notification, mobilization, and travel of resources identified to meet the medium and Tier 1 worst case discharge requirements identified in section 4.3 of this appendix (for medium discharges) and section 5.3 of this appendix (for worst case discharges). The facility owner or operator must plan for notification and mobilization of Tier 2 and 3 response resources as necessary to meet the requirements for arrival on-scene in accordance with section 5.3 of this appendix. An on-water speed of 5 knots and a land speed of 35 miles per hour is assumed, unless the facility owner or operator can demonstrate otherwise.

2.7 In identifying equipment, the facility owner or operator shall list the storage location, quantity, and manufacturer's make and model. For oil recovery devices, the effective daily recovery capacity, as determined using section 6 of this appendix, must be included. For boom, the overall boom height (draft and freeboard) shall be included. A facility owner or operator is responsible for ensuring that the identified boom has compatible connectors.

3.0 Determining Response Resources Required for Small Discharges

3.1 A facility owner or operator shall identify sufficient response resources available, by contract or other approved means as described in §112.2, to respond to a small discharge. A small discharge is defined as any discharge volume less than or equal to 2,100 gallons, but not to exceed the calculated worst case discharge. The equipment must be designed to function in the operating environment at the point of expected use.

3.2 Complexes that are regulated by EPA and the USCG must also consider planning quantities for the transportation-related transfer portion of the facility. The USCG planning level that corresponds to EPA's "small discharge" is termed "the average most probable discharge." The USCG revisions to 33 CFR part 154 define "the average most probable discharge" as a discharge of 50 barrels (2,100 gallons). Owners or operators of complexes must compare oil spill volumes for a small discharge and an average most probable discharge and plan for whichever quantity is greater.

3.3 The response resources shall, as appropriate, include:

3.3.1 One thousand feet of containment boom (or, for complexes with marine transfer components, 1,000 feet of containment boom or two times the length of the largest vessel that regularly conducts oil transfers to or from the facility, whichever is greater), and a means of deploying it within 1 hour of the discovery of a spill;

3.3.2 Oil recovery devices with an effective daily recovery capacity equal to the amount of oil discharged in a small discharge or greater which is available at the facility within 2 hours of the detection of an oil discharge; and

3.3.3 Oil storage capacity for recovered oily material indicated in section 9.2 of this appendix.

4.0 Determining Response Resources Required for Medium Discharges

4.1 A facility owner or operator shall identify sufficient response resources available, by contract or other approved means as described in §112.2, to respond to a medium discharge of oil for that facility. This will require response resources capable of containing and collecting up to 36,000 gallons of oil or 10 percent of the worst case discharge, whichever is less. All equipment identified must be designed to operate in the applicable operating environment specified in Table 1 of this appendix.

4.2 Complexes that are regulated by EPA and the USCG must also consider planning quantities for the transportation-related transfer portion of the facility. The USCG planning level that corresponds to EPA's "medium discharge" is termed "the maximum most probable discharge." The USCG revisions to 33 CFR part 154 define "the maximum most probable discharge" as a discharge of 1,200 barrels (50,400 gallons) or 10 percent of the worst case discharge, whichever is less. Owners or operators of complexes must compare spill volumes for a medium discharge and a maximum most probable discharge and plan for whichever quantity is greater.

4.3 Oil recovery devices identified to meet the applicable medium discharge volume planning criteria must be located such that they are capable of arriving on-scene within 6 hours in higher volume port areas and the Great Lakes and within 12 hours in all other areas. Higher volume port areas and Great Lakes areas are defined in section 1.1 of Appendix C to this part.

[4.3 corrected at 59 FR 49006, Sept. 26, 1994]

4.4 Because rapid control, containment, and removal of oil are critical to reduce spill impact, the owner or operator must determine response resources using an effective daily recovery capacity for oil recovery devices equal to 50 percent of the planning volume applicable for the facility as determined in section 4.1 of this appendix. The effective daily recovery capacity for oil recovery devices identified in the plan must be determined using the criteria in section 6 of this appendix.

4.5 In addition to oil recovery capacity, the plan shall, as appropriate, identify sufficient quantity of containment boom available, by contract or other approved means as described in §112.2, to arrive within the required response times for oil collection and containment and for protection of fish and wildlife and sensitive environments. For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility

[Part 112, Appendix E]

and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (see Appendix E to this part, section 10, for availability) and the applicable ACP. While the regulation does not set required quantities of boom for oil collection and containment, the response plan shall identify and ensure, by contract or other approved means as described in §112.2, the availability of the quantity of boom identified in the plan for this purpose.

4.6 The plan must indicate the availability of temporary storage capacity to meet section 9.2 of this appendix. If available storage capacity is insufficient to meet this level, then the effective daily recovery capacity must be derated (downgraded) to the limits of the available storage capacity.

4.7 The following is an example of a medium discharge volume planning calculation for equipment identification in a higher volume port area: The facility's largest aboveground storage tank volume is 840,000 gallons. Ten percent of this capacity is 84,000 gallons. Because 10 percent of the facility's largest tank, or 84,000 gallons, is greater than 36,000 gallons, 36,000 gallons is used as the planning volume. The effective daily recovery capacity is 50 percent of the planning volume, or 18,000 gallons per day. The ability of oil recovery devices to meet this capacity must be calculated using the procedures in section 6 of this appendix. Temporary storage capacity available on-scene must equal twice the daily recovery capacity as indicated in section 9.2 of this appendix, or 36,000 gallons per day. This is the information the facility owner or operator must use to identify and ensure the availability of the required response resources, by contract or other approved means as described in §112.2. The facility owner shall also identify how much boom is available for use.

5.0 Determining Response Resources Required for the Worst Case Discharge to the Maximum Extent Practicable

5.1 A facility owner or operator shall identify and ensure the availability of, by contract or other approved means as described in §112.2, sufficient response resources to respond to the worst case discharge of oil to the maximum extent practicable. Section 7 of this appendix describes the method to determine the necessary response resources. A worksheet is provided as Attachment E-1 at the end of this appendix to simplify the procedures involved in calculating the planning volume for response resources for the worst case discharge.

5.2 Complexes that are regulated by EPA and the USCG must also consider planning for the worst case discharge at the transportation-related portion of the facility. The USCG requires that transportation-related facility owners or operators use a different calculation for the worst case discharge in the revisions to 33 CFR part 154. Owners or operators of complex facilities that are regulated by EPA and the USCG must compare both calculations of worst case discharge derived by EPA and the USCG and plan for whichever volume is greater.

5.3 Oil spill response resources identified in the response plan and available, by contract or other approved means as described in §112.2, to meet the applicable worst case discharge planning volume must be located such that they are capable of arriving at the scene of a discharge within the times specified for the applicable response tier listed below:

	Tier 1	Tier 2	Tier 3
Higher volume port areas.	6 hrs	30 hrs	54 hrs
Great Lakes.	12 hrs	36 hrs	60 hrs
All other river and canal, inland, and near-shore areas.	12 hrs	36 hrs	60 hrs

The three levels of response tiers apply to the amount of time in which facility owners or operators must plan for response resources to arrive at the scene of a spill to respond to the worst case discharge planning volume. For example, at a worst case discharge in an inland area, the first tier of response resources (i.e., that amount of on-water and shoreline cleanup capacity necessary to respond to the fraction of the worst case discharge as indicated through the series of steps described in sections 7.2 and 7.3 of this appendix) would arrive at the scene of the discharge within 12 hours; the second tier of response resources would arrive within 36 hours; and the third tier of response resources would arrive within 60 hours.

5.4 The effective daily recovery capacity for oil recovery devices identified in the response plan must be determined using the criteria in section 6 of this appendix. A facility owner or operator shall identify the storage locations of all response resources used for each tier. The owner or operator of a facility whose required daily recovery capacity exceeds the applicable contracting caps in Table 5 of this appendix shall, as appropriate, identify sources of additional equipment, their location, and the arrangements made to obtain this equipment during a response. The owner or operator of a facility whose calculated planning volume exceeds the applicable contracting caps in Table 5 of this appendix shall, as appropriate, identify sources of additional equipment equal to twice the cap listed in Tier 3 or the amount necessary to reach the calculated planning volume, whichever is lower. The resources identified above the cap shall be capable of arriving on-scene not later than the Tier 3 response times in section 5.3 of this appendix. No contract is required. While general listings of available response equipment may be used to identify additional sources (i.e., "public" resources vs. "private" resources), the response plan shall identify the specific sources, locations, and quantities of equipment that a facility owner or operator has considered in his or her planning. When listing USCG-classified oil spill removal organization(s) that have sufficient removal capacity to recover the volume above the response capacity cap for the specific facility, as specified in Table 5 of this appendix, it is not necessary to list specific quantities of equipment.

5.5 A facility owner or operator shall identify the availability of temporary storage capacity to meet section 9.2 of this appendix. If available storage capacity is insufficient, then the effective daily recovery capacity must be derated (downgraded) to the limits of the available storage capacity.

5.6 When selecting response resources necessary to meet the response plan requirements, the facility owner or operator shall, as appropriate, ensure that a portion of those resources is capable of being used in close-to-shore response activities in shallow water. For any EPA-regulated facility that is required to plan for response in shallow water, at least 20 percent of the on-water response equipment identified for the applicable operating

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area shall, as appropriate, be capable of operating in water of 6 feet or less depth.

5.7 In addition to oil spill recovery devices, a facility owner or operator shall identify sufficient quantities of boom that are available, by contract or other approved means as described in §112.2, to arrive on-scene within the specified response times for oil containment and collection. The specific quantity of boom required for collection and containment will depend on the facility-specific information and response strategies employed. A facility owner or operator shall, as appropriate, also identify sufficient quantities of oil containment boom to protect fish and wildlife and sensitive environments. For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (see Appendix E to this part, section 10, for availability), and the applicable ACP. Refer to this guidance document for the number of days and geographic areas (i.e., operating environments) specified in Table 2 of this appendix.

5.8 A facility owner or operator shall also identify, by contract or other approved means as described in §112.2, the availability of an oil spill removal organization(s) (as described in §112.2) capable of responding to a shoreline cleanup operation involving the calculated volume of oil and emulsified oil that might impact the affected shoreline. The volume of oil that shall, as appropriate, be planned for is calculated through the application of factors contained in Tables 2 and 3 of this appendix. The volume calculated from these tables is intended to assist the facility owner or operator to identify an oil spill removal organization with sufficient resources and expertise.

6.0 Determining Effective Daily Recovery Capacity for Oil Recovery Devices

6.1 Oil recovery devices identified by a facility owner or operator must be identified by the manufacturer, model, and effective daily recovery capacity. These capacities must be used to determine whether there is sufficient capacity to meet the applicable planning criteria for a small discharge, a medium discharge, and a worst case discharge to the maximum extent practicable.

6.2 To determine the effective daily recovery capacity of oil recovery devices, the formula listed in section 6.2.1 of this appendix shall be used. This formula considers potential limitations due to available daylight, weather, sea state, and percentage of emulsified oil in the recovered material. The RA may assign a lower efficiency factor to equipment listed in a response plan if it is determined that such a reduction is warranted.

6.2.1 The following formula shall be used to calculate the effective daily recovery capacity:

$R = T \times 24 \text{ hours} \times E$

where:

R—Effective daily recovery capacity;

T—Throughput rate in barrels per hour (nameplate capacity); and

E—20 percent efficiency factor (or lower factor as determined by the Regional Administrator).

6.2.2 For those devices in which the pump limits the throughput of liquid, throughput rate shall be calculated using the pump capacity.

6.2.3 For belt or moptype devices, the throughput rate shall be calculated using the speed of the belt or mop through the device, assumed thickness of oil adhering to or collected by the device, and surface area of the belt or mop. For purposes of this calculation, the assumed thickness of oil will be 1/4 inch.

6.2.4 Facility owners or operators that include oil recovery devices whose throughput is not measurable using a pump capacity or belt/mop speed may provide information to support an alternative method of calculation. This information must be submitted following the procedures in section 6.3.2 of this appendix.

6.3 As an alternative to section 6.2 of this appendix, a facility owner or operator may submit adequate evidence that a different effective daily recovery capacity should be applied for a specific oil recovery device. Adequate evidence is actual verified performance data in spill conditions or tests using American Society of Testing and Materials (ASTM) Standard F 631-80, F 808-83 (1988), or an equivalent test approved by EPA as deemed appropriate (see Appendix E to this part, section 10, for general availability of documents).

6.3.1 The following formula must be used to calculate the effective daily recovery capacity under this alternative:

$R = D \times U$

where:

R—Effective daily recovery capacity;

D—Average Oil Recovery Rate in barrels per hour (Item 26 in F 808-83; Item 13.1.15 in F 631-80; or actual performance data); and

U—Hours per day that equipment can operate under spill conditions. Ten hours per day must be used unless a facility owner or operator can demonstrate that the recovery operation can be sustained for longer periods.

6.3.2 A facility owner or operator submitting a response plan shall provide data that supports the effective daily recovery capacities for the oil recovery devices listed. The following is an example of these calculations:

(1) A weir skimmer identified in a response plan has a manufacturer's rated throughput at the pump of 267 gallons per minute (gpm).

267 gpm=381 barrels per hour (bph)

R=381 bph×24 hr/day×0.2=1,829 barrels per day

(2) After testing using ASTM procedures, the skimmer's oil recovery rate is determined to be 220 gpm. The facility owner or operator identifies sufficient resources available to support operations for 12 hours per day.

220 gpm=314 bph

R=314 bph×12 hr/day=3,768 barrels per day

(3) The facility owner or operator will be able to use the higher capacity if sufficient temporary oil storage capacity is available. Determination of alternative efficiency factors under section 6.2 of this appendix or the acceptability of an alternative effective daily recovery capacity under section 6.3 of this appendix will be made by the Regional Administrator as deemed appropriate.

7.0 Calculating Planning Volumes for a Worst Case Discharge

7.1 A facility owner or operator shall plan for a response to the facility's worst case discharge. The planning for on-water oil recovery must take into account a loss of some oil to the environment due to evaporative and natural dissipation, potential increases in volume due to emulsification, and the potential for deposition of oil on the shoreline. The procedures for non-petroleum oils are discussed in section 7.7 of this appendix.

7.2 The following procedures must be used by a facility owner or operator in determining the required on-water oil recovery capacity:

7.2.1 The following must be determined: the worst case discharge volume of oil in the facility; the appropriate group(s) for the types of oil handled,

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stored, or transported at the facility [persistent (Groups 2, 3, 4, 5) or non-persistent (Group 1)]; and the facility's specific operating area. See sections 1.2.2 and 1.2.7 of this appendix for the definitions of non-persistent and persistent oils, respectively. Facilities that handle, store, or transport oil from different oil groups must calculate each group separately, unless the oil group constitutes 10 percent or less by volume of the facility's total oil storage capacity. This information is to be used with Table 2 of this appendix to determine the percentages of the total volume to be used for removal capacity planning. Table 2 of this appendix divides the volume into three categories: oil lost to the environment; oil deposited on the shoreline; and oil available for on-water recovery.

7.2.2 The on-water oil recovery volume shall, as appropriate, be adjusted using the appropriate emulsification factor found in Table 3 of this appendix. Facilities that handle, store, or transport oil from different petroleum groups must compare the on-water recovery volume for each oil group (unless the oil group constitutes 10 percent or less by volume of the facility's total storage capacity) and use the calculation that results in the largest on-water oil recovery volume to plan for the amount of response resources for a worst case discharge.

7.2.3 The adjusted volume is multiplied by the on-water oil recovery resource mobilization factor found in Table 4 of this appendix from the appropriate operating area and response tier to determine the total on-water oil recovery capacity in barrels per day that must be identified or contracted to arrive on-scene within the applicable time for each response tier. Three tiers are specified. For higher volume port areas, the contracted tiers of resources must be located such that they are capable of arriving on-scene within 6 hours for Tier 1, 30 hours for Tier 2, and 54 hours for Tier 3 of the discovery of an oil discharge. For all other rivers and canals, inland, nearshore areas, and the Great Lakes, these tiers are 12, 36, and 60 hours.

7.2.4 The resulting on-water oil recovery capacity in barrels per day for each tier is used to identify response resources necessary to sustain operations in the applicable operating area. The equipment shall be capable of sustaining operations for the time period specified in Table 2 of this appendix. The facility owner or operator shall identify and ensure the availability, by contract or other approved means as described in §112.2, of sufficient oil spill recovery devices to provide the effective daily oil recovery capacity required. If the required capacity exceeds the applicable cap specified in Table 5 of this appendix, then a facility owner or operator shall ensure, by contract or other approved means as described in §112.2, only for the quantity of resources required to meet the cap, but shall identify sources of additional resources as indicated in section 5.4 of this appendix. The owner or operator of a facility whose planning volume exceeded the cap in 1993 must make arrangements to identify and ensure the availability, by contract or other approved means as described in §112.2, for additional capacity to be under contract by 1998 or 2003, as appropriate. For a facility that handles multiple groups of oil, the required effective daily recovery capacity for each oil group is calculated before applying the cap. The oil group calculation resulting in the largest on-water recovery volume must be used to plan for the amount of response resources for a worst case discharge, unless the oil group comprises 10 percent or less by volume of the facility's total oil storage capacity.

7.3 The procedures discussed in sections 7.3.1–7.3.3 of this appendix must be used to calculate the planning volume for identifying shoreline cleanup capacity (for Group 1 through Group 4 oils).

[7.3 corrected at 59 FR 49006, Sept. 26, 1994]

7.3.1 The following must be determined: the worst case discharge volume of oil for the facility; the appropriate group(s) for the types of oil handled, stored, or transported at the facility [persistent (Groups 2, 3, or 4) or non-persistent (Group 1)]; and the geographic area(s) in which the facility operates (*i.e.*, operating areas). For a facility handling, storing, or transporting oil from different groups, each group must be calculated separately. Using this information, Table 2 of this appendix must be used to determine the percentages of the total volume to be used for shoreline cleanup resource planning.

7.3.2 The shoreline cleanup planning volume must be adjusted to reflect an emulsification factor using the same procedure as described in section 7.2.2 of this appendix.

7.3.3 The resulting volume shall be used to identify an oil spill removal organization with the appropriate shoreline cleanup capability.

7.4 A response plan must identify response resources with fire fighting capability. The owner or operator of a facility that handles, stores, or transports Group 1 through Group 4 oils that does not have adequate fire fighting resources located at the facility or that cannot rely on sufficient local fire fighting resources must identify adequate fire fighting resources. It is recommended that the facility owner or operator ensure, by contract or other approved means as described in §112.2, the availability of these resources. The response plan must also identify an individual located at the facility to work with the fire department for Group 1 through Group 4 oil fires. This individual shall also verify that sufficient well-trained fire fighting resources are available within a reasonable response time to a worst case scenario. The individual may be the qualified individual identified in the response plan or another appropriate individual located at the facility.

[7.4 corrected at 59 FR 49006, Sept. 26, 1994]

7.5 The following is an example of the procedure described above in sections 7.2 and 7.3 of this appendix: A facility with a 270,000 barrel (11.3 million gallons) capacity for ±6 oil (specific gravity 0.96) is located in a higher volume port area. The facility is on a peninsula and has docks on both the ocean and bay sides. The facility has four aboveground oil storage tanks with a combined total capacity of 80,000 barrels (3.36 million gallons) and no secondary containment. The remaining facility tanks are inside secondary containment structures. The largest aboveground oil storage tank (90,000 barrels or 3.78 million gallons) has its own secondary containment. Two 50,000 barrel (2.1 million gallon) tanks (that are not connected by a manifold) are within a common secondary containment tank area, which is capable of holding 100,000 barrels (4.2 million gallons) plus sufficient freeboard.

7.5.1 The worst case discharge for the facility is calculated by adding the capacity of all aboveground oil storage tanks without secondary containment (80,000 barrels) plus the capacity of the largest aboveground oil storage tank inside secondary containment. The resulting worst case discharge volume is 170,000 barrels or 7.14 million gallons.

7.5.2 Because the requirements for Tiers 1, 2, and 3 for inland and nearshore

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exceed the caps identified in Table 5 of this appendix, the facility owner will contract for a response to 10,000 barrels per day (bpd) for Tier 1, 20,000 bpd for Tier 2, and 40,000 bpd for Tier 3. Resources for the remaining 7,850 bpd for Tier 1, 9,750 bpd for Tier 2, and 7,600 bpd for Tier 3 shall be identified but need not be contracted for in advance. The facility owner or operator shall, as appropriate, also identify or contract for quantities of boom identified in their response plan for the protection of fish and wildlife and sensitive environments within the area potentially impacted by a worst case discharge from the facility. For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments," (see Appendix E to this part, section 10, for availability) and the applicable ACP. Attachment C-III to Appendix C provides a method for calculating a planning distance to fish and wildlife and sensitive environments and public drinking water intakes that may be impacted in the event of a worst case discharge.

7.6 The procedures discussed in sections 7.6.1—7.6.3 of this appendix must be used to determine appropriate response resources for facilities with Group 5 oils.

7.6.1 The owner or operator of a facility that handles, stores, or transports Group 5 oils shall, as appropriate, identify the response resources available by contract or other approved means, as described in §112.2. The equipment identified in a response plan shall, as appropriate, include:

(1) Sonar, sampling equipment, or other methods for locating the oil on the bottom or suspended in the water column;

(2) Containment boom, sorbent boom, silt curtains, or other methods for containing the oil that may remain floating on the surface or to reduce spreading on the bottom;

(3) Dredges, pumps, or other equipment necessary to recover oil from the bottom and shoreline;

(4) Equipment necessary to assess the impact of such discharges; and

(5) Other appropriate equipment necessary to respond to a discharge involving the type of oil handled, stored, or transported.

7.6.2 Response resources identified in a response plan for a facility that handles, stores, or transports Group 5 oils under section 7.6.1 of this appendix shall be capable of being deployed (on site) within 24 hours of discovery of a discharge to the area where the facility is operating.

7.6.3 A response plan must identify response resources with fire fighting capability. The owner or operator of a facility that handles, stores, or transports Group 5 oils that does not have adequate fire fighting resources located at the facility or that cannot rely on sufficient local fire fighting resources must identify adequate fire fighting resources. It is recommended that the owner or operator ensure, by contract or other approved means as described in §112.2, the availability of these resources. The response plan shall also identify an individual located at the facility to work with the fire department for Group 5 oil fires. This individual shall also verify that sufficient well-trained fire fighting resources are available within a reasonable response time to respond to a worst case discharge. The individual may be the qualified individual identified in the response plan or another appropriate individual located at the facility.

7.7 The procedures described in sections 7.7.1-7.7.5 of this appendix must be used to determine appropriate response plan development and evaluation criteria for facilities that handle, store, or transport non-petroleum oils. Refer to section 8 of this appendix for information on the limitations on the use of dispersants for inland and nearshore areas.

7.7.1 An owner or operator of a facility that handles, stores, or transports non-petroleum oil must provide information in his or her plan that identifies:

(1) Procedures and strategies for responding to a worst case discharge of non-petroleum oils to the maximum extent practicable; and

(2) Sources of the equipment and supplies necessary to locate, recover, and mitigate such a discharge.

7.7.2 An owner or operator of a facility that handles, stores, or transports non-petroleum oil must ensure that any equipment identified in a response plan is capable of operating in the conditions expected in the geographic area(s) (i.e., operating environments) in which the facility operates using the criteria in Table 1 of this appendix. When evaluating the operability of equipment, the facility owner or operator must consider limitations that are identified in the appropriate ACPs, including:

(1) Ice conditions;

(2) Debris;

(3) Temperature ranges; and

(4) Weather-related visibility.

7.7.3 The owner or operator of a facility that handles, stores, or transports non-petroleum oil must identify the response resources that are available by contract or other approved means, as described in §112.2. The equipment described in the response plan shall, as appropriate, include:

(1) Containment boom, sorbent boom, or other methods for containing oil floating on the surface or to protect shorelines from impact;

(2) Oil recovery devices appropriate for the type of non-petroleum oil carried; and

(3) Other appropriate equipment necessary to respond to a discharge involving the type of oil carried.

7.7.4 Response resources identified in a response plan according to section 7.7.3 of this appendix must be capable of commencing an effective on-scene response within the applicable tier response times in section 5.3 of this appendix.

7.7.5 A response plan must identify response resources with fire fighting capability. The owner or operator of a facility that handles, stores, or transports non-petroleum oils that does not have adequate fire fighting resources located at the facility or that cannot rely on sufficient local fire fighting resources must identify adequate fire fighting resources. It is recommended that the owner or operator ensure, by contract or other approved means as described in §112.2, the availability of these resources. The response plan must also identify an individual located at the facility to work with the fire department for non-petroleum fires. This individual shall also verify that sufficient well-trained fire fighting resources are available within a reasonable response time to a worst case scenario. The individual may be the qualified individual identified in

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the response plan or another appropriate individual located at the facility.

8.0 Determining the Availability of Alternative Response Methods

8.1 For dispersants to be identified in a response plan, they must be on the NCP Product Schedule that is maintained by EPA. (Some States have a list of approved dispersants for use within State waters. These State-approved dispersants are listed on the NCP Product Schedule.)

8.2 Identification of dispersant application in the plan does not imply that the use of this technique will be authorized. Actual authorization for use during a spill response will be governed by the provisions of the NCP and the applicable ACP. To date, dispersant application has not been approved by ACPs for inland areas or shallow nearshore areas.

9.0 Additional Equipment Necessary to Sustain Response Operations

9.1 A facility owner or operator shall, as appropriate, ensure that sufficient numbers of trained personnel and boats, aerial spotting aircraft, containment boom, sorbent materials, boom anchoring materials, and other supplies are available to sustain response operations to completion. All such equipment must be suitable for use with the primary equipment identified in the response plan. A facility owner or operator is not required to list these resources, but shall certify their availability.

9.2 A facility owner or operator shall evaluate the availability of adequate temporary storage capacity to sustain the effective daily recovery capacities from equipment identified in the plan. Because of the inefficiencies of oil spill recovery devices, response plans must identify daily storage capacity equivalent to twice the effective daily recovery capacity required on-scene. This temporary storage capacity may be reduced if a facility owner or operator can demonstrate by waste stream analysis that the efficiencies of the oil recovery devices, ability to decant waste, or the availability of alternative temporary storage or disposal locations will reduce the overall volume of oily material storage requirement.

9.3 A facility owner or operator shall ensure that his or her planning includes the capability to arrange for disposal of recovered oil products. Specific disposal procedures will be addressed in the applicable ACP.

10.0 References and Availability

10.1 All materials listed in this section are part of EPA's rulemaking docket, and are located in the Superfund Docket, Room M2615, at the U.S. Environmental Protection Agency, 401 M Street, SW., Washington, DC 20460 (Docket Number SPCC-2P). The docket is available for inspection between 9:00 a.m. and 4:00 p.m., Monday through Friday, excluding Federal holidays. Appointments to review the docket can be made by calling 202-260-3046. The public may copy a maximum of 266 pages from any regulatory docket at no cost. If the number of pages copied exceeds 266, however, a charge of 15 cents will be incurred for each additional page, plus a $25.00 administrative fee. Charges for copies and docket hours are subject to change.

10.2 The docket will mail copies of materials to requestors who are outside the Washington D.C. metro area. Materials may be available from other sources, as noted in this section. The ERNS/SPCC Information line at 202-260-2342 or the RCRA/Superfund Hotline at 800-424-9346 may also provide additional information on where to obtain documents. To contact the RCRA/Superfund Hotline in the Washington, DC metropolitan area, dial 703-412-9810. The Telecommunications Device for the Deaf (TDD) Hotline number is 800-553-7672, or, in the Washington, DC metropolitan area, 703-412-3323.

10.3 Documents Referenced

(1) National Preparedness for Response Exercise Program (PREP). The PREP draft guidelines are available from United States Coast Guard Headquarters (G-MEP-4), 2100 Second Street, SW., Washington, DC 20593. (See 58 FR 53990, October 19, 1993, Notice of Availability of PREP Guidelines).

(2) "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (published in the **Federal Register** by DOC/NOAA at 59 FR 14713, March 29, 1994). The guidance is available in the Superfund Docket (see sections 10.1 and 10.2 of this appendix).

(3) ASTM Standards. ASTM F 715, ASTM F 989, ASTM F 631-80, ASTM F 808-83 (1988). The ASTM standards are available from the American Society for Testing and Materials, 1916 Race Street, Philadelphia, PA 19103-1187.

TABLE 1 TO APPENDIX E—RESPONSE RESOURCE OPERATING CRITERIA

Oil Recovery Devices		
Operating environment	Significant wave height [1]	Sea state
Rivers and Canals	≤ 1 foot	1
Inland	≤ 3 feet	2
Great Lakes	≤ 4 feet	2-3
Ocean	≤ 6 feet	3-4

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Boom				
Boom property	Use			
	Rivers and canals	Inland	Great Lakes	Ocean
Significant Wave Height [1]	≤ 1	≤ 3	≤ 4	≤ 6
Sea State	1	2	2–3	3–4
Boom height—inches (draft plus freeboard)	6–18	18–42	18–42	≥ 42
Reserve Buoyancy to Weight Ratio	2:1	2:1	2:1	3:1 to 4:1
Total Tensile Strength—pounds	4,500	15,000–20,000	15,000–20,000	≥ 20,000
Skirt Fabric Tensile Strength—pounds	200	300	300	500
Skirt Fabric Tear Strength—pounds	100	100	100	125

[1] Oil recovery devices and boom *shall* be at least capable of operating in wave heights up to and including the values listed in Table 1 for each operating environment.

TABLE 2 TO APPENDIX E—REMOVAL CAPACITY PLANNING TABLE

Spill location	Rivers and canals			Nearshore/ inland Great Lakes		
Sustainability of on-water oil recovery	3 days			4 days		
Oil group [1]	Percent natural dissipation	Percent recovered floating oil	Percent oil onshore	Percent natural dissipation	Percent recovered floating oil	Percent oil Onshore
1. Non-persistent oils	80	10	10	80	20	10
2. Light crudes	40	15	45	50	50	30
3. Medium crudes and fuels	20	15	65	30	50	50
4. Heavy crudes and fuels	5	20	75	10	50	70

Group 5 oils are defined in section 1.2.7 of this appendix; the response resource considerations are outlined in section 7.6 of this appendix.

[1] Non-petroleum oils are defined in section 1.2.3 of this appendix; the response resource considerations are outlined in section 7.7 of this appendix.

TABLE 3 TO APPENDIX E—EMULSIFICATION FACTORS FOR PETROLEUM OIL GROUPS[1]

Non-Persistent Oil:	
Group 1	1.0
Persistent Oil:	
Group 2	1.8
Group 3	2.0
Group 4	1.4

TABLE 3 TO APPENDIX E—EMULSIFICATION FACTORS FOR PETROLEUM OIL GROUPS[1]—Contd.

Group 5 oils are defined in section 1.2.7 of this appendix; the response resource considerations are outlined in section 7.6 of this appendix.

[1] See sections 1.2.2 and 1.2.7 of this appendix for group designations for non-persistent and persistent oils, respectively.

TABLE 4 TO APPENDIX E—ON-WATER OIL RECOVERY RESOURCE MOBILIZATION FACTORS

Operating area	Tier 1	Tier 2	Tier 3
Rivers and Canals	0.30	0.40	0.60
Inland/Nearshore Great Lakes	0.15	0.25	0.40

Note: These mobilization factors are for total resources mobilized, not incremental response resources.

TABLE 5 TO APPENDIX E—RESPONSE CAPABILITY CAPS BY OPERATING AREA

	Tier 1	Tier 2	Tier 3
February 18, 1993:			
All except Rivers & Canals, Great Lakes	10K bbls/day	20K bbls/day	40K bbls/day.
Great Lakes	5K bbls/day	10K bbls/day	20K bbls/day.
Rivers & Canals	1.5K bbls/day	3.0K bbls/day	6.0K bbls/day.
February 18, 1998:			
All except Rivers & Canals, Great Lakes	12.5K bbls/day	25K bbls/day	50K bbls/day.
Great Lakes	6.35K bbls/day	12.3K bbls/day	25K bbls/day.
Rivers & Canals	1.875K bbls/day	3.75K bbls/day	7.5K bbls/day.
February 18, 2003:			
All except Rivers & Canals, Great Lakes	TBD	TBD	TBD
Great Lakes	TBD	TBD	TBD.
Rivers & Canals	TBD	TBD	TBD.

Note: The caps show cumulative overall effective daily recovery capacity, not incremental increases.
TBD=To Be Determined.

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Attachments to Appendix E

ATTACHMENT E-1 --
WORKSHEET TO PLAN VOLUME OF RESPONSE RESOURCES FOR WORST CASE DISCHARGE

Part I Background Information

Step (A) Calculate Worst Case Discharge in barrels (Appendix D) [ ] (A)

Step (B) Oil Group[1] (Table 3 and section 1.2 of this appendix) [ ]

Step (C) Operating Area (choose one) . . . . . [ ] Nearshore/Inland [ ] or Rivers and Great Lakes and Canals

Step (D) Percentages of Oil (Table 2 of this appendix)

Percent Lost to Natural Dissipation	Percent Recovered Floating Oil	Percent Oil Onshore
[ ]	[ ]	[ ]
(D1)	(D2)	(D3)

Step (E1) On-Water Oil Recovery $\frac{\text{Step (D2) x Step (A)}}{100}$ [ ] (E1)

Step (E2) Shoreline Recovery $\frac{\text{Step (D3) x Step (A)}}{100}$ . . [ ] (E2)

Step (F) Emulsification Factor (Table 3 of this appendix) . . . . . [ ] (F)

Step (G) On-Water Oil Recovery Resource Mobilization Factor (Table 4 of this appendix)

Tier 1	Tier 2	Tier 3
[ ]	[ ]	[ ]
(G1)	(G2)	(G3)

[1] A facility that handles, stores, or transports multiple groups of oil must do separate calculations for each oil group on site except for those oil groups that constitute 10 percent or less by volume of the total oil storage capacity at the facility. For purposes of this calculation, the volumes of all products in an oil group must be summed to determine the percentage of the facility's total oil storage capacity.

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ATTACHMENT E-1 (CONTINUED) --
WORKSHEET TO PLAN VOLUME OF RESPONSE RESOURCES
FOR WORST CASE DISCHARGE

Part II On-Water Oil Recovery Capacity (barrels/day)

Tier 1	Tier 2	Tier 3
Step (E1) x Step (F) x Step (G1)	Step (E1) x Step (F) x Step (G2)	Step (E1) x Step (F) x Step (G3)

Part III Shoreline Cleanup Volume (barrels) . . . . . [ ]

Step (E2) x Step (F)

Part IV On-Water Response Capacity By Operating Area
(Table 5 of this appendix)
(Amount needed to be contracted for in barrels/day)

Tier 1	Tier 2	Tier 3
(J1)	(J2)	(J3)

Part V On-Water Amount Needed to be Identified, but not Contracted for in Advance (barrels/day)

Tier 1	Tier 2	Tier 3
Part II Tier 1 - Step (J1)	Part II Tier 2 - Step (J2)	Part II Tier 3 - Step (J3)

NOTE: To convert from barrels/day to gallons/day, multiply the quantities in Parts II through V by 42 gallons/barrel.

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ATTACHMENT E-1 EXAMPLE --
WORKSHEET TO PLAN VOLUME OF RESPONSE RESOURCES
FOR WORST CASE DISCHARGE

Part I Background Information

Step (A) Calculate Worst Case Discharge in barrels (Appendix D) **170,000** (A)

Step (B) Oil Group[1] (Table 3 and section 1.2 of this appendix) **4**

Step (C) Operating Area (choose one) . . . . . [X] Nearshore/Inland [ ] or Rivers Great Lakes and Canals

Step (D) Percentages of Oil (Table 2 of this appendix)

Percent Lost to Natural Dissipation	Percent Recovered Floating Oil	Percent Oil Onshore
10	50	70
(D1)	(D2)	(D3)

Step (E1) On-Water Oil Recovery $\frac{\text{Step (D2) x Step (A)}}{100}$ **85,000** (E1)

Step (E2) Shoreline Recovery $\frac{\text{Step (D3) x Step (A)}}{100}$ . . **119,000** (E2)

Step (F) Emulsification Factor (Table 3 of this appendix) . . . . . **1.4** (F)

Step (G) On-Water Oil Recovery Resource Mobilization Factor (Table 4 of this appendix)

Tier 1	Tier 2	Tier 3
0.15	0.25	0.40
(G1)	(G2)	(G3)

[1] A facility that handles, stores, or transports multiple groups of oil must do separate calculations for each oil group on site except for those oil groups that constitute 10 percent or less by volume of the total oil storage capacity at the facility. For purposes of this calculation, the volumes of all products in an oil group must be summed to determine the percentage of the facility's total oil storage capacity.

[Part 112, Appendix E]

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ATTACHMENT E-1 EXAMPLE (CONTINUED) --
WORKSHEET TO PLAN VOLUME OF RESPONSE RESOURCES
FOR WORST CASE DISCHARGE

Part II On-Water Oil Recovery Capacity (barrels/day)

Tier 1	Tier 2	Tier 3
17,850	29,750	47,600
Step (E1) x Step (F) x Step (G1)	Step (E1) x Step (F) x Step (G2)	Step (E1) x Step (F) x Step (G3)

Part III Shoreline Cleanup Volume (barrels) 166,600

Step (E2) x Step (F)

Part IV On-Water Response Capacity By Operating Area
(Table 5 of this appendix)
(Amount needed to be contracted for in barrels/day)

Tier 1	Tier 2	Tier 3
10,000	20,000	40,000
(J1)	(J2)	(J3)

Part V On-Water Amount Needed to be Identified, but not Contracted for in Advance (barrels/day)

Tier 1	Tier 2	Tier 3
7,850	9,750	7,600
Part II Tier 1 - Step (J1)	Part II Tier 2 - Step (J2)	Part II Tier 3 - Step (J3)

NOTE: To convert from barrels/day to gallons/day, multiply the quantities in Parts II through V by 42 gallons/barrel.

[Part 112, Appendix E]

Appendix F to Part 112—Facility-Specific Response Plan

[Appendix F added at 59 FR 34097, July 1, 1994]

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1.0 Model Facility-Specific Response Plan

(A) Owners or operators of facilities regulated under this part which pose a threat of substantial harm to the environment by discharging oil into or on navigable waters or adjoining shorelines are required to prepare and submit facility-specific response plans to EPA in accordance with the provisions in this appendix. This appendix further describes the required elements in §112.20(h).

(B) Response plans must be sent to the appropriate EPA Regional office. Figure F-1 of this Appendix lists each EPA Regional office and the address where owners or operators must submit their response plans. Those facilities deemed by the Regional Administrator (RA) to pose a threat of significant and substantial harm to the environment will have their plans reviewed and approved by EPA. In certain cases, information required in the model response plan is similar to information currently maintained in the facility's Spill Prevention, Control, and Countermeasures (SPCC) Plan as required by 40 CFR 112.3. In these cases, owners or operators may reproduce the information and include a photocopy in the response plan.

(C) A complex may develop a single response plan with a set of core elements for all regulating agencies and separate sections for the non-transportation-related and transportation-related components, as described in §112.20(h). Owners or operators of large facilities that handle, store, or transport oil at more than one geographically distinct location (e.g., oil storage areas at opposite ends of a single, continuous parcel of property) shall, as appropriate, develop separate sections of the response plan for each storage area.

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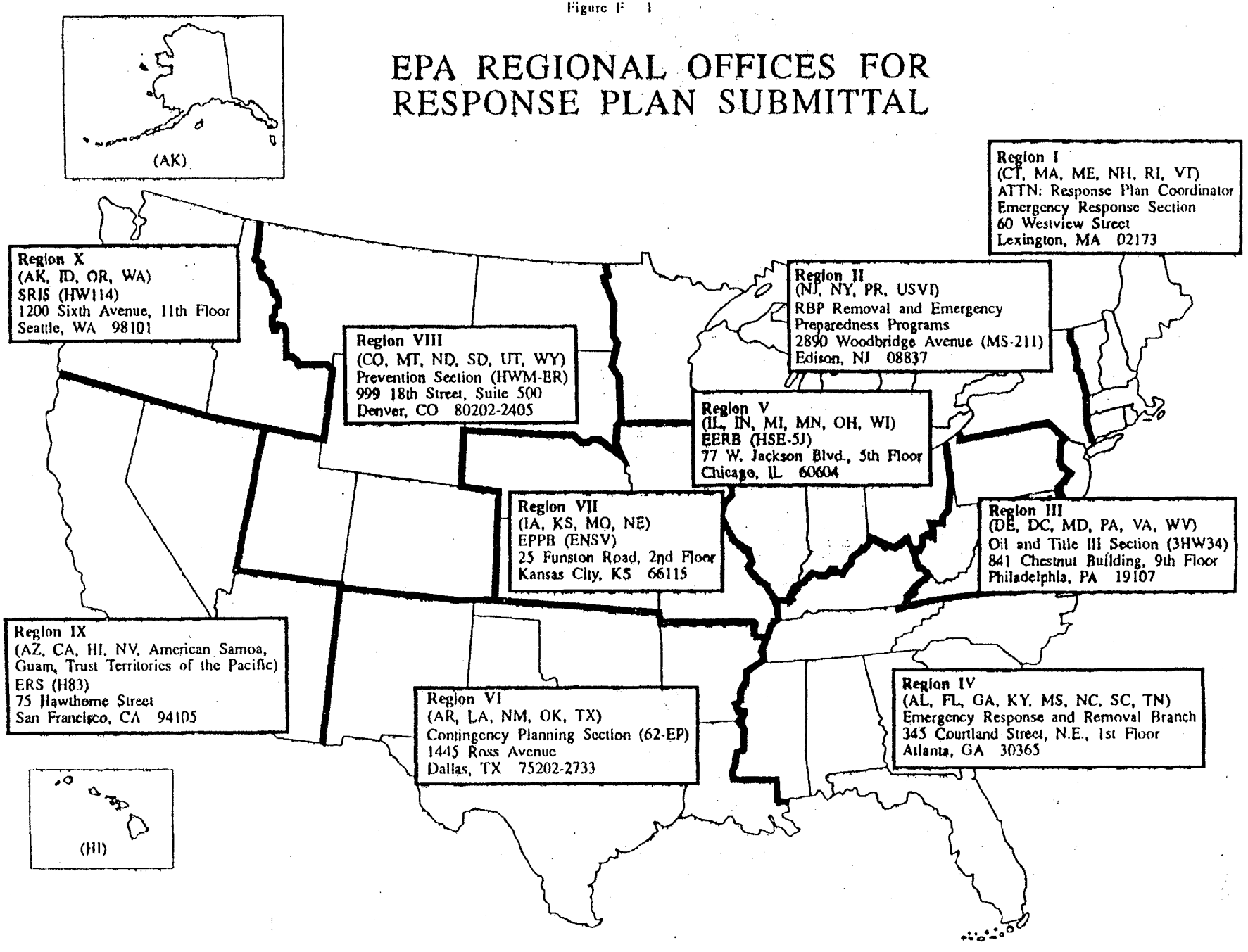
Figure F 1

EPA REGIONAL OFFICES FOR RESPONSE PLAN SUBMITTAL



1.1 Emergency Response Action Plan

Several sections of the response plan shall be co-located for easy access by response personnel during an actual emergency or oil spill. This collection of sections shall be called the Emergency Response Action Plan. The Agency intends that the Action Plan contain only as much information as is necessary to combat the spill and be arranged so response actions are not delayed. The Action Plan may be arranged in a number of ways. For example, the sections of the Emergency Response Action Plan may be photocopies or condensed versions of the forms included in the associated sections of the response plan. Each Emergency Response Action Plan section may be tabbed for quick reference. The Action Plan shall be maintained in the front of the same binder that contains the complete response plan or it shall be contained in a separate binder. In the latter case, both binders shall be kept together so that the entire plan can be accessed by the qualified individual and appropriate spill response personnel. The Emergency Response Action Plan shall be made up of the following sections:

1. Qualified Individual Information (Section 1.2) partial
2. Emergency Notification Phone List (Section 1.3.1) partial
3. Spill Response Notification Form (Section 1.3.1) partial
4. Response Equipment List and Location (Section 1.3.2) complete
5. Response Equipment Testing and Deployment (Section 1.3.3) complete
6. Facility Response Team (Section 1.3.4) partial
7. Evacuation Plan (Section 1.3.5) condensed
8. Immediate Actions (Section 1.7.1) complete
9. Facility Diagram (Section 1.9) complete

[1.1 corrected at 59 FR 49006, Sept. 26, 1994]

1.2 Facility Information

The facility information form is designed to provide an overview of the site and a description of past activities at the facility. Much of the information required by this section may be obtained from the facility's existing SPCC Plan.

1.2.1 *Facility name and location:* Enter facility name and street address. Enter the address of corporate headquarters only if corporate headquarters are physically located at the facility. Include city, county, state, zip code, and phone number.

1.2.2 *Latitude and Longitude:* Enter the latitude and longitude of the facility. Include degrees, minutes, and seconds of the main entrance of the facility.

1.2.3 *Wellhead Protection Area:* Indicate if the facility is located in or drains into a wellhead protection area as defined by the Safe Drinking Water Act of 1986 (SDWA).[1] The response plan requirements in the Wellhead Protection Program are outlined by the State or Territory in which the facility resides.

1.2.4 *Owner/operator:* Write the name of the company or person operating the facility and the name of the person or company that owns the facility, if the two are different. List the address of the owner, if the two are different.

1.2.5 *Qualified Individual:* Write the name of the qualified individual for the entire facility. If more than one person is listed, each individual indicated in this section shall have full authority to implement the facility response plan. For each individual, list: name, position, home and work addresses (street addresses, not P.O. boxes), emergency phone number, and specific response training experience.

1.2.6 *Date of Oil Storage Start-up:* Enter the year which the present facility first started storing oil.

1.2.7 *Current Operation:* Briefly describe the facility's operations and include the Standard Industry Classification (SIC) code.

1.2.8 *Dates and Type of Substantial Expansion:* Include information on expansions that have occurred at the facility. Examples of such expansions include, but are not limited to: Throughput expansion, addition of a product line, change of a product line, and installation of additional oil storage capacity. The data provided shall include all facility historical information and detail the expansion of the facility. An example of substantial expansion is any material alteration of the facility which causes the owner or operator of the facility to re-evaluate and increase the response equipment necessary to adequately respond to a worst case discharge from the facility.

[1] A wellhead protection area is defined as the surface and subsurface area surrounding a water well or wellfield, supplying a public water system, through which contaminants are reasonably likely to move toward and reach such water well or wellfield. For further information regarding State and territory protection programs, facility owners or operators may contact the SDWA Hotline at 1-800-426-4791.

Date of Last Update: _____

Facility Information Form

Facility Name: _____
Location (Street Address): _____
City: _____ State: _____ Zip: _____
County: _____ Phone Number: ( ) _____
Latitude: _____ Degrees _____ Minutes _____ Seconds
Longitude: _____ Degrees _____ Minutes _____ Seconds
Wellhead Protection Area: _____
Owner: _____
Owner Location (Street Address): _____
(if different from Facility Address)
City: _____ State: _____ Zip: _____
County: _____ Phone Number: ( ) _____
Operator (if not Owner): _____
Qualified Individual(s): (attach additional sheets if more than one)
Name: _____
Position: _____
Work Address: _____
Home Address: _____
Emergency Phone Number: ( ) _____
Date of Oil Storage Start-up: _____
Current Operation: _____
_____
_____
Date(s) and Type(s) of Substantial Expansion(s): _____
_____
(Attach additional sheets if necessary)

1.3 Emergency Response Information

(A) The information provided in this section shall describe what will be needed in an actual emergency involving the discharge of oil or a combination of hazardous substances and oil discharge. The Emergency Response Information section of the plan must include the following components:

(1) The information provided in the Emergency Notification Phone List in section 1.3.1 identifies and prioritizes the names and phone numbers of the organizations and personnel that need to be notified immediately in the event of an emergency. This section shall include all the appropriate phone numbers for the facility. These numbers must be verified each time the plan is updated. The contact list must be accessible to all facility employees to ensure that, in case of a discharge, any employee on site could immediately notify the appropriate parties.

(2) The Spill Response Notification Form in section 1.3.1 creates a checklist of information that shall be provided to the National Response Center (NRC) and other response personnel. All information on this checklist must be known at the time of notification, or be in the pro-

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cess of being collected. This notification form is based on a similar form used by the NRC. Note: Do not delay spill notification to collect the information on the list.

(3) Section 1.3.2 provides a description of the facility's list of emergency response equipment and location of the response equipment. When appropriate, the amount of oil that emergency response equipment can handle and any limitations (e.g., launching sites) must be described.

(4) Section 1.3.3 provides information regarding response equipment tests and deployment drills. Response equipment deployment exercises shall be conducted to ensure that response equipment is operational and the personnel who would operate the equipment in a spill response are capable of deploying and operating it. Only a representative sample of each type of response equipment needs to be deployed and operated, as long as the remainder is properly maintained. If appropriate, testing of response equipment may be conducted while it is being deployed. Facilities without facility-owned response equipment must ensure that the oil spill removal organization that is identified in the response plan to provide this response equipment certifies that the deployment exercises have been met. Refer to the National Preparedness for Response Exercise Program (PREP) Guidelines (see Appendix E to this part, section 10, for availability), which satisfy Oil Pollution Act (OPA) response exercise requirements.

(5) Section 1.3.4 lists the facility response personnel, including those employed by the facility and those under contract to the facility for response activities, the amount of time needed for personnel to respond, their responsibility in the case of an emergency, and their level of response training. Three different forms are included in this section. The Emergency Response Personnel List shall be composed of all personnel employed by the facility whose duties involve responding to emergencies, including oil spills, even when they are not physically present at the site. An example of this type of person would be the Building Engineer-in-Charge or Plant Fire Chief. The second form is a list of the Emergency Response Contractors (both primary and secondary) retained by the facility. Any changes in contractor status must be reflected in updates to the response plan. Evidence of contracts with response contractors shall be included in this section so that the availability of resources can be verified. The last form is the Facility Response Team List, which shall be composed of both emergency response personnel (referenced by job title/position) and emergency response contractors, included in one of the two lists described above, that will respond immediately upon discovery of an oil spill or other emergency (i.e., the first people to respond). These are to be persons normally on the facility premises or primary response contractors. Examples of these personnel would be the Facility Hazardous Materials (HAZMAT) Spill Team 1, Facility Fire Engine Company 1, Production Supervisor, or Transfer Supervisor. Company personnel must be able to respond immediately and adequately if contractor support is not available.

(6) Section 1.3.5 lists factors that must, as appropriate, be considered when preparing an evacuation plan.

(7) Section 1.3.6 references the responsibilities of the qualified individual for the facility in the event of an emergency.

(B) The information provided in the emergency response section will aid in the assessment of the facility's ability to respond to a worst case discharge and will identify additional assistance that may be needed. In addition, the facility owner or operator may want to produce a wallet-size card containing a checklist of the immediate response and notification steps to be taken in the event of an oil discharge.

1.3.1 Notification

Date of Last Update: _____

Emergency Notification Phone List Whom To Notify

Report's Name: _____
Date: _____
Facility Name: _____
Owner Name: _____
Facility Identification Number: _____
Date and Time of Each NRC Notification: _____

Organization	Phone No.
1. National Response Center (NRC):	1-800-424-8802
2. Qualified Individual:	_____
Evening Phone:	_____
3. Company Response Team:	_____
Evening Phone:	_____
4. Federal On-Scene Coordinator (OSC) and/or Regional Response Center (RRC):	_____
Evening Phone(s):	_____
Pager Number(s):	_____
5. Local Response Team (Fire Dept./Cooperatives):	_____
6. Fire Marshall:	_____
Evening Phone:	_____
7. State Emergency Response Commission (SERC):	_____
Evening Phone:	_____
8. State Police:	_____
9. Local Emergency Planning Committee (LEPC):	_____
10. Local Water Supply System:	_____
Evening Phone:	_____
11. Weather Report:	_____
12. Local Television/Radio Station for Evacuation Notification:	_____
13. Hospitals:	_____

Spill Response Notification Form

Reporter's Last Name: _____
First: _____
M.I.: _____
Position: _____
Phone Numbers: _____
Day ( ) -
Evening ( ) -
Company: _____
Organization Type: _____
Address: _____

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City: _____
State: _____
Zip: _____
Were Materials Discharged? _____ (Y/N)
Confidential? _____ (Y/N)
Meeting Federal Obligations to Report? _____ (Y/N) Date Called: _____
Calling for Responsible Party? _____ (Y/N)
Time Called: _____

Incident Description

Source and/or Cause of Incident: _____

Date of Incident: _____
Time of Incident: _____ AM/PM
Incident Address/Location: _____

Nearest City: _____ State: _____
Distance from City: _____ Units of Measure: _____ Direction from City: _____
Section: _____ Township: _____ Range: _____ Borough: _____

Container Type: _____ Tank Oil Storage Capacity: _____ Units of Measure: _____
Facility Oil Storage Capacity: _____ Units of Measure: _____
Facility Latitude: _____ Degrees _____ Minutes _____ Seconds
Facility Longitude: _____ Degrees _____ Minutes _____ Seconds

Material

CHRIS Code	Discharged quantity	Unit of measure	Material Discharged in water	Quantity	Unit of measure

Response Action
Actions Taken to Correct, Control or Mitigate Incident: _____

Were there Evacuations? _____ (Y/N)
Number Evacuated: _____
Was there any Damage? _____ (Y/N)
Damage in Dollars (approximate): _____
Medium Affected: _____
Description: _____
More Information about Medium: _____

Additional Information
Any information about the incident not recorded elsewhere in the report: _____

Caller Notifications
EPA? _____ (Y/N) USCG? _____ (/N)
State? _____ (Y/N)
Other? _____ (Y/N) Describe: _____

1.3.2 Response Equipment List
Date of Last Update: _____

Facility Response Equipment List
1. Skimmers/Pumps—Operational Status: _____
Type, Model, and Year: _____

Impact
Number of Injuries: _____ Number of Deaths: _____

Type Model Year
Number: _____
Capacity: _____ gal./min.
Daily Effective Rate: _____
Storage Location(s): _____
Date Fuel Last Changed: _____
2. Boom—Operational Status: _____
Type, Model, and Year: _____
Type Model Year
Number: _____
Size (length); _____ ft.
Containment Area: _____ sq. ft.
Storage Location: _____
3. Chemicals Stored (Dispersants listed on EPA's NCP Product Schedule)

Type	Amount	Date purchased	Treatment capacity	Storage location

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Type	Amount	Date purchased	Treatment capacity	Storage location

Were appropriate procedures used to receive approval for use of dispersants in accordance with the NCP (40 CFR 300.910) and the Area Contingency Plan (ACP), where applicable? _____ (Y/N).

Name and State of On-Scene Coordinator (OSC) authorizing use: _____.

Date Authorized: _____.

4. Dispersant Dispensing Equipment—Operational Status: _____.

Type and year	Capacity	Storage location	Response time (minutes)

5. Sorbents—Operational Status: _____
Type and Year Purchased: _____
Amount: _____
Absorption Capacity (gal.): _____
Storage Location(s):— _____
6. Hand Tools—Operational Status: _____

Type and year	Quantity	Storage location

7. Communication Equipment (include operating frequency and channel and/or cellular phone numbers)—Operational Status: _____

Type and year	Quantity	Storage location

Type and year	Quantity	Storage location

8. Fire Fighting and Personnel Protective Equipment—Operational Status: _____

Type and year	Quantity	Storage location

9. Other (e.g., Heavy Equipment, Boats and Motors)—Operational Status: _____

Type and year	Quantity	Storage location

1.3.3 Response Equipment Testing/ Deployment
Date of Last Update: _____
Response Equipment Testing and Deployment Drill Log
Last Inspection or Response Equipment Test Date: _____
Inspection Frequency: _____
Last Deployment Drill Date: _____
Deployment Frequency: _____
Oil Spill Removal Organization Certification (if applicable): _____

1.3.4 Personnel
Date of Last Update: _____

EMERGENCY RESPONSE PERSONNEL COMPANY PERSONNEL
Company Personnel

Name	Phone [1]	Response time	Responsibility during response action	Response training type/date
1.				

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EMERGENCY RESPONSE PERSONNEL COMPANY PERSONNEL

Company Personnel

Name	Phone [1]	Response time	Responsibility during response action	Response training type/date
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				

[1] Phone number to be used when person is not on-site.

EMERGENCY RESPONSE CONTRACTORS

Date of Last Update: _____

Contractor	Phone	Response time	Contract responsibility [1]
1.			
2.			
3.			
4.			

[1] Include evidence of contracts/agreements with response contractors to ensure the availability of personnel and response equipment.

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FACILITY RESPONSE TEAM
Date of Last Update: _____

Team member	Response time (minutes)	Phone or pager number (day/evening)
Qualified Individual:		/
		/
		/
		/
		/
		/
		/
		/
		/
		/
		/
		/
		/
		/
		/
		/
		/
		/

Note: If the facility uses contracted help in an emergency response situation, the owner or operator must provide the contractors' names and review the contractors' capacities to provide adequate personnel and response equipment.

[Part 112 Appendix F]

1.3.5 Evacuation Plans

1.3.5.1 Based on the analysis of the facility, as discussed elsewhere in the plan, a facility-wide evacuation plan shall be developed. In addition, plans to evacuate parts of the facility that are at a high risk of exposure in the event of a spill or other release must be developed. Evacuation routes must be shown on a diagram of the facility (see section 1.9 of this appendix). When developing evacuation plans, consideration must be given to the following factors, as appropriate:

(1) Location of stored materials;

(2) Hazard imposed by spilled material;

(3) Spill flow direction;

(4) Prevailing wind direction and speed;

(5) Water currents, tides, or wave conditions (if applicable);

(6) Arrival route of emergency response personnel and response equipment;

(7) Evacuation routes;

(8) Alternative routes of evacuation;

(9) Transportation of injured personnel to nearest emergency medical facility;

(10) Location of alarm/notification systems;

(11) The need for a centralized check-in area for evacuation validation (roll call);

(12) Selection of a mitigation command center; and

(13) Location of shelter at the facility as an alternative to evacuation.

1.3.5.2 One resource that may be helpful to owners or operators in preparing this section of the response plan is The *Handbook of Chemical Hazard Analysis Procedures* by the Federal Emergency Management Agency (FEMA), Department of Transportation (DOT), and EPA. *The Handbook of Chemical Hazard Analysis Procedures* is available from: FEMA , Publication Office, 500 C. Street, S.W., Washington, DC 20472, (202) 646-3484.

1.3.5.3 As specified in § 112.20(h)(1)(vi), the facility owner or operator must reference existing community evacuation plans, as appropriate.

1.3.6 Qualified Individual's Duties

The duties of the designated qualified individual are specified in § 112.20(h)(3)(ix). The qualified individual's duties must be described and be consistent with the minimum requirements in § 112.20(h)(3)(ix). In addition, the qualified individual must be identified with the Facility Information in section 1.2 of the response plan.

1.4 Hazard Evaluation

This section requires the facility owner or operator to examine the facility's operations closely and to predict where discharges could occur. Hazard evaluation is a widely used industry practice that allows facility owners or operators to develop a complete understanding of potential hazards and the response actions necessary to address these hazards. *The Handbook of Chemical Hazard Analysis Procedures*, prepared by the EPA, DOT, and the FEMA and the *Hazardous Materials Emergency Planning Guide* (NRT-1), prepared by the National Response Team are good references for conducting a hazard analysis. Hazard identification and evaluation will assist facility owners or operators in planning for potential discharges, thereby reducing the severity of discharge impacts that may occur in the future. The evaluation also may help the operator identify and correct potential sources of discharges. In addition, special hazards to workers and emergency response personnel's health and safety shall be evaluated, as well as the facility's oil spill history.

1.4.1 Hazard Identification

The Tank and Surface Impoundment (SI) forms, or their equivalent, that are part of this section must be completed according to the directions below. ("Surface Impoundment" means a facility or part of a facility which is a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials), which is designed to hold an accumulation of liquid wastes or wastes containing free liquids, and which is not an injection well or a seepage facility.) Similar worksheets, or their equivalent, must be developed for any other type of storage containers.

(1) List each tank at the facility with a separate and distinct identifier. Begin aboveground tank identifiers with an "A" and belowground tank identifiers with a "B", or submit multiple sheets with the aboveground tanks and belowground tanks on separate sheets.

(2) Use gallons for the maximum capacity of a tank; and use square feet for the area.

(3) Using the appropriate identifiers and the following instructions, fill in the appropriate forms:

(a) Tank or SI number—Using the aforementioned identifiers (A or B) or multiple reporting sheets, identify each tank or SI at the facility that stores oil or hazardous materials.

(b) Substance Stored—For each tank or SI identified, record the material that is stored therein. If the tank or SI is used to store more than one material, list all of the stored materials.

(c) Quantity Stored—For each material stored in each tank or SI, report the average volume of material stored on any given day.

(d) Tank Type or Surface Area/Year—For each tank, report the type of tank (e.g., floating top), and the year the tank was originally installed. If the tank has been refabricated, the year that the latest refabrication was completed must be recorded in parentheses next to the year installed. For each SI, record the surface areaBthe impoundment and the year it went into service.

(e) Maximum Capacity—Record the operational maximum capacity for each tank and SI. If the maximum capacity varies with the season, record the upper and lower limits.

(f) Failure/Cause—Record the cause and date of any tank or SI failure which has resulted in a loss of tank or SI contents.

(4) Using the numbers from the tank and SI forms, label a schematic drawing of the facility. This drawing shall be identical to any schematic drawings included in the SPCC Plan.

(5) Using knowledge of the facility and its operations, describe the following in writing:

(a) The loading and unloading of transportation vehicles that risk the discharge of oil or release of hazardous substances during transport processes. These operations may include loading and unloading of trucks, railroad cars, or vessels. Estimate the volume of material involved in transfer operations, if the exact volume cannot be determined.

(b) Day-to-day operations that may present a risk of discharging oil or releasing a hazardous substance. These activities include scheduled venting, piping repair or replacement, valve maintenance, transfer of tank contents from one tank to

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another, etc. (not including transportation-related activities). Estimate the volume of material involved in these operations, if the exact volume cannot be determined.

(c) The secondary containment volume associated with each tank and/or transfer point at the facility. The numbering scheme developed on the tables, or an equivalent system, must be used to identify each containment area. Capacities must be listed for each individual unit (tanks, slumps, drainage traps, and ponds), as well as the facility total.

(d) Normal daily throughput for the facility and any effect on potential discharge volumes that a negative or positive change in that throughput may cause.

HAZARD IDENTIFICATION TANKS[1]

Date of Last Update: _____

Tank No.	Substance Stored (Oil and Hazardous Substance)	Quantity Stored (gallons)	Tank Type/Year	Maximum Capacity (gallons)	Failure/Cause

[1] Tank = any container that stores oil.
Attach as many sheets as necessary.

HAZARD IDENTIFICATION SURFACE IMPOUNDMENTS (SIS)

Date of Last Update: _____

SI No.	Substance Stored	Quantity Stored (gallons)	Surface Area/Year	Maximum Capacity (gallons)	Failure/Cause

Attach as many sheets as necessary.

1.4.2 Vulnerability Analysis

The vulnerability analysis shall address the potential effects (i.e., to human health, property, or the environment) of an oil spill. Attachment C–III to Appendix C to this part provides a method that

[Part 112 Appendix F]

owners or operators shall use to determine appropriate distances from the facility to fish and wildlife and sensitive environments. Owners or operators can use a comparable formula that is considered acceptable by the RA. If a comparable formula is used, documentation of the reliability and analytical soundness of the formula must be attached to the response plan cover sheet. This analysis must be prepared for each facility and, as appropriate, must discuss the vulnerability of:

(1) Water intakes (drinking, cooling, or other);

(2) Schools;

(3) Medical facilities;

(4) Residential areas;

(5) Businesses;

(6) Wetlands or other sensitive environments;[2]

(7) Fish and wildlife;

(8) Lakes and streams;

(9) Endangered flora and fauna;

(10) Recreational areas;

(11) Transportation routes (air, land, and water);

(12) Utilities; and

(13) Other areas of economic importance (e.g., beaches, marinas) including terrestrially sensitive environments, aquatic environments, and unique habitats.

1.4.3 Analysis of the Potential for an Oil Spill

Each owner or operator shall analyze the probability of a spill occurring at the facility. This analysis shall incorporate factors such as oil spill history, horizontal range of a potential spill, and vulnerability to natural disaster, and shall, as appropriate, incorporate other factors such as tank age. This analysis will provide information for developing discharge scenarios for a worst case discharge and small and medium discharges and aid in the development of techniques to reduce the size and frequency of spills. The owner or operator may need to research the age of the tanks and the oil spill history at the facility.

[2] Refer to the DOC/NOAA "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (See appendix E to this part, section 10, for availability).

1.4.4 Facility Reportable Oil Spill History

Briefly describe the facility's reportable oil spill[3] history for the entire life of the facility to the extent that such information is reasonably identifiable, including:

(1) Date of discharge(s);

(2) List of discharge causes;

(3) Material(s) discharged;

(4) Amount discharged in gallons;

(5) Amount of discharge that reached navigable waters, if applicable;

(6) Effectiveness and capacity of secondary containment;

(7) Clean-up actions taken;

(8) Steps taken to reduce possibility of recurrence;

(9) Total oil storage capacity of the tank(s) or impoundment(s) from which the material discharged;

(10) Enforcement actions;

(11) Effectiveness of monitoring equipment; and

(12) Description(s) of how each oil spill was detected.

The information solicited in this section may be similar to requirements in 40 CFR 112.4(a). Any duplicate information required by §112.4(a) may be photocopied and inserted.

1.5 Discharge Scenarios

In this section, the owner or operator is required to provide a description of the facility's worst case discharge, as well as a small and medium spill, as appropriate. A multi-level planning approach has been chosen because the response actions to a spill (i.e., necessary response equipment, products, and personnel) are dependent on the magnitude of the spill. Planning for lesser discharges is necessary because the nature of the response may be qualitatively different depending on the quantity of the discharge. The facility owner or operator shall discuss the potential direction of the spill pathway.

1.5.1 Small and Medium Discharges

1.5.1.1 To address multi-level planning requirements, the owner or operator must consider types of facility-specific spill scenarios that may contribute to a small or medium spill. The scenarios shall account for all the operations that take place at the facility, including but not limited to:

(1) Loading and unloading of surface transportation;

(2) Facility maintenance;

(3) Facility piping;

(4) Pumping stations and sumps;

(5) Oil storage tanks;

(6) Vehicle refueling; and

(7) Age and condition of facility and components.

1.5.1.2 The scenarios shall also consider factors that affect the response efforts required by the facility. These include but are not limited to:

(1) Size of the spill;

(2) Proximity to downgradient wells, waterways, and drinking water intakes;

(3) Proximity to fish and wildlife and sensitive environments;

(4) Likelihood that the discharge will travel offsite (i.e., topography, drainage) ;

(5) Location of the material spilled (i.e., on a concrete pad or directly on the soil);

(6) Material discharged;

(7) Weather or aquatic conditions (i.e., river flow);

(8) Available remediation equipment;

(9) Probability of a chain reaction of failures; and

(10) Direction of spill pathway.

1.5.2 Worst Case Discharge

1.5.2.1 In this section, the owner or operator must identify the worst case discharge volume at the facility. Worksheets for production and non-production facility owners or operators to use when calculating worst case discharge are presented in Appendix D to this part. When planning for the worst case discharge response, all of the aforementioned factors listed in the small and medium discharge section of the response plan shall be addressed.

1.5.2.2 For onshore storage facilities and production facilities, permanently manifolded oil storage tanks are defined as tanks that are designed, installed, and/or operated in such a manner that the multiple tanks function as one storage unit (i.e., multiple tank volumes are equalized). In this section of the response plan, owners or operators must provide evidence that oil storage tanks with common piping or piping systems are not operated as one unit. If such evidence is provided and is acceptable to the RA, the worst case discharge volume shall be

[3] As described in 40 CFR part 110, reportable oil spills are those that: (a) violate applicable water quality standards, or (b) cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

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based on the combined oil storage capacity of all manifold tanks or the oil storage capacity of the largest single oil storage tank within the secondary containment area, whichever is greater. For permanently manifolded oil storage tanks that function as one storage unit, the worst case discharge shall be based on the combined oil storage capacity of all manifolded tanks or the oil storage capacity of the largest single tank within a secondary containment area, whichever is greater. For purposes of the worst case discharge calculation, permanently manifolded oil storage tanks that are separated by internal divisions for each tank are considered to be single tanks and individual manifolded tank volumes are not combined.

1.6 Discharge Detection Systems

In this section, the facility owner or operator shall provide a detailed description of the procedures and equipment used to detect discharges. A section on spill detection by personnel and a discussion of automated spill detection, if applicable, shall be included for both regular operations and after hours operations. In addition, the facility owner or operator shall discuss how the reliability of any automated system will be checked and how frequently the system will be inspected.

1.6.1 Discharge Detection by Personnel

In this section, facility owners or operators shall describe the procedures and personnel that will detect any spill or uncontrolled discharge of oil or release of a hazardous substance. A thorough discussion of facility inspections must be included. In addition, a description of initial response actions shall be addressed. This section shall reference section 1.3.1 of the response plan for emergency response information.

1.6.2 Automated Discharge Detection

In this section, facility owners or operators must describe any automated spill detection equipment that the facility has in place. This section shall include a discussion of overfill alarms, secondary containment sensors, etc. A discussion of the plans to verify an automated alarm and the actions to be taken once verified must also be included.

1.7 Plan Implementation

In this section, facility owners or operators must explain in detail how to implement the facility's emergency response plan by describing response actions to be carried out under the plan to ensure the safety of the facility and to mitigate or prevent discharges described in section 1.5 of the response plan. This section shall include the identification of response resources for small, medium, and worst case spills; disposal plans; and containment and drainage planning. A list of those personnel who would be involved in the cleanup shall be identified. Procedures that the facility will use, where appropriate or necessary, to update their plan after an oil spill event and the time frame to update the plan must be described.

1.7.1 Response Resources for Small, Medium, and Worst Case Spills

1.7.1.1 Once the spill scenarios have been identified in section 1.5 of the response plan, the facility owner or operator shall identify and describe implementation of the response actions. The facility owner or operator shall demonstrate accessibility to the proper response personnel and equipment to effectively respond to all of the identified spill scenarios. The determination and demonstration of adequate response capability are presented in Appendix E to this part. In addition, steps to expedite the cleanup of oil spills must be discussed. At a minimum, the following items must be addressed:

(1) Emergency plans for spill response;

(2) Additional response training;

(3) Additional contracted help;

(4) Access to additional response equipment/experts; and

(5) Ability to implement the plan including response training and practice drills.

1.7.1.2A recommended form detailing immediate actions follows.

OIL SPILL RESPONSE—IMMEDIATEP ACTIONS

1. Stop the product flow	Act quickly to secure pumps, close valves, etc.
2. Warn personnel....	Enforce safety and security measures.
3. Shut off ignition sources.	Motors, electrical circuits, open flames, etc.
4. Initiate containment.	Around the tank and/or in the water with oil boom.
5. Notify NRC.....	1-800-424-8802
6. Notify OSC.	
7. Notify, as appropriate	

Source: FOSS, Oil Spill Response—mergency Procedures, Revised December 3, 1992.

1.7.2 Disposal Plans

1.7.2.1 Facility owners or operators must describe how and where the facility intends to recover, reuse, decontaminate, or dispose of materials after a discharge has taken place. The appropriate permits required to transport or dispose of recovered materials according to local, State, and Federal requirements must be addressed. Materials that must be accounted for in the disposal plan, as appropriate, include:

(1) Recovered product;

(2) Contaminated soil;

(3) Contaminated equipment and materials, including drums, tank parts, valves, and shovels;

(4) Personnel protective equipment;

(5) Decontamination solutions;

(6) Adsorbents; and

(7) Spent chemicals.

1.7.2.2 These plans must be prepared in accordance with Federal (e.g., the Resource Conservation and Recovery Act [RCRA]), State, and local regulations, where applicable. A copy of the disposal plans from the facility's SPCC Plan may be inserted with this section, including any diagrams in those plans.

Material	Disposal facility	Location	RCRA permit/manifes
1.			

[Part 112 Appendix F]

Material	Disposal facility	Location	RCRA permit/manifes
2.			
3.			
4.			

1.7.3 Containment and Drainage Planning

A proper plan to contain and control a spill through drainage may limit the threat of harm to human health and the environment. This section shall describe how to contain and control a spill through drainage, including:

(1) The available volume of containment (use the information presented in section 1.4.1 of the response plan);

(2) The route of drainage from oil storage and transfer areas;

(3) The construction materials used in drainage troughs;

(4) The type and number of valves and separators used in the drainage system;

(5) Sump pump capacities;

(6) The containment capacity of weirs and booms that might be used and their location (see section 1.3.2 of this appendix); and

(7) Other cleanup materials.

In addition, facility owners or operators must meet the inspection and monitoring requirements for drainage contained in 40 CFR 112.7(e). A copy of the containment and drainage plans that are required in 40 CFR 112.7(e) may be inserted in this section, including any diagrams in those plans.

Note: The general permit for stormwater drainage may contain additional requirements.

1.8 Self-Inspection, Drills/Exercises, and Response Training

The owner or operator must develop programs for facility response training and for drills/exercises according to the requirements of 40 CFR 112.21. Logs must be kept for facility drills/exercises, personnel response training, and spill prevention meetings. Much of the recordkeeping information required by this section is also contained in the SPCC Plan required by 40 CFR 112.3. These logs may be included in the facility response plan or kept as an annex to the facility response plan.

1.8.1 Facility Self-Inspection

Pursuant to 40 CFR 112.7(e)(8), each facility shall include the written procedures and records of inspections in the SPCC Plan. The inspection shall include the tanks, secondary containment, and response equipment at the facility. Records of the inspections of tanks and secondary containment required by 40 CFR 112.7(e) shall be cross-referenced in the response plan. The inspection of response equipment is a new requirement in this plan. Facility self-inspection requires two steps: (1) a checklist of things to inspect; and (2) a method of recording the actual inspection and its findings. The date of each inspection shall be noted. These records are required to be maintained for 5 years.

1.8.1.1 Tank Inspection

The tank inspection checklist presented below has been included as guidance during inspections and monitoring. Similar requirements exist in 40 CFR 112.7(e). Duplicate information from the SPCC Plan may be photocopied and inserted in this section. The inspection checklist consists of the following items:

Tank Inspection Checklist

1. Check tanks for leaks, specifically looking for:
   A. drip marks;
   B. discoloration of tanks;
   C. puddles containing spilled or leaked material;
   D. corrosion;
   E. cracks; and
   F. localized dead vegetation.
2. Check foundation for:
   A. cracks;
   B. discoloration;
   C. puddles containing spilled or leaked material;
   D. settling;
   E. gaps between tank and foundation; and
   F. damage caused by vegetation roots.
3. Check piping for:
   A. droplets of stored material;
   B. discoloration;
   C. corrosion;
   D. bowing of pipe between supports;
   E. evidence of stored material seepage from valves or seals; and
   F. localized dead vegetation.

TANK/SURFACE IMPOUNDMENT INSPECTION LOG

Inspector	Tank or SI#	Date	Comments

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TANK/SURFACE IMPOUNDMENT INSPECTION LOG

Inspector	Tank or SI#	Date	Comments

1.8.1.2 Response Equipment Inspection

Using the Emergency Response Equipment List provided in section 1.3.2 of the response plan, describe each type of response equipment, checking for the following:

Response Equipment Checklist

1. Inventory (item and quantity);
2. Storage location;
3. Accessibility (time to access and respond);
4. Operational status/condition;
5. Actual use/testing (last test date and frequency of testing); and
6. Shelf life (present age, expected replacement date).

Please note any discrepancies between this list and the available response equipment.

RESPONSE EQUIPMENT INSPECTION LOG
[Use section 1.3.2 of the response plan as a checklist]

Inspector	Date	Comments

[Part 112, Appendix F]

RESPONSE EQUIPMENT INSPECTION LOG
[Use section 1.3.2 of the response plan as a checklist]

Inspector	Date	Comments

1.8.1.3 Secondary Containment Inspection

Inspect the secondary containment (as described in sections 1.4.1 and 1.7.2 of the response plan), checking the following:

Secondary Containment Checklist

1. Dike or berm system.
   A. Level of precipitation in dike/available capacity;
   B. Operational status of drainage valves;
   C. Dike or berm permeability;
   D. Debris;
   E. Erosion;
   F. Permeability of the earthen floor of diked area; and
   G. Location/status of pipes, inlets, drainage beneath tanks, etc.
2. Secondary containment
   A. Cracks;
   B. Discoloration;
   C. Presence of spilled or leaked material (standing liquid);
   D. Corrosion; and
   E. Valve conditions.
3. Retention and drainage ponds
   A. Erosion;
   B. Available capacity;
   C. Presence of spilled or leaked material;
   D. Debris; and
   E. Stressed vegetation.

During inspection, make note of discrepancies in any of the above mentioned items, and report them immediately to the proper facility personnel. Similar requirements exist in 40 CFR 112.7(e). Duplicate information from the SPCC Plan may be photocopied and inserted in this section.

1.8.2 Facility Drills/Exercises

(A) CWA section 311(j)(5), as amended by OPA, requires the response plan to contain a description of facility drills/exercises. According to 40 CFR 112.21(c), the facility owner or operator shall develop a program of facility response drills/exercises, including evaluation procedures. Following the PREP guidelines (see Appendix E to this part, section 10, for availability) would satisfy a facility's requirements for drills/exercises under this part. Alternately, under §112.21(c), a facility owner or operator may develop a program that is not based on the PREP guidelines. Such a program is subject to approval by the Regional Administrator based on the description of the program provided in the response plan.

(B) The PREP Guidelines specify that the facility conduct internal and external drills/exercises. The internal exercises include: qualified individual notification drills, spill management team tabletop exercises, equipment deployment exercises, and unannounced exercises. External exercises include Area Exercises. Credit for an Area or Facility-specific Exercise will be given to the facility for an actual response to a spill in the area if the plan was utilized for response to the spill and the objectives of the Exercise were met and were properly evaluated, documented and self-certified.

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(C)Section 112.20(h)(8)(ii) requires the facility owner or operator to provide a description of the drill/exercise program to be carried out under the response plan. Qualified Individual Notification Drill and Spill Management Team Tabletop Drill logs shall be provided in sections 1.8.2.1 and 1.8.2.2, respectively. These logs may be included in the facility response plan or kept as an annex to the facility response plan. See section 1.3.3 of this appendix for Equipment Deployment Drill Logs.

1.8.2.1 Qualified Individual Notification Drill Logs Qualified Individual Notification Drill Log

Date: _____
Company: _____
Qualified Individual(s): _____
Emergency Scenario: _____
_____
_____
Evaluation: _____
_____
_____
_____
Changes to be Implemented: _____
_____
_____
Time Table for Implementation: _____
_____

1.8.2.2 Spill Management Team Tabletop Exercise Logs Spill Management Team Tabletop Exercise Log

Date: _____
Company: _____
Qualified Individual(s): _____
Emergency Scenario: _____
_____
_____
Evaluation: _____
_____
_____
_____
Changes to be Implemented: _____
_____
_____
Time Table for Implementation: _____

1.8.3 Response Training

Section 112.21(a) requires facility owners or operators to develop programs for facility response training. Facility owners or operators are required by §112.20(h)(8)(iii) to provide a description of the response training program to be carried out under the response plan. A facility's training program can be based on the USCG's Training Elements for Oil Spill Response, to the extent applicable to facility operations, or another response training program acceptable to the RA. The training elements are available from Petty Officer Daniel Caras at (202) 267-6570 or fax 267-4085/4065. Personnel response training logs and discharge prevention meeting logs shall be included in sections 1.8.3.1 and 1.8.3.2 of the response plan respectively. These logs may be included in the facility response plan or kept as an annex to the facility response plan.

1.8.3.1 Personnel Response Training Logs

PERSONNEL RESPONSE TRAINING LOG

Name	Response training/date and number of hours	Prevention training/date and number of hours

1.8.3.2 Discharge Prevention Meetings Logs

Discharge Prevention Meeting Log

Date: _____
Attendees: _____
_____
_____
_____

[Part 112, Appendix F]

Discharge Prevention Meeting Log

Subject/issue identified	Required action	Implementation date

1.9 Diagrams

The facility-specific response plan shall include the following diagrams. Additional diagrams that would aid in the development of response plan sections may also be included.

(1) The Site Plan Diagram shall, as appropriate, include and identify:
- (A) the entire facility to scale;
- (B) above and below ground bulk oil storage tanks;
- (C) the contents and capacities of bulk oil storage tanks;
- (D) the contents and capacity of drum oil storage areas;
- (E) the contents and capacities of surface impoundments;
- (F) process buildings;
- (G) transfer areas;
- (H) secondary containment systems (location and capacity);
- (I) structures where hazardous materials are stored or handled, including materials stored and capacity of storage;
- (J) location of communication and emergency response equipment;
- (K) location of electrical equipment which contains oil; and
- (L) for complexes only, the interface(s) (i.e., valve or component) between the portion of the facility regulated by EPA and the portion(s) regulated by other Agencies. In most cases, this interface is defined as the last valve inside secondary containment before piping leaves the secondary containment area to connect to the transportation-related portion of the facility (i.e., the structure used or intended to be used to transfer oil to or from a vessel or pipeline). In the absence of secondary containment, this interface is the valve manifold adjacent to the tank nearest the transfer structure as described above. The interface may be defined differently at a specific facility if agreed to by the RA and the appropriate Federal official.

(2) The Site Drainage Plan Diagram shall, as appropriate, include:
- (A) major sanitary and storm sewers, manholes, and drains;
- (B) weirs and shut-off valves;
- (C) surface water receiving streams;
- (D) fire fighting water sources;
- (E) other utilities;
- (F) response personnel ingress and egress;
- (G) response equipment transportation routes; and
- (H) direction of spill flow from discharge points.

(3) The Site Evacuation Plan Diagram shall, as appropriate, include:
- (A) site plan diagram with evacuation route(s); and
- (B) location of evacuation regrouping areas.

1.10 Security

According to 40 CFR 112.7(e)(9), facilities are required to maintain a certain level of security, as appropriate. In this section, a description of the facility security shall be provided and include, as appropriate:

(1) emergency cut-off locations (automatic or manual valves);
(2) enclosures (e.g., fencing, etc.);
(3) guards and their duties, day and night;
(4) lighting;
(5) valve and pump locks; and
(6) pipeline connection caps.

The SPCC Plan contains similar information. Duplicate information may be photocopied and inserted in this section.

2.0 Response Plan Cover Sheet

A three-page form has been developed to be completed and submitted to the RA by owners or operators who are required to prepare and submit a facility-specific response plan. The cover sheet (Attachment F-1) must accompany the response plan to provide the Agency with basic information concerning the facility. This section will describe the Response Plan

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Cover Sheet and provide instructions for its completion.

2.1 General Information

Owner/Operator of Facility: Enter the name of the owner of the facility (if the owner is the operator). Enter the operator of the facility if otherwise. If the owner/operator of the facility is a corporation, enter the name of the facility's principal corporate executive. Enter as much of the name as will fit in each section.

(1) *Facility Name:* Enter the proper name of the facility.

(2) *Facility Address:* Enter the street address, city, State, and zip code.

(3) *Facility Phone Number:* Enter the phone number of the facility.

(4) *Latitude and Longitude:* Enter the facility latitude and longitude in degrees, minutes, and seconds.

(5) *Dun and Bradstreet Number:* Enter the facility's Dun and Bradstreet number if available (this information may be obtained from public library resources).

(6) *Standard Industrial Classification (SIC) Code:* Enter the facility's SIC code as determined by the Office of Management and Budget (this information may be obtained from public library resources).

(7) *Largest Oil Storage Tank Capacity:* Enter the capacity in GALLONS of the largest aboveground oil storage tank at the facility.

(8) *Maximum Oil Storage Capacity:* Enter the total maximum capacity in GALLONS of all aboveground oil storage tanks at the facility.

(9) *Number of Oil Storage Tanks:* Enter the number of all aboveground oil storage tanks at the facility.

(10) *Worst Case Discharge Amount:* Using information from the worksheets in Appendix D, enter the amount of the worst case discharge in GALLONS.

(11) *Facility Distance to Navigable Waters:* Mark the appropriate line for the nearest distance between an opportunity for discharge (i.e., oil storage tank, piping, or flowline) and a navigable water.

[2.1 heading corrected at 59 FR 49006, Sept. 26, 1994]

2.2 Applicability of Substantial Harm Criteria

Using the flowchart provided in Attachment C-I to Appendix C to this part, mark the appropriate answer to each question. Explanations of referenced terms can be found in Appendix C to this part. If a comparable formula to the ones described in Attachment C-III to Appendix C to this part is used to calculate the planning distance, documentation of the reliability and analytical soundness of the formula must be attached to the response plan cover sheet.

[2.2 heading corrected at 59 FR 49006, Sept. 26, 1994]

2.3 Certification

Complete this block after all other questions have been answered.

[2.3 heading corrected at 59 FR 49006, Sept. 26, 1994]

3.0 Acronyms

ACP: Area Contingency Plan
ASTM: American Society of Testing Materials
bbls: Barrels
bpd: Barrels per Day
bph: Barrels per Hour
CHRIS: Chemical Hazards Response Information System
CWA: Clean Water Act
DOI: Department of Interior
DOC: Department of Commerce
DOT: Department of Transportation
EPA: Environmental Protection Agency
FEMA: Federal Emergency Management Agency
FR: Federal Register
gal: Gallons
gpm: Gallons per Minute
HAZMAT: Hazardous Materials
LEPC: Local Emergency Planning Committee
MMS: Minerals Management Service (part of DOI)
NCP: National Oil and Hazardous Substances Pollution Contingency Plan
NOAA: National Oceanic and Atmospheric Administration (part of DOC)
NRC: National Response Center
NRT: National Response Team
OPA: Oil Pollution Act of 1990
OSC: On-Scene Coordinator
PREP: National Preparedness for Response Exercise Program
RA: Regional Administrator
RCRA: Resource Conservation and Recovery Act
RRC: Regional Response Centers
RRT: Regional Response Team
RSPA: Research and Special Programs Administration
SARA: Superfund Amendments and Reauthorization Act
SERC: State Emergency Response Commission
SDWA: Safe Drinking Water Act of 1986
SI: Surface Impoundment
SIC: Standard Industrial Classification
SPCC: Spill Prevention, Control, and Countermeasures
USCG: United States Coast Guard

[2.3 heading corrected at 59 FR 49006, Sept. 26, 1994]

4.0 References

CONCAWE. 1982. Methodologies for Hazard Analysis and Risk Assessment in the Petroleum Refining and Storage Industry. Prepared by CONCAWE's Risk Assessment Ad-hoc Group.

U.S. Department of Housing and Urban Development. 1987. Siting of HUD-Assisted Projects Near Hazardous Facilities: Acceptable Separation Distances from Explosive and Flammable Hazards. Prepared by the Office of Environment and Energy, Environmental Planning Division, Department of Housing and Urban Development. Washington, DC.

U.S. DOT, FEMA and U.S. EPA. Handbook of Chemical Hazard Analysis Procedures.

U.S. DOT, FEMA and U.S. EPA. Technical Guidance for Hazards Analysis: Emergency Planning for Extremely Hazardous Substances.

The National Response Team. 1987. Hazardous Materials Emergency Planning Guide. Washington, DC.

The National Response Team. 1990. Oil Spill Contingency Planning, National Status: A Report to the President. Washington, DC. U.S. Government Printing Office.

Offshore Inspection and Enforcement Division. 1988. Minerals Management Service, Offshore Inspection Program: National Potential Incident of Noncompliance (PINC) List. Reston, VA.

Attachments to Appendix F

Attachment F-1—Response Plan Cover Sheet

This cover sheet will provide EPA with basic information concerning the facility. It must accompany a submitted facility response plan. Explanations and detailed instructions can be found in Appendix F. Please type or write legibly in blue or

black ink. Public reporting burden for the collection of this information is estimated to vary from 1 hour to 270 hours per response in the first year, with an average of 5 hours per response. This estimate includes time for reviewing instructions, searching existing data sources, gathering the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate of this information, including suggestions for reducing this burden to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M St., SW., Washington, D.C. 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington D.C. 20503.

General Information

Owner/Operator of Facility:

Facility Name: _____

Facility Address (street address or route):

Q _____

City, State, and U.S. Zip Code:

Facility Phone No.: _____

Latitude (Degrees: North):

_____

degrees, minutes, seconds

Dun & Bradstreet Number:[1]

_____

_____

Largest Aboveground Oil Storage Tank Capacity (Gallons):

_____

Number of Aboveground Oil Storage Tanks:

_____

[1]These numbers may be obtained from public library resources.

Longitude (Degrees: West):

_____

degrees, minutes, seconds _____

Standard Industrial Classification (SIC) Code: [1] _____

_____

Maximum Oil Storage Capacity (Gallons): _____

Worst Case Oil Discharge Amount (Gallons):

Facility Distance to Navigable Water. Mark the appropriate line. _____

0–1/4 mile _____ 1/4 – 1/2 mile _____

1/2–1 mile _____ >1 mile _____

Applicability of Substantial Harm Criteria

Does the facility transfer oil over-water[2] and does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?

Yes _____

No _____

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and, within any storage area, does the facility lack secondary containment [2] that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation?

Yes _____

No _____

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance [2] (as calculated using the appropriate formula in Appendix C or a comparable formula) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments?[3]

Yes _____

No _____

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and is the facility located at a distance [2] (as calculated using the appropriate formula in Appendix C or a comparable formula) such that a discharge from the facility would shut down a public drinking water intake? [2]

Yes _____

No _____

Does the facility have a total oil storage capacity greater than or equal to 1 million gallons and has the facility experienced a reportable oil spill [2] in an amount greater than or equal to 10,000 gallons within the last 5 years?

Yes _____

No _____

Certification

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining information, I believe that the submitted information is true, accurate, and complete.

Signature: _____

Name (Please type or print): _____

_____

Title: _____

Date: _____

[2]Explanations of the above-referenced terms can be found in Appendix C to this part. If a comparable formula to the ones contained in Attachment C-III is used to establish the appropriate distance to fish and wildlife and sensitive environments or public drinking water intakes, documentation of the reliability and analytical soundness of the formula must be attached to this form.

[3]For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (see Appendix E to this part, section 10, for availability) and the applicable ACP.

[Part 112, Appendix F]

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40 CFR 280

EPA TECHNICAL STANDARDS AND CORRECTIVE ACTION REQUIREMENTS FOR OWNERS AND OPERATORS OF UNDERGROUND STORAGE TANKS

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TITLE 40—PROTECTION OF ENVIRONMENT

CHAPTER I—ENVIRONMENTAL PROTECTION AGENCY

SUBCHAPTER I—SOLID WASTES

PART 280—TECHNICAL STANDARDS AND CORRECTIVE ACTION REQUIREMENTS FOR OWNERS AND OPERATORS OF UNDERGROUND STORAGE TANKS (UST)

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§280.10 Applicability.

(a) The requirements of this part apply to all owners and operators of an UST system as defined in §280.12 except as otherwise provided in paragraphs (b), (c), and (d) of this section. Any UST system listed in paragraph (c) of this section must meet the requirements of §280.11.

(b) The following UST systems are excluded from the requirements of this part:

(1) Any UST system holding hazardous wastes listed or identified under Subtitle C of the Solid Waste Disposal Act, or a mixture of such hazardous waste and other regulated substances.

(2) Any wastewater treatment tank system that is part of a wastewater treatment facility regulated under section 402 or 307(b) of the Clean Water Act.

(3) Equipment or machinery that contains regulated substances for operational purposes such as hydraulic lift tanks and electrical equipment tanks.

(4) Any UST system whose capacity is 110 gallons or less.

(5) Any UST system that contains a *de minimis* concentration of regulated substances.

(6) Any emergency spill or overflow containment UST system that is expeditiously emptied after use.

(c) *Deferrals.* Subparts B, C, D, E, and G do not apply to any of the following types of UST systems:

(1) Wastewater treatment tank systems;

(2) Any UST systems containing radioactive material that are regulated under the Atomic Energy Act of 1954 (42 U.S.C. 2011 and following);

(3) Any UST system that is part of an emergency generator system at nuclear power generation facilities regulated by the Nuclear Regulatory Commission under 10 CFR part 50, appendix A;

(4) Airport hydrant fuel distribution systems; and

(5) UST systems with field-constructed tanks.

(d) *Deferrals.* Subpart D does not apply to any UST system that stores fuel solely for use by emergency power generators.

§280.11 Interim prohibition for deferred UST systems.

(a) No person may install an UST system listed in §280.10(c) for the purpose of storing regulated substances unless the UST system (whether of single- or double-wall construction):

(1) Will prevent releases due to corrosion or structural failure for the operational life of the UST system;

(2) Is cathodically protected against corrosion, constructed of noncorrodible material, steel clad with a noncorrodible material, or designed in a manner to prevent the release or threatened release of any stored substance; and

(3) Is constructed or lined with material that is compatible with the stored substance.

(b) Notwithstanding paragraph (a) of this section, an UST system without corrosion protection may be installed at a site that is determined by a corrosion expert not to be corrosive enough to cause it to have a release due to corrosion during its operating life. Owners and operators must maintain records that demonstrate compliance with the requirements of this paragraph for the remaining life of the tank.

NOTE: The National Association of Corrosion Engineers Standard RP-02-85, "Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems," may be used as guidance for complying with paragraph (b) of this section.

§280.12 Definitions.

Aboveground release means any release to the surface of the land or to surface water. This includes, but is not limited to, releases from the above-ground portion of an UST system and aboveground releases associated with overfills and transfer operations as the regulated substance moves to or from an UST system.

Ancillary equipment means any devices including, but not limited to, such devices as piping, fittings, flanges, valves, and pumps used to distribute, meter, or control the flow of regulated substances to and from an UST.

Belowground release means any release to the subsurface of the land and to ground water. This includes, but is not limited to, releases from the belowground portions of an underground storage tank system and belowground releases associated with overfills and transfer operations as the regulated substance moves to or from an underground storage tank.

Beneath the surface of the ground means beneath the ground surface or otherwise covered with earthen materials.

Cathodic protection is a technique to prevent corrosion of a metal surface by making that surface the cathode of an electrochemical cell. For example, a tank system can be cathodically protected through the application of either galvanic anodes or impressed current.

Cathodic protection tester means a person who can demonstrate an understanding of the principles and measurements of all common types of cathodic protection systems as applied to buried or submerged metal piping and tank systems. At a minimum, such persons must have education and experience in soil resistivity, stray current, structure-to-soil potential, and component electrical isolation measurements of buried metal piping and tank systems.

[Sec. 280.12]

CERCLA means the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended.

Compatible means the ability of two or more substances to maintain their respective physical and chemical properties upon contact with one another for the design life of the tank system under conditions likely to be encountered in the UST.

Connected piping means all underground piping including valves, elbows, joints, flanges, and flexible connectors attached to a tank system through which regulated substances flow. For the purpose of determining how much piping is connected to any individual UST system, the piping that joins two UST systems should be allocated equally between them.

Consumptive use with respect to heating oil means consumed on the premises.

Corrosion expert means a person who, by reason of thorough knowledge of the physical sciences and the principles of engineering and mathematics acquired by a professional education and related practical experience, is qualified to engage in the practice of corrosion control on buried or submerged metal piping systems and metal tanks. Such a person must be accredited or certified as being qualified by the National Association of Corrosion Engineers or be a registered professional engineer who has certification or licensing that includes education and experience in corrosion control of buried or submerged metal piping systems and metal tanks.

Dielectric material means a material that does not conduct direct electrical current. Dielectric coatings are used to electrically isolate UST systems from the surrounding soils. Dielectric bushings are used to electrically isolate portions of the UST system (e.g., tank from piping).

Electrical equipment means underground equipment that contains dielectric fluid that is necessary for the operation of equipment such as transformers and buried electrical cable.

Excavation zone means the volume containing the tank system and backfill material bounded by the ground surface, walls, and floor of the pit and trenches into which the UST system is placed at the time of installation.

Existing tank system means a tank system used to contain an accumulation of regulated substances or for which installation has commenced on or before December 22, 1988. Installation is considered to have commenced if:

(a)The owner or operator has obtained all federal, state, and local approvals or permits necessary to begin physical construction of the site or installation of the tank system; and if,

(b)(1)Either a continuous on-site physical construction or installation program has begun; or,

(2)The owner or operator has entered into contractual obligations—which cannot be cancelled or modified without substantial loss—for physical construction at the site or installation of the tank system to be completed within a reasonable time.

Farm tank is a tank located on a tract of land devoted to the production of crops or raising animals, including fish, and associated residences and improvements. A farm tank must be located on the farm property. "Farm" includes fish hatcheries, rangeland and nurseries with growing operations.

Flow-through process tank is a tank that forms an integral part of a production process through which there is a steady, variable, recurring, or intermittent flow of materials during the operation of the process. Flow-through process tanks do not include tanks used for the storage of materials prior to their introduction into the production process or for the storage of finished products or by-products from the production process.

Free product refers to a regulated substance that is present as a non-aqueous phase liquid (e.g., liquid not dissolved in water.)

Gathering lines means any pipeline, equipment, facility, or building used in the transportation of oil or gas during oil or gas production or gathering operations.

Hazardous substance UST system means an underground storage tank system that contains a hazardous substance defined in section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (but not including any substance regulated as a hazardous waste under subtitle C) or any mixture of such substances and petroleum, and which is not a petroleum UST system.

Heating oil means petroleum that is No. 1, No. 2, No. 4—light, No. 4—heavy, No. 5—light, No. 5—heavy, and No. 6 technical grades of fuel oil; other residual fuel oils (including Navy Special Fuel Oil and Bunker C); and other fuels when used as substitutes for one of these fuel oils. Heating oil is typically used in the operation of heating equipment, boilers, or furnaces.

Hydraulic lift tank means a tank holding hydraulic fluid for a closed-loop mechanical system that uses compressed air or hydraulic fluid to operate lifts, elevators, and other similar devices.

Implementing agency means EPA, or, in the case of a state with a program approved under section 9004 (or pursuant to a memorandum of agreement with EPA), the designated state or local agency responsible for carrying out an approved UST program.

Liquid trap means sumps, well cellars, and other traps used in association with oil and gas production, gathering, and extraction operations (including gas production plants), for the purpose of collecting oil, water, and other liquids. These liquid traps may temporarily collect liquids for subsequent disposition or reinjection into a production or pipeline stream, or may collect and separate liquids from a gas stream.

Maintenance means the normal operational upkeep to prevent an underground storage tank system from releasing product.

Motor fuel means petroleum or a petroleum-based substance that is motor gasoline, aviation gasoline, No. 1 or No. 2 diesel fuel, or any grade of gasohol, and is typically used in the operation of a motor engine.

New tank system means a tank system that will be used to contain an accumulation of regulated substances and for which installation has commenced after December 22, 1988. (See also "Existing Tank System.")

Noncommercial purposes with respect to motor fuel means not for resale.

On the premises where stored with respect to heating oil means UST systems located on the same property where the stored heating oil is used.

Operational life refers to the period beginning when installation of the tank system has commenced until the time the tank system is properly closed under Subpart G.

Operator means any person in control of, or having responsibility for, the daily operation of the UST system.

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Overfill release is a release that occurs when a tank is filled beyond its capacity, resulting in a discharge of the regulated substance to the environment.

Owner means:

(a) In the case of an UST system in use on November 8, 1984, or brought into use after that date, any person who owns an UST system used for storage, use, or dispensing of regulated substances; and

(b) In the case of any UST system in use before November 8, 1984, but no longer in use on that date, any person who owned such UST immediately before the discontinuation of its use.

Person means an individual, trust, firm, joint stock company, Federal agency, corporation, state, municipality, commission, political subdivision of a state, or any interstate body. "Person" also includes a consortium, a joint venture, a commercial entity, and the United States Government.

Petroleum UST system means an underground storage tank system that contains petroleum or a mixture of petroleum with *de minimis* quantities of other regulated substances. Such systems include those containing motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils.

Pipe or *Piping* means a hollow cylinder or tubular conduit that is constructed of non-earthen materials.

Pipeline facilities (including gathering lines) are new and existing pipe rights-of-way and any associated equipment, facilities, or buildings.

Regulated substance means:

(a) Any substance defined in section 101(14) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980 (but not including any substance regulated as a hazardous waste under subtitle C), and

(b) Petroleum, including crude oil or any fraction thereof that is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute).

The term "regulated substance" includes but is not limited to petroleum and petroleum-based substances comprised of a complex blend of hydrocarbons derived from crude oil though processes of separation, conversion, upgrading, and finishing, such as motor fuels, jet fuels, distillate fuel oils, residual fuel oils, lubricants, petroleum solvents, and used oils.

Release means any spilling, leaking, emitting, discharging, escaping, leaching or disposing from an UST into ground water, surface water or subsurface soils.

Release detection means determining whether a release of a regulated substance has occurred from the UST system into the environment or into the interstitial space between the UST system and its secondary barrier or secondary containment around it.

Repair means to restore a tank or UST system component that has caused a release of product from the UST system.

Residential tank is a tank located on property used primarily for dwelling purposes.

SARA means the Superfund Amendments and Reauthorization Act of 1986.

Septic tank is a water-tight covered receptacle designed to receive or process, through liquid separation or biological digestion, the sewage discharged from a building sewer. The effluent from such receptacle is distributed for disposal through the soil and settled solids and scum from the tank are pumped out periodically and hauled to a treatment facility.

Storm-water or wastewater collection system means piping, pumps, conduits, and any other equipment necessary to collect and transport the flow of surface water run-off resulting from precipitation, or domestic, commercial, or industrial wastewater to and from retention areas or any areas where treatment is designated to occur. The collection of storm water and wastewater does not include treatment except where incidental to conveyance.

Surface impoundment is a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials) that is not an injection well.

Tank is a stationary device designed to contain an accumulation of regulated substances and constructed of non-earthen materials (e.g., concrete, steel, plastic) that provide structural support.

Underground area means an underground room, such as a basement, cellar, shaft or vault, providing enough space for physical inspection of the exterior of the tank situated on or above the surface of the floor.

Underground release means any below-ground release.

Underground storage tank or *UST* means any one or combination of tanks (including underground pipes connected thereto) that is used to contain an accumulation of regulated substances, and the volume of which (including the volume of underground pipes connected thereto) is 10 percent or more beneath the surface of the ground. This term does not include any:

(a) Farm or residential tank of 1,100 gallons or less capacity used for storing motor fuel for noncommercial purposes;

(b) Tank used for storing heating oil for consumptive use on the premises where stored;

(c) Septic tank;

(d) Pipeline facility (including gathering lines) regulated under:

(1) The Natural Gas Pipeline Safety Act of 1968 (49 U.S.C. App. 1671, *et seq.*), or

(2) The Hazardous Liquid Pipeline Safety Act of 1979 (49 U.S.C. App. 2001, *et seq.*), or

(3) Which is an intrastate pipeline facility regulated under state laws comparable to the provisions of the law referred to in paragraph (d)(1) or (d)(2) of this definition;

(e) Surface impoundment, pit, pond, or lagoon;

(f) Storm-water or wastewater collection system;

(g) Flow-through process tank;

(h) Liquid trap or associated gathering lines directly related to oil or gas production and gathering operations; or

(i) Storage tank situated in an underground area (such as a basement, cellar, mineworking, drift, shaft, or tunnel) if the storage tank is situated upon or above the surface of the floor.

The term "underground storage tank" or "UST" does not include any pipes connected to any tank which is described in paragraphs (a) through (i) of this definition.

Upgrade means the addition or retrofit of some systems such as cathodic protection, lining, or spill and overfill controls to improve the ability of an underground storage tank system to prevent the release of product.

UST system or *Tank system* means an underground storage tank, connected underground piping, underground ancillary equipment, and containment system, if any.

[Sec. 280.12]

Wastewater treatment tank means a tank that is designed to receive and treat an influent wastewater through physical, chemical, or biological methods.

Subpart B—UST Systems: Design, Construction, Installation and Notification

§280.20 Performance standards for new UST systems.

In order to prevent releases due to structural failure, corrosion, or spills and overfills for as long as the UST system is used to store regulated substances, all owners and operators of new UST systems must meet the following requirements.

(a) *Tanks.* Each tank must be properly designed and constructed, and any portion underground that routinely contains product must be protected from corrosion, in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory as specified below:

(1) The tank is constructed of fiberglass-reinforced plastic; or

NOTE: The following industry codes may be used to comply with paragraph (a)(1) of this section: Underwriters Laboratories Standard 1316, "Standard for Glass- Fiber-Reinforced Plastic Underground Storage Tanks for Petroleum Products"; Underwriter's Laboratories of Canada CAN4-S615-M83, "Standard for Reinforced Plastic Underground Tanks for Petroleum Products"; or American Society of Testing and Materials Standard D4021-86, "Standard Specification for Glass-Fiber-Reinforced Polyester Underground Petroleum Storage Tanks."

(2) The tank is constructed of steel and cathodically protected in the following manner:

(i) The tank is coated with a suitable dielectric material;

(ii) Field-installed cathodic protection systems are designed by a corrosion expert;

(iii) Impressed current systems are designed to allow determination of current operating status as required in §280.31(c); and

(iv) Cathodic protection systems are operated and maintained in accordance with §280.31 or according to guidelines established by the implementing agency; or

NOTE: The following codes and standards may be used to comply with paragraph (a)(2) of this section:

(A) Steel Tank Institute "Specification for STI-P3 System of External Corrosion Protection of Underground Steel Storage Tanks";

(B) Underwriters Laboratories Standard 1746, "Corrosion Protection Systems for Underground Storage Tanks";

(C) Underwriters Laboratories of Canada CAN4-S603-M85, "Standard for Steel Underground Tanks for Flammable and Combustible Liquids," and CAN4-G03.1-M85, "Standard for Galvanic Corrosion Protection Systems for Underground Tanks for Flammable and Combustible Liquids," and CAN4-S631-M84, "Isolating Bushings for Steel Underground Tanks Protected with Coatings and Galvanic Systems"; or

(D) National Association of Corrosion Engineers Standard RP-02-85, "Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems," and Underwriters Laboratories Standard 58, "Standard for Steel Underground Tanks for Flammable and Combustible Liquids."

(3) The tank is constructed of a steel-fiberglass-reinforced-plastic composite; or

NOTE: The following industry codes may be used to comply with paragraph (a)(3) of this section: Underwriters Laboratories Standard 1746, "Corrosion Protection Systems for Underground Storage Tanks," or the Association for Composite Tanks ACT-100, "Specification for the Fabrication of FRP Clad Underground Storage Tanks."

(4) The tank is constructed of metal without additional corrosion protection measures provided that:

(i) The tank is installed at a site that is determined by a corrosion expert not to be corrosive enough to cause it to have a release due to corrosion during its operating life; and

(ii) Owners and operators maintain records that demonstrate compliance with the requirements of paragraphs (a)(4)(i) for the remaining life of the tank; or

(5) The tank construction and corrosion protection are determined by the implementing agency to be designed to prevent the release or threatened release of any stored regulated substance in a manner that is no less protective of human health and the environment than paragraphs (a)(1) through (4) of this section.

(b) *Piping.* The piping that routinely contains regulated substances and is in contact with the ground must be properly designed, constructed, and protected from corrosion in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory as specified below:

(1) The piping is constructed of fiberglass-reinforced plastic; or

NOTE: The following codes and standards may be used to comply with paragraph (b)(1) of this section:

(A) Underwriters Laboratories Subject 971, "UL Listed Non-Metal Pipe";

(B) Underwriters Laboratories Standard 567, "Pipe Connectors for Flammable and Combustible and LP Gas";

(C) Underwriters Laboratories of Canada Guide ULC-107, "Glass Fiber Reinforced Plastic Pipe and Fittings for Flammable Liquids"; and

(D) Underwriters Laboratories of Canada Standard CAN 4-S633-M81, "Flexible Underground Hose Connectors."

(2) The piping is constructed of steel and cathodically protected in the following manner:

(i) The piping is coated with a suitable dielectric material;

(ii) Field-installed cathodic protection systems are designed by a corrosion expert;

(iii) Impressed current systems are designed to allow determination of current operating status as required in §280.31(c); and

(iv) Cathodic protection systems are operated and maintained in accordance with §280.31 or guidelines established by the implementing agency; or

NOTE: The following codes and standards may be used to comply with paragraph (b)(2) of this section:

(A) National Fire Protection Association Standard 30, "Flammable and Combustible Liquids Code";

(B) American Petroleum Institute Publication 1615, "Installation of Underground Petroleum Storage Systems";

(C) American Petroleum Institute Publication 1632, "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems"; and

(D) National Association of Corrosion Engineers Standard RP-01-69, "Control of External Corrosion on Submerged Metallic Piping Systems."

(3) The piping is constructed of metal without additional corrosion protection measures provided that:

(i) The piping is installed at a site that is determined by a corrosion expert to not be corrosive enough to cause it to have a release due to corrosion during its operating life; and

(ii) Owners and operators maintain records that demonstrate compliance with the requirements of paragraph (b)(3)(i) of this section for the remaining life of the piping; or

NOTE: National Fire Protection Association Standard 30, "Flammable and Combustible Liquids Code"; and National Association of Corrosion Engineers Standard RP-01-69, "Control of External Corrosion on Submerged Metallic Piping Sys-

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tems," may be used to comply with paragraph (b)(3) of this section.

(4) The piping construction and corrosion protection are determined by the implementing agency to be designed to prevent the release or threatened release of any stored regulated substance in a manner that is no less protective of human health and the environment than the requirements in paragraphs (b) (1) through (3) of this section.

(c) *Spill and overfill prevention equipment.*

(1) Except as provided in paragraph (c)(2) of this section, to prevent spilling and overfilling associated with product transfer to the UST system, owners and operators must use the following spill and overfill prevention equipment:

(i) Spill prevention equipment that will prevent release of product to the environment when the transfer hose is detached from the fill pipe (for example, a spill catchment basin); and

(ii) Overfill prevention equipment that will:

(A) Automatically shut off flow into the tank when the tank is no more than 95 percent full; or

(B) Alert the transfer operator when the tank is no more than 90 percent full by restricting the flow into the tank or triggering a high-level alarm; or

(C) Restrict flow 30 minutes prior to overfilling, alert the operator with a high level alarm one minute before overfilling, or automatically shut off flow into the tank so that none of the fittings located on top of the tank are exposed to product due to overfilling.

(2) Owners and operators are not required to use the spill and overfill prevention equipment specified in paragraph (c)(1) of this section if:

(i) Alternative equipment is used that is determined by the implementing agency to be no less protective of human health and the environment than the equipment specified in paragraph (c)(1) (i) or (ii) of this section; or

(ii) The UST system is filled by transfers of no more than 25 gallons at one time.

(d) *Installation.* All tanks and piping must be properly installed in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory and in accordance with the manufacturer's instructions.

NOTE: Tank and piping system installation practices and procedures described in the following codes may be used to comply with the requirements of paragraph (d) of this section:

(i) American Petroleum Institute Publication 1615, "Installation of Underground Petroleum Storage System"; or

(ii) Petroleum Equipment Institute Publication RP100, "Recommended Practices for Installation of Underground Liquid Storage Systems"; or

(iii) American National Standards Institute Standard B31.3, "Petroleum Refinery Piping," and American National Standards Institute Standard B31.4 "Liquid Petroleum Transportation Piping System."

(e) *Certification of installation.* All owners and operators must ensure that one or more of the following methods of certification, testing, or inspection is used to demonstrate compliance with paragraph (d) of this section by providing a certification of compliance on the UST notification form in accordance with §280.22.

(1) The installer has been certified by the tank and piping manufacturers; or

(2) The installer has been certified or licensed by the implementing agency; or

(3) The installation has been inspected and certified by a registered professional engineer with education and experience in UST system installation; or

(4) The installation has been inspected and approved by the implementing agency; or

(5) All work listed in the manufacturer's installation checklists has been completed; or

(6) The owner and operator have complied with another method for ensuring compliance with paragraph (d) of this section that is determined by the implementing agency to be no less protective of human health and the environment.

[§280.20 amended at 56 FR 38344, Aug. 13, 1991]

§280.21 Upgrading of existing UST systems.

(a) *Alternatives allowed.* Not later than December 22, 1998, all existing UST systems must comply with one of the following requirements:

(1) New UST system performance standards under §280.20;

(2) The upgrading requirements in paragraphs (b) through (d) of this section; or

(3) Closure requirements under subpart G of this part, including applicable requirements for corrective action under subpart F.

(b) *Tank upgrading requirements.* Steel tanks must be upgraded to meet one of the following requirements in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory:

(1) *Interior lining.* A tank may be upgraded by internal lining if:

(i) The lining is installed in accordance with the requirements of §280.33, and

(ii) Within 10 years after lining, and every 5 years thereafter, the lined tank is internally inspected and found to be structurally sound with the lining still performing in accordance with original design specifications.

(2) *Cathodic protection.* A tank may be upgraded by cathodic protection if the cathodic protection system meets the requirements of §280.20(a)(2)(ii), (iii), and (iv) and the integrity of the tank is ensured using one of the following methods:

(i) The tank is internally inspected and assessed to ensure that the tank is structurally sound and free of corrosion holes prior to installing the cathodic protection system; or

(ii) The tank has been installed for less than 10 years and is monitored monthly for releases in accordance with §280.43 (d) through (h); or

(iii) The tank has been installed for less than 10 years and is assessed for corrosion holes by conducting two (2) tightness tests that meet the requirements of §280.43(c). The first tightness test must be conducted prior to installing the cathodic protection system. The second tightness test must be conducted between three (3) and six (6) months following the first operation of the cathodic protection system; or

(iv) The tank is assessed for corrosion holes by a method that is determined by the implementing agency to prevent releases in a manner that is no less protective of human health and the environment than paragraphs (b)(2) (i) through (iii) of this section.

(3) *Internal lining combined with cathodic protection.* A tank may be upgraded by both internal lining and cathodic protection if:

(i) The lining is installed in accordance with the requirements of §280.33; and

[Sec. 280.21(b)(3)(i)]

(ii) The cathodic protection system meets the requirements of §280.20(a)(2)(ii), (iii), and (iv).

NOTE: The following codes and standards may be used to comply with this section:

(A) American Petroleum Institute Publication 1631, "Recommended Practice for the Interior Lining of Existing Steel Underground Storage Tanks";

(B) National Leak Prevention Association Standard 631, "Spill Prevention, Minimum 10 Year Life Extension of Existing Steel Underground Tanks by Lining Without the Addition of Cathodic Protection";

(C) National Association of Corrosion Engineers Standard RP-02-85, "Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems"; and

(D) American Petroleum Institute Publication 1632, "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems."

(c) *Piping upgrading requirements.* Metal piping that routinely contains regulated substances and is in contact with the ground must be cathodically protected in accordance with a code of practice developed by a nationally recognized association or independent testing laboratory and must meet the requirements of §280.20(b)(2) (ii), (iii), and (iv).

NOTE: The codes and standards listed in the note following §280.20(b)(2) may be used to comply with this requirement.

(d) *Spill and overfill prevention equipment.* To prevent spilling and overfilling associated with product transfer to the UST system, all existing UST systems must comply with new UST system spill and overfill prevention equipment requirements specified in §280.20(c).

§280.22 Notification requirements.

(a) Any owner who brings an underground storage tank system into use after May 8, 1986, must within 30 days of bringing such tank into use, submit, in the form prescribed in appendix I of this part, a notice of existence of such tank system to the state or local agency or department designated in appendix II of this part to receive such notice.

NOTE: Owners and operators of UST systems that were in the ground on or after May 8, 1986, unless taken out of operation on or before January 1, 1974, were required to notify the designated state or local agency in accordance with the Hazardous and Solid Waste Amendments of 1984, Pub. L. 98-616, on a form published by EPA on November 8, 1985 (50 FR 46602) unless notice was given pursuant to section 103(c) of CERCLA. Owners and operators who have not complied with the notification requirements may use portions I through VI of the notification form contained in Appendix I of this part.

(b) In states where state law, regulations, or procedures require owners to use forms that differ from those set forth in Appendix I of this part to fulfill the requirements of this section, the state forms may be submitted in lieu of the forms set forth in Appendix I of this part. If a state requires that its form be used in lieu of the form presented in this regulation, such form must meet the requirements of section 9002.

(c) Owners required to submit notices under paragraph (a) of this section must provide notices to the appropriate agencies or departments identified in Appendix II of this part for each tank they own. Owners may provide notice for several tanks using one notification form, but owners who own tanks located at more than one place of operation must file a separate notification form for each separate place of operation.

(d) Notices required to be submitted under paragraph (a) of this section must provide all of the information in sections I through VI of the prescribed form (or appropriate state form) for each tank for which notice must be given. Notices for tanks installed after December 22, 1988 must also provide all of the information in section VII of the prescribed form (or appropriate state form) for each tank for which notice must be given.

(e) All owners and operators of new UST systems must certify in the notification form compliance with the following requirements:

(1) Installation of tanks and piping under §280.20(e);

(2) Cathodic protection of steel tanks and piping under §280.20 (a) and (b);

(3) Financial responsibility under Subpart H of this part; and

(4) Release detection under §§280.41 and 280.42.

(f) All owners and operators of new UST systems must ensure that the installer certifies in the notification form that the methods used to install the tanks and piping complies with the requirements in §280.20(d).

(g) Beginning October 24, 1988, any person who sells a tank intended to be used as an underground storage tank must notify the purchaser of such tank of the owner's notification obligations under paragraph (a) of this section. The form provided in Appendix III of this part may be used to comply with this requirement.

Subpart C—General Operating Requirements

§280.30 Spill and overfill control.

(a) Owners and operators must ensure that releases due to spilling or overfilling do not occur. The owner and operator must ensure that the volume available in the tank is greater than the volume of product to be transferred to the tank before the transfer is made and that the transfer operation is monitored constantly to prevent overfilling and spilling.

NOTE: The transfer procedures described in National Fire Protection Association Publication 385 may be used to comply with paragraph (a) of this section. Further guidance on spill and overfill prevention appears in American Petroleum Institute Publication 1621, "Recommended Practice for Bulk Liquid Stock Control at Retail Outlets," and National Fire Protection Association Standard 30, "Flammable and Combustible Liquids Code."

(b) The owner and operator must report, investigate, and clean up any spills and overfills in accordance with §280.53.

§280.31 Operation and maintenance of corrosion protection.

All owners and operators of steel UST systems with corrosion protection must comply with the following requirements to ensure that releases due to corrosion are prevented for as long as the UST system is used to store regulated substances:

(a) All corrosion protection systems must be operated and maintained to continuously provide corrosion protection to the metal components of that portion of the tank and piping that routinely contain regulated substances and are in contact with the ground.

(b) All UST systems equipped with cathodic protection systems must be inspected for proper operation by a qualified cathodic protection tester in accordance with the following requirements:

(1) *Frequency.* All cathodic protection systems must be tested within 6 months of installation and at least every 3 years thereafter or according to another reasonable time frame established by the implementing agency; and

(2) *Inspection criteria.* The criteria that are used to determine that cathodic protection is adequate as required by this section must be in accordance with a code

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of practice developed by a nationally recognized association.

NOTE: National Association of Corrosion Engineers Standard RP-02-85, "Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems," may be used to comply with paragraph (b)(2) of this section.

(c) UST systems with impressed current cathodic protection systems must also be inspected every 60 days to ensure the equipment is running properly.

(d) For UST systems using cathodic protection, records of the operation of the cathodic protection must be maintained (in accordance with §280.34) to demonstrate compliance with the performance standards in this section. These records must provide the following:

(1) The results of the last three inspections required in paragraph (c) of this section; and

(2) The results of testing from the last two inspections required in paragraph (b) of this section.

§280.32 Compatibility.

Owners and operators must use an UST system made of or lined with materials that are compatible with the substance stored in the UST system.

NOTE: Owners and operators storing alcohol blends may use the following codes to comply with the requirements of this section:

(a) American Petroleum Institute Publication 1626, "Storing and Handling Ethanol and Gasoline-Ethanol Blends at Distribution Terminals and Service Stations"; and

(b) American Petroleum Institute Publication 1627, "Storage and Handling of Gasoline-Methanol/Cosolvent Blends at Distribution Terminals and Service Stations."

§280.33 Repairs allowed.

Owners and operators of UST systems must ensure that repairs will prevent releases due to structural failure or corrosion as long as the UST system is used to store regulated substances. The repairs must meet the following requirements:

(a) Repairs to UST systems must be properly conducted in accordance with a code of practice developed by a nationally recognized association or an independent testing laboratory.

NOTE: The following codes and standards may be used to comply with paragraph (a) of this section: National Fire Protection Association Standard 30, "Flammable and Combustible Liquids Code"; American Petroleum Institute Publication 2200, "Repairing Crude Oil, Liquified Petroleum Gas, and Product Pipelines"; American Petroleum Institute Publication 1631, "Recommended Practice for the Interior Lining of Existing Steel Underground Storage Tanks"; and National Leak Prevention Association Standard 631, "Spill Prevention, Minimum 10 Year Life Extension of Existing Steel Underground Tanks by Lining Without the Addition of Cathodic Protection."

(b) Repairs to fiberglass-reinforced plastic tanks may be made by the manufacturer's authorized representatives or in accordance with a code of practice developed by a nationally recognized association or an independent testing laboratory.

(c) Metal pipe sections and fittings that have released product as a result of corrosion or other damage must be replaced. Fiberglass pipes and fittings may be repaired in accordance with the manufacturer's specifications.

(d) Repaired tanks and piping must be tightness tested in accordance with §280.43(c) and §280.44(b) within 30 days following the date of the completion of the repair except as provided in paragraphs (d) (1) through (3), of this section:

(1) The repaired tank is internally inspected in accordance with a code of practice developed by a nationally recognized association or an independent testing laboratory; or

(2) The repaired portion of the UST system is monitored monthly for releases in accordance with a method specified in §280.43(d) through (h); or

(3) Another test method is used that is determined by the implementing agency to be no less protective of human health and the environment than those listed above.

(e) Within 6 months following the repair of any cathodically protected UST system, the cathodic protection system must be tested in accordance with §280.31 (b) and (c) to ensure that it is operating properly.

(f) UST system owners and operators must maintain records of each repair for the remaining operating life of the UST system that demonstrate compliance with the requirements of this section.

§280.34 Reporting and recordkeeping.

Owners and operators of UST systems must cooperate fully with inspections, monitoring and testing conducted by the implementing agency, as well as requests for document submission, testing, and monitoring by the owner or operator pursuant to section 9005 of Subtitle I of the Resource Conservation and Recovery Act, as amended.

(a) *Reporting.* Owners and operators must submit the following information to the implementing agency:

(1) Notification for all UST systems (§280.22), which includes certification of installation for new UST systems (§280.20(e)),

(2) Reports of all releases including suspected releases (§280.50), spills and overfills (§280.53), and confirmed releases (§280.61);

(3) Corrective actions planned or taken including initial abatement measures (§280.62), initial site characterization (§280.63), free product removal (§280.64), investigation of soil and ground-water cleanup (§280.65), and corrective action plan (§280.66); and

(4) A notification before permanent closure or change-in-service (§280.71).

(b) *Recordkeeping.* Owners and operators must maintain the following information:

(1) A corrosion expert's analysis of site corrosion potential if corrosion protection equipment is not used (§280.20(a)(4); §280.20(b)(3)).

(2) Documentation of operation of corrosion protection equipment (§280.31);

(3) Documentation of UST system repairs (§280.33(f));

(4) Recent compliance with release detection requirements (§280.45); and

(5) Results of the site investigation conducted at permanent closure (§280.74).

(c) *Availability and Maintenance of Records.* Owners and operators must keep the records required either:

(1) At the UST site and immediately available for inspection by the implementing agency; or

(2) At a readily available alternative site and be provided for inspection to the implementing agency upon request.

(3) In the case of permanent closure records required under §280.74, owners and operators are also provided with the additional alternative of mailing closure records to the implementing agency if they cannot be kept at the site or an alternative site as indicated above.

[Sec. 280.34(c)(3)]

Subpart D—Release Detection

§280.40 General requirements for all UST systems.

(a) Owners and operators of new and existing UST systems must provide a method, or combination of methods, of release detection that:

(1) Can detect a release from any portion of the tank and the connected underground piping that routinely contains product;

(2) Is installed, calibrated, operated, and maintained in accordance with the manufacturer's instructions, including routine maintenance and service checks for operability or running condition; and

(3) Meets the performance requirements in §280.43 or 280.44, with any performance claims and their manner of determination described in writing by the equipment manufacturer or installer. In addition, methods used after the date shown in the following table corresponding with the specified method except for methods permanently installed prior to that date, must be capable of detecting the leak rate or quantity specified for that method in the corresponding section of the rule (also shown in the table) with a probability of detection (Pd) of 0.95 and a probability of false alarm (Pfa) of 0.05.

Method	Section	Date after which Pd/Pfa must be demonstrated
Manual Tank Gauging	280.43(b)	December 22, 1990.
Tank Tightness Testing	280.43(c)	December 22, 1990.
Automatic Tank Gauging	280.43(d)	December 22, 1990.
Automatic Line Leak Detectors	280.44(a)	September 22, 1991.
Line Tightness Testing	280.44(b)	December 22, 1990.

(b) When a release detection method operated in accordance with the performance standards in §280.43 and §280.44 indicates a release may have occurred, owners and operators must notify the implementing agency in accordance with subpart E.

(c) Owners and operators of all UST systems must comply with the release detection requirements of this subpart by December 22 of the year listed in the following table:

SCHEDULE FOR PHASE-IN OF RELEASE DETECTION—

Year system was installed	Year when release detection is required (by December 22 of the year indicated)				
	1989	1990	1991	1992	1993
Before 1965 or date unknown	RD	P			
1965-69		P/RD			
1970-74		P	RD		
1975-79		P		RD	
1980-88		P			RD

New tanks (after December 22) immediately upon installation.

P=Must begin release detection for all pressurized piping as defined in §280.41(b)(1).

RD=Must begin release detection for tanks and suction piping in accordance with §280.41(a), §280.41(b)(2), and §280.42.

(d) Any existing UST system that cannot apply a method of release detection that complies with the requirements of this subpart must complete the closure procedures in subpart G by the date on which release detection is required for that UST system under paragraph (c) of this section.

[§280.40 amended at 55 FR 17753, April 27, 1990; 55 FR 23738, June 12, 1990; 56 FR 26, Jan. 2, 1991]

§280.41 Requirements for petroleum UST systems.

Owners and operators of petroleum UST systems must provide release detection for tanks and piping as follows:

(a) *Tanks.* Tanks must be monitored at least every 30 days for releases using one of the methods listed in §280.43(d) through (h) except that:

(1) UST systems that meet the performance standards in §280.20 or §280.21, and the monthly inventory control requirements in §280.43(a) or (b), may use tank tightness testing (conducted in accordance with §280.43(c)) at least every 5 years until December 22, 1998, or until 10 years after the tank is installed or upgraded under §280.21(b), whichever is later;

(2) UST systems that do not meet the performance standards in §280.20 or §280.21 may use monthly inventory controls (conducted in accordance with §280.43(a) or (b)) and annual tank tightness testing (conducted in accordance with §280.43(c)) until December 22, 1998 when the tank must be upgraded under §280.21 or permanently closed under §280.71; and

(3) Tanks with capacity of 550 gallons or less may use weekly tank gauging (conducted in accordance with §280.43(b)).

(b) *Piping.* Underground piping that routinely contains regulated substances must be monitored for releases in a manner that meets one of the following requirements:

(1) *Pressurized piping.* Underground piping that conveys regulated substances under pressure must:

(i) Be equipped with an automatic line leak detector conducted in accordance with §280.44(a); and

(ii) Have an annual line tightness test conducted in accordance with §280.44(b) or have monthly monitoring conducted in accordance with §280.44(c).

(2) *Suction piping.* Underground piping that conveys regulated substances under suction must either have a line tightness test conducted at least every 3 years and in accordance with §280.44(b), or use a monthly monitoring method conduct in accordance with §280.44(c). No release detection is required for suction piping that is designed and constructed to meet the following standards:

(i) The below-grade piping operates at less than atmospheric pressure;

(ii) The below-grade piping is sloped so that the contents of the pipe will drain back into the storage tank if the suction is released;

(iii) Only one check valve is included in each suction line;

(iv) The check valve is located directly below and as close as practical to the suction pump; and

(v) A method is provided that allows compliance with paragraphs (b)(2)(ii)-(iv) of this section to be readily determined.

§280.42 Requirements for hazardous substance UST systems.

Owners and operators of hazardous substance UST systems must provide release detection that meets the following requirements:

(a) Release detection at existing UST systems must meet the requirements for petroleum UST systems in §280.41. By December 22, 1998, all existing hazardous substance UST systems must meet the release detection requirements for new systems in paragraph (b) of this section.

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(b) Release detection at new hazardous substance UST systems must meet the following requirements:

(1) Secondary containment systems must be designed, constructed and installed to:

(i) Contain regulated substances released from the tank system until they are detected and removed;

(ii) Prevent the release of regulated substances to the environment at any time during the operational life of the UST system; and

(iii) Be checked for evidence of a release at least every 30 days.

NOTE. — The provisions of 40 CFR 265.193, Containment and Detection of Releases, may be used to comply with these requirements.

(2) Double-walled tanks must be designed, constructed, and installed to:

(i) Contain a release from any portion of the inner tank within the outer wall; and

(ii) Detect the failure of the inner wall.

(3) External liners (including vaults) must be designed, constructed, and installed to:

(i) Contain 100 percent of the capacity of the largest tank within its boundary;

(ii) Prevent the interference of precipitation or ground-water intrusion with the ability to contain or detect a release of regulated substances; and

(iii) Surround the tank completely (i.e., it is capable of preventing lateral as well as vertical migration of regulated substances).

(4) Underground piping must be equipped with secondary containment that satisfies the requirements of paragraph (b)(1) of this section (e.g., trench liners, jacketing of double-walled pipe). In addition, underground piping that conveys regulated substances under pressure must be equipped with an automatic line leak detector in accordance with §280.44(a).

(5) Other methods of release detection may be used if owners and operators:

(i) Demonstrate to the implementing agency that an alternate method can detect a release of the stored substance as effectively as any of the methods allowed in §§280.43(b) through (h) can detect a release of petroleum;

(ii) Provide information to the implementing agency on effective corrective action technologies, health risks, and chemical and physical properties of the stored substance, and the characteristics of the UST site; and,

(iii) Obtain approval from the implementing agency to use the alternate release detection method before the installation and operation of the new UST system.

§280.43 Methods of release detection for tanks.

Each method of release detection for tanks used to meet the requirements of §280.41 must be conducted in accordance with the following:

(a) *Inventory control.* Product inventory control (or another test of equivalent performance) must be conducted monthly to detect a release of at least 1.0 percent of flow-through plus 130 gallons on a monthly basis in the following manner:

(1) Inventory volume measurements for regulated substance inputs, withdrawals, and the amount still remaining in the tank are recorded each operating day;

(2) The equipment used is capable of measuring the level of product over the full range of the tank's height to the nearest one-eighth of an inch;

(3) The regulated substance inputs are reconciled with delivery receipts by measurement of the tank inventory volume before and after delivery;

(4) Deliveries are made through a drop tube that extends to within one foot of the tank bottom;

(5) Product dispensing is metered and recorded within the local standards for meter calibration or an accuracy of 6 cubic inches for every 5 gallons of product withdrawn; and

(6) The measurement of any water level in the bottom of the tank is made to the nearest one-eighth of an inch at least once a month.

NOTE: Practices described in the American Petroleum Institute Publication 1621, "Recommended Practice for Bulk Liquid Stock Control at Retail Outlets," may be used, where applicable, as guidance in meeting the requirements of this paragraph.

(b) *Manual tank gauging.* Manual tank gauging must meet the following requirements:

(1) Tank liquid level measurements are taken at the beginning and ending of a period of at least 36 hours during which no liquid is added to or removed from the tank;

(2) Level measurements are based on an average of two consecutive stick readings at both the beginning and ending of the period;

(3) The equipment used is capable of measuring the level of product over the full range of the tank's height to the nearest one-eighth of an inch;

(4) A leak is suspected and subject to the requirements of subpart E if the variation between beginning and ending measurements exceeds the weekly or monthly standards in the following table:

Nominal tank capacity	Weekly standard (one test)	Monthly standard (average of four tests)
550 gallons or less	10 gallons	5 gallons.
551-1,000 gallons	13 gallons	7 gallons.
1,001-2,000 gallons	26 gallons	13 gallons.

(5) Only tanks of 550 gallons or less nominal capacity may use this as the sole method of release detection. Tanks of 551 to 2,000 gallons may use the method in place of manual inventory control in §280.43(a). Tanks of greater than 2,000 gallons nominal capacity may not use this method to meet the requirements of this subpart.

(c) *Tank tightness testing.* Tank tightness testing (or another test of equivalent performance) must be capable of detecting a 0.1 gallon per hour leak rate from any portion of the tank that routinely contains product while accounting for the effects of thermal expansion or contraction of the product, vapor pockets, tank deformation, evaporation or condensation, and the location of the water table.

(d) *Automatic tank gauging.* Equipment for automatic tank gauging that tests for the loss of product and conducts inventory control must meet the following requirements:

(1) The automatic product level monitor test can detect a 0.2 gallon per hour leak rate from any portion of the tank that routinely contains product; and

(2) Inventory control (or another test of equivalent performance) is conducted in accordance with the requirements of §280.43(a).

(e) *Vapor monitoring.* Testing or monitoring for vapors within the soil gas of the excavation zone must meet the following requirements:

(1) The materials used as backfill are sufficiently porous (e.g., gravel, sand, crushed rock) to readily allow diffusion of

[Sec. 280.43(e)(1)]

vapors from releases into the excavation area;

(2) The stored regulated substance, or a tracer compound placed in the tank system, is sufficiently volatile (e.g., gasoline) to result in a vapor level that is detectable by the monitoring devices located in the excavation zone in the event of a release from the tank;

(3) The measurement of vapors by the monitoring device is not rendered inoperative by the ground water, rainfall, or soil moisture or other known interferences so that a release could go undetected for more than 30 days;

(4) The level of background contamination in the excavation zone will not interfere with the method used to detect releases from the tank;

(5) The vapor monitors are designed and operated to detect any significant increase in concentration above background of the regulated substance stored in the tank system, a component or components of that substance, or a tracer compound placed in the tank system;

(6) In the UST excavation zone, the site is assessed to ensure compliance with the requirements in paragraphs (e) (1) through (4) of this section and to establish the number and positioning of monitoring wells that will detect releases within the excavation zone from any portion of the tank that routinely contains product; and

(7) Monitoring wells are clearly marked and secured to avoid unauthorized access and tampering.

(f) *Ground-water monitoring.* Testing or monitoring for liquids on the ground water must meet the following requirements:

(1) The regulated substance stored is immiscible in water and has a specific gravity of less than one;

(2) Ground water is never more than 20 feet from the ground surface and the hydraulic conductivity of the soil(s) between the UST system and the monitoring wells or devices is not less than 0.01 cm/sec (e.g., the soil should consist of gravels, coarse to medium sands, coarse silts or other permeable materials);

(3) The slotted portion of the monitoring well casing must be designed to prevent migration of natural soils or filter pack into the well and to allow entry of regulated substance on the water table into the well under both high and low ground-water conditions;

(4) Monitoring wells shall be sealed from the ground surface to the top of the filter pack;

(5) Monitoring wells or devices intercept the excavation zone or are as close to it as is technically feasible;

(6) The continuous monitoring devices or manual methods used can detect the presence of at least one-eighth of an inch of free product on top of the ground water in the monitoring wells;

(7) Within and immediately below the UST system excavation zone, the site is assessed to ensure compliance with the requirements in paragraphs (f) (1) through (5) of this section and to establish the number and positioning of monitoring wells or devices that will detect releases from any portion of the tank that routinely contains product; and

(8) Monitoring wells are clearly marked and secured to avoid unauthorized access and tampering.

(g) *Interstitial monitoring.* Interstitial monitoring between the UST system and a secondary barrier immediately around or beneath it may be used, but only if the system is designed, constructed and installed to detect a leak from any portion of the tank that routinely contains product and also meets one of the following requirements:

(1) For double-walled UST systems, the sampling or testing method can detect a release through the inner wall in any portion of the tank that routinely contains product;

NOTE: The provisions outlined in the Steel Tank Institute's "Standard for Dual Wall Underground Storage Tanks" may be used as guidance for aspects of the design and construction of underground steel double-walled tanks.

(2) For UST systems with a secondary barrier within the excavation zone, the sampling or testing method used can detect a release between the UST system and the secondary barrier;

(i) The secondary barrier around or beneath the UST system consists of artificially constructed material that is sufficiently thick and impermeable (at least 10^{-6} cm/sec for the regulated substance stored) to direct a release to the monitoring point and permit its detection;

(ii) The barrier is compatible with the regulated substance stored so that a release from the UST system will not cause a deterioration of the barrier allowing a release to pass through undetected;

(iii) For cathodically protected tanks, the secondary barrier must be installed so that it does not interfere with the proper operation of the cathodic protection system;

(iv) The ground water, soil moisture, or rainfall will not render the testing or sampling method used inoperative so that a release could go undetected for more than 30 days;

(v) The site is assessed to ensure that the secondary barrier is always above the ground water and not in a 25-year flood plain, unless the barrier and monitoring designs are for use under such conditions; and,

(vi) Monitoring wells are clearly marked and secured to avoid unauthorized access and tampering.

(3) For tanks with an internally fitted liner, an automated device can detect a release between the inner wall of the tank and the liner, and the liner is compatible with the substance stored.

(h) *Other methods.* Any other type of release detection method, or combination of methods, can be used if:

(1) It can detect a 0.2 gallon per hour leak rate or a release of 150 gallons within a month with a probability of detection of 0.95 and a probability of false alarm of 0.05; or

(2) The implementing agency may approve another method if the owner and operator can demonstrate that the method can detect a release as effectively as any of the methods allowed in paragraphs (c) through (h) of this section. In comparing methods, the implementing agency shall consider the size of release that the method can detect and the frequency and reliability with which it can be detected. If the method is approved, the owner and operator must comply with any conditions imposed by the implementing agency on its use to ensure the protection of human health and the environment.

§280.44 Methods of release detection for piping.

Each method of release detection for piping used to meet the requirements of §280.41 must be conducted in accordance with the following:

(a) *Automatic line leak detectors.* Methods which alert the operator to the presence of a leak by restricting or shutting off the flow of regulated substances through piping or triggering an audible or visual alarm may be used only if they de-

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tect leaks of 3 gallons per hour at 10 pounds per square inch line pressure within 1 hour. An annual test of the operation of the leak detector must be conducted in accordance with the manufacturer's requirements.

(b) *Line tightness testing.* A periodic test of piping may be conducted only if it can detect a 0.1 gallon per hour leak rate at one and one-half times the operating pressure.

(c) *Applicable tank methods.* Any of the methods in §280.43 (e) through (h) may be used if they are designed to detect a release from any portion of the underground piping that routinely contains regulated substances.

§280.45 Release detection recordkeeping.

All UST system owners and operators must maintain records in accordance with §280.34 demonstrating compliance with all applicable requirements of this subpart. These records must include the following:

(a) All written performance claims pertaining to any release detection system used, and the manner in which these claims have been justified or tested by the equipment manufacturer or installer, must be maintained for 5 years, or for another reasonable period of time determined by the implementing agency, from the date of installation;

(b) The results of any sampling, testing, or monitoring must be maintained for at least 1 year, or for another reasonable period of time determined by the implementing agency, except that the results of tank tightness testing conducted in accordance with §280.43(c) must be retained until the next test is conducted; and

(c) Written documentation of all calibration, maintenance, and repair of release detection equipment permanently located on-site must be maintained for at least one year after the servicing work is completed, or for another reasonable time period determined by the implementing agency. Any schedules of required calibration and maintenance provided by the release detection equipment manufacturer must be retained for 5 years from the date of installation.

Subpart E—Release Reporting, Investigation, and Confirmation

§280.50 Reporting of suspected releases.

Owners and operators of UST systems must report to the implementing agency within 24 hours, or another reasonable time period specified by the implementing agency, and follow the procedures in §280.52 for any of the following conditions:

(a) The discovery by owners and operators or others of released regulated substances at the UST site or in the surrounding area (such as the presence of free product or vapors in soils, basements, sewer and utility lines, and nearby surface water).

(b) Unusual operating conditions observed by owners and operators (such as the erratic behavior of product dispensing equipment, the sudden loss of product from the UST system, or an unexplained presence of water in the tank), unless system equipment is found to be defective but not leaking, and is immediately repaired or replaced; and,

(c) Monitoring results from a release detection method required under §280.41 and §280.42 that indicate a release may have occurred unless:

(1) The monitoring device is found to be defective, and is immediately repaired, recalibrated or replaced, and additional monitoring does not confirm the initial result; or

(2) In the case of inventory control, a second month of data does not confirm the initial result.

§280.51 Investigation due to off-site impacts.

When required by the implementing agency, owners and operators of UST systems must follow the procedures in §280.52 to determine if the UST system is the source of off-site impacts. These impacts include the discovery of regulated substances (such as the presence of free product or vapors in soils, basements, sewer and utility lines, and nearby surface and drinking waters) that has been observed by the implementing agency or brought to its attention by another party.

§280.52 Release investigation and confirmation steps.

Unless corrective action is initiated in accordance with subpart F, owners and operators must immediately investigate and confirm all suspected releases of regulated substances requiring reporting under §280.50 within 7 days, or another reasonable time period specified by the implementing agency, using either the following steps or another procedure approved by the implementing agency:

(a) *System test.* Owners and operators must conduct tests (according to the requirements for tightness testing in §280.43(c) and §280.44(b)) that determine whether a leak exists in that portion of the tank that routinely contains product, or the attached delivery piping, or both.

(1) Owners and operators must repair, replace or upgrade the UST system, and begin corrective action in accordance with subpart F if the test results for the system, tank, or delivery piping indicate that a leak exists.

(2) Further investigation is not required if the test results for the system, tank, and delivery piping do not indicate that a leak exists and if environmental contamination is not the basis for suspecting a release.

(3) Owners and operators must conduct a site check as described in paragraph (b) of this section if the test results for the system, tank, and delivery piping do not indicate that a leak exists but environmental contamination is the basis for suspecting a release.

(b) *Site check.* Owners and operators must measure for the presence of a release where contamination is most likely to be present at the UST site. In selecting sample types, sample locations, and measurement methods, owners and operators must consider the nature of the stored substance, the type of initial alarm or cause for suspicion, the type of backfill, the depth of ground water, and other factors appropriate for identifying the presence and source of the release.

(1) If the test results for the excavation zone or the UST site indicate that a release has occurred, owners and operators must begin corrective action in accordance with subpart F;

(2) If the test results for the excavation zone or the UST site do not indicate that a release has occurred, further investigation is not required.

[Sec. 280.52(b)(2)]

§280.53 Reporting and cleanup of spills and overfills.

(a) Owners and operators of UST systems must contain and immediately clean up a spill or overfill and report to the implementing agency within 24 hours, or another reasonable time period specified by the implementing agency, and begin corrective action in accordance with subpart F in the following cases:

(1) Spill or overfill of petroleum that results in a release to the environment that exceeds 25 gallons or another reasonable amount specified by the implementing agency, or that causes a sheen on nearby surface water; and

(2) Spill or overfill of a hazardous substance that results in a release to the environment that equals or exceeds its reportable quantity under CERCLA (40 CFR part 302).

(b) Owners and operators of UST systems must contain and immediately clean up a spill or overfill of petroleum that is less than 25 gallons or another reasonable amount specified by the implementing agency, and a spill or overfill of a hazardous substance that is less than the reportable quantity. If cleanup cannot be accomplished within 24 hours, or another reasonable time period established by the implementing agency, owners and operators must immediately notify the implementing agency.

NOTE: Pursuant to §§302.6 and 355.40, a release of a hazardous substance equal to or in excess of its reportable quantity must also be reported immediately (rather than within 24 hours) to the National Response Center under sections 102 and 103 of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 and to appropriate state and local authorities under Title III of the Superfund Amendments and Reauthorization Act of 1986.

Subpart F—Release Response and Corrective Action for UST Systems Containing Petroleum or Hazardous Substances

§280.60 General.

Owners and operators of petroleum or hazardous substance UST systems must, in response to a confirmed release from the UST system, comply with the requirements of this subpart except for USTs excluded under §280.10(b) and UST systems subject to RCRA Subtitle C corrective action requirements under section 3004(u) of the Resource Conservation and Recovery Act, as amended.

§280.61 Initial response.

Upon confirmation of a release in accordance with §280.52 or after a release from the UST system is identified in any other manner, owners and operators must perform the following initial response actions within 24 hours of a release or within another reasonable period of time determined by the implementing agency:

(a) Report the release to the implementing agency (e.g., by telephone or electronic mail);

(b) Take immediate action to prevent any further release of the regulated substance into the environment; and

(c) Identify and mitigate fire, explosion, and vapor hazards.

§280.62 Initial abatement measures and site check.

(a) Unless directed to do otherwise by the implementing agency, owners and operators must perform the following abatement measures:

(1) Remove as much of the regulated substance from the UST system as is necessary to prevent further release to the environment;

(2) Visually inspect any aboveground releases or exposed belowground releases and prevent further migration of the released substance into surrounding soils and ground water;

(3) Continue to monitor and mitigate any additional fire and safety hazards posed by vapors or free product that have migrated from the UST excavation zone and entered into subsurface structures (such as sewers or basements);

(4) Remedy hazards posed by contaminated soils that are excavated or exposed as a result of release confirmation, site investigation, abatement, or corrective action activities. If these remedies include treatment or disposal of soils, the owner and operator must comply with applicable State and local requirements;

(5) Measure for the presence of a release where contamination is most likely to be present at the UST site, unless the presence and source of the release have been confirmed in accordance with the site check required by §280.52(b) or the closure site assessment of §280.72(a). In selecting sample types, sample locations, and measurement methods, the owner and operator must consider the nature of the stored substance, the type of backfill, depth to ground water and other factors as appropriate for identifying the presence and source of the release; and

(6) Investigate to determine the possible presence of free product, and begin free product removal as soon as practicable and in accordance with §280.64.

(b) Within 20 days after release confirmation, or within another reasonable period of time determined by the implementing agency, owners and operators must submit a report to the implementing agency summarizing the initial abatement steps taken under paragraph (a) of this section and any resulting information or data.

§280.63 Initial site characterization.

(a) Unless directed to do otherwise by the implementing agency, owners and operators must assemble information about the site and the nature of the release, including information gained while confirming the release or completing the initial abatement measures in §280.60 and §280.61. This information must include, but is not necessarily limited to the following:

(1) Data on the nature and estimated quantity of release;

(2) Data from available sources and/or site investigations concerning the following factors: surrounding populations, water quality, use and approximate locations of wells potentially affected by the release, subsurface soil conditions, locations of subsurface sewers, climatological conditions, and land use;

(3) Results of the site check required under §280.62(a)(5); and

(4) Results of the free product investigations required under §280.62(a)(6), to be used by owners and operators to determine whether free product must be recovered under §280.64.

(b) Within 45 days of release confirmation or another reasonable period of time determined by the implementing agency, owners and operators must submit the information collected in compliance with paragraph (a) of this section to the implementing agency in a manner that demonstrates its applicability and technical adequacy, or in a format and according to the schedule required by the implementing agency.

[Sec. 280.63(b)]

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§280.64 Free product removal.

At sites where investigations under §280.62(a)(6) indicate the presence of free product, owners and operators must remove free product to the maximum extent practicable as determined by the implementing agency while continuing, as necessary, any actions initiated under §§280.61 through 280.63, or preparing for actions required under §§280.65 through 280.66. In meeting the requirements of this section, owners and operators must:

(a) Conduct free product removal in a manner that minimizes the spread of contamination into previously uncontaminated zones by using recovery and disposal techniques appropriate to the hydrogeologic conditions at the site, and that properly treats, discharges or disposes of recovery byproducts in compliance with applicable local, State and Federal regulations;

(b) Use abatement of free product migration as a minimum objective for the design of the free product removal system;

(c) Handle any flammable products in a safe and competent manner to prevent fires or explosions; and

(d) Unless directed to do otherwise by the implementing agency, prepare and submit to the implementing agency, within 45 days after confirming a release, a free product removal report that provides at least the following information:

(1) The name of the person(s) responsible for implementing the free product removal measures;

(2) The estimated quantity, type, and thickness of free product observed or measured in wells, boreholes, and excavations;

(3) The type of free product recovery system used;

(4) Whether any discharge will take place on-site or off-site during the recovery operation and where this discharge will be located;

(5) The type of treatment applied to, and the effluent quality expected from, any discharge;

(6) The steps that have been or are being taken to obtain necessary permits for any discharge; and

(7) The disposition of the recovered free product.

§280.65 Investigations for soil and ground-water cleanup.

(a) In order to determine the full extent and location of soils contaminated by the release and the presence and concentrations of dissolved product contamination in the ground water, owners and operators must conduct investigations of the release, the release site, and the surrounding area possibly affected by the release if any of the following conditions exist:

(1) There is evidence that ground-water wells have been affected by the release (e.g., as found during release confirmation or previous corrective action measures);

(2) Free product is found to need recovery in compliance with §280.64;

(3) There is evidence that contaminated soils may be in contact with ground water (e.g., as found during conduct of the initial response measures or investigations required under §§280.60 through 280.64); and

(4) The implementing agency requests an investigation, based on the potential effects of contaminated soil or ground water on nearby surface water and groundwater resources.

(b) Owners and operators must submit the information collected under paragraph (a) of this section as soon as practicable or in accordance with a schedule established by the implementing agency.

§280.66 Corrective action plan.

(a) At any point after reviewing the information submitted in compliance with §280.61 through §280.63, the implementing agency may require owners and operators to submit additional information or to develop and submit a corrective action plan for responding to contaminated soils and ground water. If a plan is required, owners and operators must submit the plan according to a schedule and format established by the implementing agency. Alternatively, owners and operators may, after fulfilling the requirements of §280.61 through §280.63, choose to submit a corrective action plan for responding to contaminated soil and ground water. In either case, owners and operators are responsible for submitting a plan that provides for adequate protection of human health and the environment as determined by the implementing agency, and must modify their plan as necessary to meet this standard.

(b) The implementing agency will approve the corrective action plan only after ensuring that implementation of the plan will adequately protect human health, safety, and the environment. In making this determination, the implementing agency should consider the following factors as appropriate:

(1) The physical and chemical characteristics of the regulated substance, including its toxicity, persistence, and potential for migration;

(2) The hydrogeologic characteristics of the facility and the surrounding area;

(3) The proximity, quality, and current and future uses of nearby surface water and ground water;

(4) The potential effects of residual contamination on nearby surface water and ground water;

(5) An exposure assessment; and

(6) Any information assembled in compliance with this subpart.

(c) Upon approval of the corrective action plan or as directed by the implementing agency, owners and operators must implement the plan, including modifications to the plan made by the implementing agency. They must monitor, evaluate, and report the results of implementing the plan in accordance with a schedule and in a format established by the implementing agency.

(d) Owners and operators may, in the interest of minimizing environmental contamination and promoting more effective cleanup, begin cleanup of soil and ground water before the corrective action plan is approved provided that they:

(1) Notify the implementing agency of their intention to begin cleanup;

(2) Comply with any conditions imposed by the implementing agency, including halting cleanup or mitigating adverse consequences from cleanup activities; and

(3) Incorporate these self-initiated cleanup measures in the corrective action plan that is submitted to the implementing agency for approval.

§280.67 Public participation.

(a) For each confirmed release that requires a corrective action plan, the implementing agency must provide notice to the public by means designed to reach those members of the public directly affected by the release and the planned corrective action. This notice may include, but is not limited to, public notice in local

[Sec. 280.67(a)]

newspapers, block advertisements, public service announcements, publication in a state register, letters to individual households, or personal contacts by field staff.

(b) The implementing agency must ensure that site release information and decisions concerning the corrective action plan are made available to the public for inspection upon request.

(c) Before approving a corrective action plan, the implementing agency may hold a public meeting to consider comments on the proposed corrective action plan if there is sufficient public interest, or for any other reason.

(d) The implementing agency must give public notice that complies with paragraph (a) of this section if implementation of an approved corrective action plan does not achieve the established cleanup levels in the plan and termination of that plan is under consideration by the implementing agency.

Subpart G—Out-of-Service UST Systems and Closure

§280.70 Temporary closure.

(a) When an UST system is temporarily closed, owners and operators must continue operation and maintenance of corrosion protection in accordance with §280.31, and any release detection in accordance with subpart D. Subparts E and F must be complied with if a release is suspected or confirmed. However, release detection is not required as long as the UST system is empty. The UST system is empty when all materials have been removed using commonly employed practices so that no more than 2.5 centimeters (one inch) of residue, or 0.3 percent by weight of the total capacity of the UST system, remain in the system.

(b) When an UST system is temporarily closed for 3 months or more, owners and operators must also comply with the following requirements:

(1) Leave vent lines open and functioning; and

(2) Cap and secure all other lines, pumps, manways, and ancillary equipment.

(c) When an UST system is temporarily closed for more than 12 months, owners and operators must permanently close the UST system if it does not meet either performance standards in §280.20 for new UST systems or the upgrading requirements in §280.21, *except that* the spill and overfill equipment requirements do not have to be met. Owners and operators must permanently close the substandard UST systems at the end of this 12-month period in accordance with §§280.71–280.74, *unless* the implementing agency provides an extension of the 12-month temporary closure period. Owners and operators must complete a site assessment in accordance with §280.72 before such an extension can be applied for.

§280.71 Permanent closure and changes-in-service.

(a) At least 30 days before beginning either permanent closure or a change-in-service under paragraphs (b) and (c) of this section, or within another reasonable time period determined by the implementing agency, owners and operators must notify the implementing agency of their intent to permanently close or make the change-in-service, *unless* such action is in response to corrective action. The required assessment of the excavation zone under §280.72 must be performed after notifying the implementing agency but before completion of the permanent closure or a change-in-service.

(b) To permanently close a tank, owners and operators must empty and clean it by removing all liquids and accumulated sludges. All tanks taken out of service permanently must also be either removed from the ground or filled with an inert solid material.

(c) Continued use of an UST system to store a non-regulated substance is considered a change-in-service. Before a change-in-service, owners and operators must empty and clean the tank by removing all liquid and accumulated sludge and conduct a site assessment in accordance with §280.72.

NOTE: The following cleaning and closure procedures may be used to comply with this section:

(A) American Petroleum Institute Recommended Practice 1604, "Removal and Disposal of Used Underground Petroleum Storage Tanks";

(B) American Petroleum Institute Publication 2015, "Cleaning Petroleum Storage Tanks";

(C) American Petroleum Institute Recommended Practice 1631, "Interior Lining of Underground Storage Tanks," may be used as guidance for compliance with this section; and

(D) The National Institute for Occupational Safety and Health "Criteria for a Recommended Standard * * * Working in Confined Space" may be used as guidance for conducting safe closure procedures at some hazardous substance tanks.

§280.72 Assessing the site at closure or change-in-service.

(a) Before permanent closure or a change-in-service is completed, owners and operators must measure for the presence of a release where contamination is most likely to be present at the UST site. In selecting sample types, sample locations, and measurement methods, owners and operators must consider the method of closure, the nature of the stored substance, the type of backfill, the depth to ground water, and other factors appropriate for identifying the presence of a release. The requirements of this section are satisfied if one of the external release detection methods allowed in §280.43 (e) and (f) is operating in accordance with the requirements in §280.43 at the time of closure, and indicates no release has occurred.

(b) If contaminated soils, contaminated ground water, or free product as a liquid or vapor is discovered under paragraph (a) of this section, or by any other manner, owners and operators must begin corrective action in accordance with subpart F.

§280.73 Applicability to previously closed UST systems.

When directed by the implementing agency, the owner and operator of an UST system permanently closed before December 22, 1988 must assess the excavation zone and close the UST system in accordance with this subpart if releases from the UST may, in the judgment of the implementing agency, pose a current or potential threat to human health and the environment.

§280.74 Closure records.

Owners and operators must maintain records in accordance with §280.34 that are capable of demonstrating compliance with closure requirements under this subpart. The results of the excavation zone assessment required in §280.72 must be maintained for at least 3 years after completion of permanent closure or change-in-service in one of the following ways:

(a) By the owners and operators who took the UST system out of service;

(b) By the current owners and operators of the UST system site; or

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(c) By mailing these records to the implementing agency if they cannot be maintained at the closed facility.

Subpart H—Financial Responsibility

[Subpart H added at 53 FR 43370, Oct. 26, 1988]

§280.90 Applicability.

(a) This subpart applies to owners and operators of all petroleum underground storage tank (UST) systems except as otherwise provided in this section.

(b) Owners and operators of petroleum UST systems are subject to these requirements if they are in operation on or after the date for compliance established in §280.91.

(c) State and Federal government entities whose debts and liabilities are the debts and liabilities of a state or the United States are exempt from the requirements of this subpart.

(d) The requirements of this subpart do not apply to owners and operators of any UST system described in §280.10 (b) or (c).

(e) If the owner and operator of a petroleum underground storage tank are separate persons, only one person is required to demonstrate financial responsibility; however, both parties are liable in event of noncompliance. Regardless of which party complies, the date set for compliance at a particular facility is determined by the characteristics of the owner as set forth in §280.91.

§280.91 Compliance dates.

Owners of petroleum underground storage tanks are required to comply with the requirements of this subpart by the following dates:

(a) All petroleum marketing firms owning 1,000 or more USTs and all other UST owners that report a tangible net worth of $20 million or more to the U.S. Securities and Exchange Commission (SEC), Dun and Bradstreet, the Energy Information Administration, or the Rural Electrification Administration; January 24, 1989, except that compliance with §280.94(b) is required by: July 24, 1989.

(b) All petroleum marketing firms owning 100-999 USTs; October 26, 1989.

(c) All petroleum marketing firms owning 13-99 USTs at more than one facility; April 26, 1991.

(d) All petroleum UST owners not described in paragraphs (a), (b), or (c) of this section, excluding local government entities; December 31, 1993.

[§280.91(e) revised at 59 FR 9607, Feb. 28, 1994]

(e) All local government entities (including Indian tribes) not included in paragraph (f) of this section; February 18, 1994.

[§280.91(e) revised by 59 FR 9607, Feb. 28, 1994]

[§280.91 amended at 54 FR 5452, Feb. 3, 1989; 55 FR 18567, May 2, 1990; 55 FR 46025, Oct. 31, 1990; 56 FR 66373, Dec. 23, 1991]

(f) Indian tribes that own USTs on Indian lands which meet the applicable technical requirements of this part; December 31, 1998.

[§280.91(f) added by 59 FR 9607, Feb. 28, 1994]

§280.92 Definition of terms.

When used in this subpart, the following terms shall have the meanings given below:

Accidental release means any sudden or nonsudden release of petroleum from an underground storage tank that results in a need for corrective action and/or compensation for bodily injury or property damage neither expected nor intended by the tank owner or operator.

Bodily injury shall have the meaning given to this term by applicable state law; however, this term shall not include those liabilities which, consistent with standard insurance industry practices, are excluded from coverage in liability insurance policies for bodily injury.

Chief Financial Officer, in the case of local government owners and operators, means the individual with the overall authority and responsibility for the collection, disbursement, and use of funds by the local government.

[Added at 58 FR 9050, Feb. 18, 1993]

Controlling interest means direct ownership of at least 50 percent of the voting stock of another entity.

Director of the Implementing Agency means the EPA Regional Administrator, or, in the case of a state with a program approved under section 9004, the Director of the designated state or local agency responsible for carrying out an approved UST program.

Financial reporting year means the latest consecutive twelve-month period for which any of the following reports used to support a financial test is prepared:

a 10-K report submitted to the SEC;

an annual report of tangible net worth submitted to Dun and Bradstreet; or

annual reports submitted to the Energy Information Administration or the Rural Electrification Administration.

"Financial reporting year" may thus comprise a fiscal or a calendar year period.

Legal defense cost is any expense that an owner or operator or provider of financial assurance incurs in defending against claims or actions brought,

By EPA or a state to require corrective action or to recover the costs of corrective action;

By or on behalf of a third party for bodily injury or property damage caused by an accidental release; or

By any person to enforce the terms of a financial assurance mechanism.

Local government shall have the meaning given this term by applicable state law and includes Indian tribes. The term is generally intended to include: (1) Counties, municipalities, townships, separately chartered and operated special districts (including local government public transit systems and redevelopment authorities), and independent school districts authorized as governmental bodies by state charter or constitution; and (2) Special districts and independent school districts established by counties, municipalities, townships, and other general purpose governments to provide essential services.

[Added at 58 FR 9050, Feb. 18, 1993]

Occurrence means an accident, including continuous or repeated exposure to conditions, which results in a release from an underground storage tank.

NOTE: This definition is intended to assist in the understanding of these regulations and is not intended either to limit the meaning of "occurrence" in a way that conflicts with standard insurance usage or to prevent the use of other standard insurance terms in place of "occurrence."

Owner or operator, when the owner or operator are separate parties, refers to the party that is obtaining or has obtained financial assurances.

Petroleum marketing facilities include all facilities at which petroleum is produced or refined and all facilities from

which petroleum is sold or transferred to other petroleum marketers or to the public.

Petroleum marketing firms are all firms owning petroleum marketing facilities. Firms owning other types of facilities with USTs as well as petroleum marketing facilities are considered to be petroleum marketing firms.

Property damage shall have the meaning given this term by applicable state law. This term shall not include those liabilities which, consistent with standard insurance industry practices, are excluded from coverage in liability insurance policies for property damage. However, such exclusions for property damage shall not include corrective action associated with releases from tanks which are covered by the policy.

Provider of financial assurance means an entity that provides financial assurance to an owner or operator of an underground storage tank through one of the mechanisms listed in §§280.95–280.103, including a guarantor, insurer, risk retention group, surety, issuer of a letter of credit, issuer of a state-required mechanism, or a state.

Substantial business relationship means the extent of a business relationship necessary under applicable state law to make a guarantee contract issued incident to that relationship valid and enforceable. A guarantee contract is issued "incident to that relationship" if it arises from and depends on existing economic transactions between the guarantor and the owner or operator.

Substantial governmental relationship means the extent of a governmental relationship necessary under applicable state law to make an added guarantee contract issued incident to that relationship valid and enforceable. A guarantee contract is issued "incident to that relationship" if it arises from a clear commonality of interest in the event of an UST release such as coterminous boundaries, overlapping constituencies, common ground-water aquifer, or other relationship other than monetary compensation that provides a motivation for the guarantor to provide a guarantee.

[Added at 58 FR 9050, Feb. 18, 1993]

Tangible net worth means the tangible assets that remain after deducting liabilities; such assets do not include intangibles such as goodwill and rights to patents or royalties. For purposes of this definition, "assets" means all existing and all probable future economic benefits obtained or controlled by a particular entity as a result of past transactions.

Termination under §280.97(b)(1) and §280.97(b)(2) means only those changes that could result in a gap in coverage as where the insured has not obtained substitute coverage or has obtained substitute coverage with a different retroactive date than the retroactive date of the original policy.

[§280.92 amended at 54 FR 47081, Nov. 9, 1989; revised at 58 FR 9050,, Feb. 18, 1993]

§280.93 Amount and scope of required financial responsibility.

(a) Owners or operators of petroleum underground storage tanks must demonstrate financial responsibility for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of petroleum underground storage tanks in at least the following per-occurrence amounts:

(1) For owners or operators of petroleum underground storage tanks that are located at petroleum marketing facilities, or that handle an average of more than 10,000 gallons of petroleum per month based on annual throughput for the previous calendar year; $1 million.

(2) For all other owners or operators of petroleum underground storage tanks; $500,000.

(b) Owners or operators of petroleum underground storage tanks must demonstrate financial responsibility for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of petroleum underground storage tanks in at least the following annual aggregate amounts:

(1) For owners or operators of 1 to 100 petroleum underground storage tanks, $1 million; and

(2) For owners or operators of 101 or more petroleum underground storage tanks, $2 million.

(c) For the purposes of paragraphs (b) and (f) of this section, only, "a petroleum underground storage tank" means a single containment unit and does not mean combinations of single containment units.

(d) Except as provided in paragraph (e) of this section, if the owner or operator uses separate mechanisms or separate combinations of mechanisms to demonstrate financial responsibility for:

(1) Taking corrective action;

(2) Compensating third parties for bodily injury and property damage caused by sudden accidental releases; or

(3) Compensating third parties for bodily injury and property damage caused by nonsudden accidental releases, the amount of assurance provided by each mechanism or combination of mechanisms must be in the full amount specified in paragraphs (a) and (b) of this section.

(e) If an owner or operator uses separate mechanisms or separate combinations of mechanisms to demonstrate financial responsibility for different petroleum underground storage tanks, the annual aggregate required shall be based on the number of tanks covered by each such separate mechanism or combination of mechanisms.

(f) Owners or operators shall review the amount of aggregate assurance provided whenever additional petroleum underground storage tanks are acquired or installed. If the number of petroleum underground storage tanks for which assurance must be provided exceeds 100, the owner or operator shall demonstrate financial responsibility in the amount of at least $2 million of annual aggregate assurance by the anniversary of the date on which the mechanism demonstrating financial responsibility became effective. If assurance is being demonstrated by a combination of mechanisms, the owner or operator shall demonstrate financial responsibility in the amount of at least $2 million of annual aggregate assurance by the first-occurring effective date anniversary of any one of the mechanisms combined (other than a financial test or guarantee) to provide assurance.

(g) The amounts of assurance required under this section exclude legal defense costs.

(h) The required per-occurrence and annual aggregate coverage amounts do not in any way limit the liability of the owner or operator.

§280.94 Allowable mechanisms and combinations of mechanisms.

(a) Subject to the limitations of paragraphs (b) and (c) of this section,

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(1) An owner or operator, including a local government owner or operator, may use any one or combination of the mechanisms listed in §§280.95 through 280.103 to demonstrate financial responsibility under this subpart for one or more underground storage tanks, and

(2) A local government owner or operator may use any one or combination of the mechanisms listed in §§280.104 through 280.107 to demonstrate financial responsibility under this subpart for one or more underground storage tanks.

[§280.94(a) revised at 58 FR 9050, Feb. 18, 1993]

(b) An owner or operator may use a guarantee under §280.96 or surety bond under §280.98 to establish financial responsibility only if the Attorney(s) General of the state(s) in which the underground storage tanks are located has (have) submitted a written statement to the implementing agency that a guarantee or surety bond executed as described in this section is a legally valid and enforceable obligation in that state.

[§280.94(b) revised at 58 FR 9050, Feb. 18, 1993]

(c) An owner or operator may use self-insurance in combination with a guarantee only if, for the purpose of meeting the requirements of the financial test under this rule, the financial statements of the owner or operator are not consolidated with the financial statements of the guarantor.

§280.95 Financial test of self-insurance.

(a) An owner or operator, and/or guarantor, may satisfy the requirements of §280.93 by passing a financial test as specified in this section. To pass the financial test of self-insurance, the owner or operator, and/or guarantor must meet the criteria of paragraph (b) or (c) of this section based on year-end financial statements for the latest completed fiscal year.

(b) (1) The owner or operator, and/or guarantor, must have a tangible net worth of at least ten times:

(i) The total of the applicable aggregate amount required by §280.93, based on the number of underground storage tanks for which a financial test is used to demonstrate financial responsibility to EPA under this section or to a state implementing agency under a state program approved by EPA under 40 CFR part 281;

(ii) The sum of the corrective action cost estimates, the current closure and post-closure care cost estimates, and amount of liability coverage for which a financial test is used to demonstrate financial responsibility to EPA under 40 CFR 264.101, 264.143, 264.145, 265.143, 165.145, 264.147, and 265.147 or to a state implementing agency under a state program authorized by EPA under 40 CFR part 271; and

(iii) The sum of current plugging and abandonment cost estimates for which a financial test is used to demonstrate financial responsibility to EPA under 40 CFR 144.63 or to a state implementing agency under a state program authorized by EPA under 40 CFR part 145.

(2) The owner or operator, and/or guarantor, must have a tangible net worth of at least $10 million.

(3) The owner or operator, and/or guarantor, must have a letter signed by the chief financial officer worded as specified in paragraph (d) of this section.

(4) The owner or operator, and/or guarantor, must either:

(i) File financial statements annually with the U.S. Securities and Exchange Commission, the Energy Information Administration, or the Rural Electrification Administration; or

(ii) Report annually the firm's tangible net worth to Dun and Bradstreet, and Dun and Bradstreet must have assigned the firm a financial strength rating of 4A or 5A.

(5) The firm's year-end financial statements, if independently audited, cannot include an adverse auditor's opinion, a disclaimer of opinion, or a "going concern" qualification.

(c) (1) The owner or operator, and/or guarantor must meet the financial test requirements of 40 CFR 264.147(f)(1), substituting the appropriate amounts specified in §280.93 (b)(1) and (b)(2) for the "amount of liability coverage" each time specified in that section.

(2) The fiscal year-end financial statements of the owner or operator, and/or guarantor, must be examined by an independent certified public accountant and be accompanied by the accountant's report of the examination.

(3) The firm's year-end financial statements cannot include an adverse auditor's opinion, a disclaimer of opinion, or a "going concern" qualification.

(4) The owner or operator, and/or guarantor, must have a letter signed by the chief financial officer, worded as specified in paragraph (d) of this section.

(5) If the financial statements of the owner or operator, and/or guarantor, are not submitted annually to the U.S. Securities and Exchange Commission, the Energy Information Administration or the Rural Electrification Administration, the owner or operator, and/or guarantor, must obtain a special report by an independent certified public accountant stating that:

(i) He has compared the data that the letter form the chief financial officer specifies as having been derived from the latest year-end financial statements of the owner or operator, and/or guarantor, with the amounts in such financial statements; and

(ii) In connection with that comparison, no matters came to his attention which caused him to believe that the specified data should be adjusted.

(d) To demonstrate that it meets the financial test under paragraph (b) or (c) of this section, the chief financial officer of the owner or operator, or guarantor, must sign, within 120 days of the close of each financial reporting year, as defined by the twelve-month period for which financial statements used to support the financial test are prepared, a letter worded exactly as follows, except that the instructions in brackets are to be replaced by the relevant information and the brackets deleted:

LETTER FROM CHIEF FINANCIAL OFFICER

I am the chief financial officer of [insert: name and address of the owner or operator, or guarantor]. This letter is in support of the use of [insert: "the financial test of self-insurance," and/or "guarantee"] to demonstrate financial responsibility for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage"] caused by [insert: "suddent accidential releases" and/or "nonsudden accidential releases"] in the amount of at least [insert: dollar amount] per occurrence and [insert: dollar amount] annual aggregate arising from operating (an) underground storage tank(s).

Underground storage tanks at the following facilities are assured by this financial test or a financial test under an autho-

rized State program by this [insert: "owner or operator," and/or "guarantor"]: [List for each facility: the name and address of the facility where tanks assured by this financial test are located, and whether tanks are assured by this financial test or a financial test under a State program approved under 40 CFR part 281. If separate mechanisms or combinations of mechanisms are being used to assure any of the tanks at this facility, list each tank assured by this financial test or a financial test under a State program authorized under 40 CFR part 281 by the tank identification number provided in the notification submitted pursuant to 40 CFR 280.22 or the corresponding State requirements.]

A [insert: "financial test," and/or "guarantee"] is also used by this [insert: "owner or operator," or "guarantor"] to demonstrate evidence of financial responsibility in the following amounts under other EPA regulations or state programs authorized by EPA under 40 CFR parts 271 and 145:

EPA Regulations	*Amount*
Closure (§§264.143 and 265.143)	$ _____
Post-Closure Care (§§264.145 and 265.145)	$ _____
Liability Coverage (§§264.147 and 265.147)	$ _____
Corrective Action (§§264.101(b))	$ _____
Plugging and Abandonment (§144.63)	$ _____
Closure	$ _____
Post-Closure Care	$ _____
Liabilitly Coverage	$ _____
Corrective Action	$ _____
Plugging and Abandonment	$ _____
Total	$ _____

This [insert: "owner or operator," or "guarantor"] has not received an adverse opinion, a disclaimer of opinion, or a "going concern" qualification from an independent auditor on his financial statements for the latest completed fiscal year.

[Fill in the information for Alternative I if the criteria of paragraph (b) of §280.95 are being used to demonstrate compliance with the financial test requirements. Fill in the information for Alternative II if the criteria of paragraph (c) of §280.95 are being used to demonstrate compliance with the financial test requirements.]

Alternative I

1. Amount of annual UST aggregate coverage being assured by a financial test, and/or guarantee ..... $ _____
2. Amount of corrective action, closure and post-closure care costs, liability coverage, and plugging and abandonment costs covered by a financial test, and/or guarantee ..... $ _____

Alternative I

3. Sum of lines 1 and 2 ..... $ _____
4. Total tangible assets ..... $ _____
5. Total liabilities [if any of the amount reported on line 3 is included in total liabilities, you may deduct that amount from this line and add that amount to line 6] ..... $ _____
6. Tangible net worth [subtract line 5 from line 4] ..... $ _____

	Yes	No
7. Is line 6 at least $10 million?	_____	_____
8. Is line 6 at least 10 times line 3?	_____	_____
9. Have financial statements for the latest fiscal year been filed with the Securities and Exchange Commission?	_____	_____
10. Have financial statements for the latest fiscal year been filed with the Energy Information Administration?	_____	_____
11. Have financial statements for the lastest fiscal year been filed with the Rural Electrification Administration?	_____	_____
12. Has financial information been provided to Dun and Bradstreet, and has Dun and Bradstreet provided a financial strength rating of 4A or 5A? [Answer "Yes" only if both criteria have been met.]	_____	_____

Alternative II—

1. Amount of annual UST aggregate coverage being assured by a test, and/or guarantee ..... $ _____
2. Amount of corrective action, closure and post-closure care costs, liability coverage, and plugging and abandonment costs covered by a financial test, and/or guarantee ..... $ _____
3. Sum of lines 1 and 2 ..... $ _____
4. Total tangible assets ..... $ _____
5. Total liabilities [if any of the amount reported on line 3 is included in total liabilities, you may deduct that amount from this line and add that amount to line 6] ..... $ _____
6. Tangible net worth [subtract line 5 from line 4] ..... $ _____
7. Total assets in the U.S. [required only if less than 90 percent of assets are located in the U.S.] ..... $ _____

	Yes	No
8. Is line 6 at least $10 million?	$ _____	_____
9. Is line 6 at least 6 times line 3?	_____	_____
10. Are at least 90 percent of assets located in the U.S.? [If "No," complete line 11.]	_____	_____
11. Is line 7 at least 6 times line 3?	_____	_____

[Fill in either lines 12-15 or lines 16-18:]

12. Current assets ..... $ _____
13. Current liabilities ..... _____
14. Net working capital [subtract line 13 from line 12] ..... _____

	Yes	No
15. Is line 14 at least 6 times line 3?	_____	_____
16. Current bond rating of most recent bond issue	_____	_____
17. Name of rating service	_____	_____
18. Date of maturity of bond	_____	_____
19. Have financial statements for the latest fiscal year been filed with the SEC, the Energy Information Administration, or the Rural Electrification Administration?	_____	_____

[If "No," please attach a report from an independent certified public accountant certifying that there are no material differences between the data as reported in lines 4-18 above and the financial statements for the latest fiscal year.]

[For both Alternative I and Alternative II complete the certification with this statement.]

I hereby certify that the wording of this letter is identical to the wording specified in 40 CFR part 280.95(d) as such regulations were constituted on the date shown immediately below.

[Signature]
[Name]
[Title]
[Date]

(e) If an owner or operator using the test to provide financial assurance finds that he or she no longer meets the requirements of the financial test based on the year-end financial statements, the owner or operator must obtain alternative coverage within 150 days of the end of the year for which financial statements have been prepared.

(f) The Director of the implementing agency may require reports of financial condition at any time from the owner or operator, and/or guarantor. If the Director finds, on the basis of such reports or other information, that the owner or operator, and/or guarantor, no longer meets the financial test requirements of §280.95(b) or (c) and (d), the owner or operator must obtain alternate coverage within 30 days after notification of such a finding.

(g) If the owner or operator fails to obtain alternate assurance within 150 days of finding that he or she no longer meets the requirements of the financial test based on the year-end financial statements, or within 30 days of notification by the Director of the implementing agency that he or she no longer meets the requirements of the financial test, the owner or operator must notify the Director of such failure within 10 days.

§280.96 Guarantee.

(a) An owner or operator may satisfy the requirements of §280.93 by obtaining a guarantee that conforms to the requirements of this section. The guarantor must be:

(1) A firm that (i) possesses a controlling interest in the owner or operator; (ii) possesses a controlling interest in a firm described under paragraph (a)(1)(i) of this section; or, (iii) is controlled through

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stock ownership by a common parent firm that possesses a controlling interest in the owner or operator; or,

(2) A firm engaged in a substantial business relationship with the owner or operator and issuing the guarantee as an act incident to that business relationship.

(b) Within 120 days of the close of each financial reporting year the guarantor must demonstrate that it meets the financial test criteria of §280.95 based on year-end financial statements for the latest completed financial reporting year by completing the letter from the chief financial officer described in §280.95(d) and must deliver the letter to the owner or operator. If the guarantor fails to meet the requirements of the financial test at the end of any financial reporting year, within 120 days of the end of that financial reporting year the guarantor shall send by certified mail, before cancellation or nonrenewal of the guarantee, notice to the owner or operator. If the Director of the implementing agency notifies the guarantor that he no longer meets the requirements of the financial test of §280.95 (b) or (c) and (d), the guarantor must notify the owner or operator within 10 days of receiving such notification from the Director. In both cases, the guarantee will terminate no less than 120 days after the date the owner or operator receives the notification, as evidenced by the return receipt. The owner or operator must obtain alternative coverage as specified in §280.110(c).

(c) The guarantee must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

GUARANTEE

Guarantee made this [date] by [name of guaranteeing entity], a business entity organized under the laws the state of [name of state], herein referred to as guarantor, to [the state implementing agency] and to any and all third parties, and obligees, on behalf of [owner or operator] of [business address].

Recitals.

(1) Guarantor meets or exceeds the financial test criteria of 40 CFR 280.95 (b) or (c) and (d) and agrees to comply with the requirements for guarantors as specified in 40 CFR 280.96(b).

(2) [Owner or operator] owns or operates the following underground storage tank(s) covered by this guarantee: [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 40 CFR 280.22 or the corresponding state requirement, and the name and address of the facility.] This guarantee satisfies 40 CFR part 280, subpart H requirements for assuring funding for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the above-identified underground storage tank(s) in the amount of [insert dollar amount] per occurrence and [insert dollar amount] annual aggregate.

(3) [Insert appropriate phrase: "On behalf of our subsidiary" (if guarantor is corporate parent of the owner or operator); "On behalf of our affiliate" (if guarantor is a related firm of the owner or operator); or "Incident to our business relationship with" (if guarantor is providing the guarantee as an incident to a substantial business relationship with owner or operator)] [owner or operator], guarantor guarantees to [implementing agency] and to any and all third parties that:

In the event that [owner or operator] fails to provide alternative coverage within 60 days after receipt of a notice of cancellation of this guarantee and the [Director of the implementing agency] has determined or suspects that a release has occurred at an underground storage tank covered by this guarantee, the guarantor, upon instructions from the [Director], shall fund a standby trust fund in accordance with the provisions of 40 CFR 280.108, in an amount not to exceed the coverage limits specified above.

In the event that the [Director] determines that [owner or operator] has failed to perform corrective action for releases arising out of the operation of the above-identified tank(s) in accordance with 40 CFR part 280, subpart F, the guarantor upon written instructions from the [Director] shall fund a standby trust in accordance with the provisions of 40 CFR 280.108, in an amount not to exceed the coverage limits specified above.

If [owner or operator] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by ["sudden" and/or "nonsudden"] accidental releases arising from the operation of the above-identified tank(s), or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor, upon written instructions from the [Director], shall fund a standby trust in accordance with the provisions of 40 CFR 280.108 to satisfy such judgment(s), award(s), or settlement agreement(s) up to the limits of coverage specified above.

(4) Guarantor agrees that if, at the end of any fiscal year before cancellation of this guarantee, the guarantor fails to meet the financial test criteria of 40 CFR 280.95 (b) or (c) and (d), guarantor shall send within 120 days of such failure, by certified mail, notice to [owner or operator]. The guarantee will terminate 120 days from the date of receipt of the notice by [owner or operator], as evidenced by the return receipt.

(5) Guarantor agrees to notify [owner or operator] by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code naming guarantor as debtor, within 10 days after commencement of the proceeding.

(6) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [owner or operator] pursuant to 40 CFR part 280.

(7) Guarantor agrees to remain bound under this guarantee for so long as [owner or operator] must comply with the applicable financial responsibility requirements of 40 CFR part 280, subpart H for the above-identified tank(s), except that guarantor may cancel this guarantee by sending notice by certified mail to [owner or operator], such cancellation to become effective no earlier than 120 days after receipt of such notice by [owner or operator], as evidenced by the return receipt.

(8) The guarantor's obligation does not apply to any of the following:

(a) Any obligation of [insert owner or operator] under a workers' compensation,

disability benefits, or unemployment compensation law or other similar law;

(b) Bodily injury to an employee of [insert owner or operator] arising from, and in the course of, employment by [insert owner or operator];

(c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;

(d) Property damage to any property owned, rented, loaded to, in the care, custody, or control of, or occupied by [insert owner or operator] that is not the direct result of a release from a petroleum underground storage tank;

(e) Bodily damage or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 40 CFR 280.93.

(9) Guarantor expressly waives notice of acceptance of this guarantee by [the implementing agency], by any or all third parties, or by [owner or operator].

I hereby certify that the wording of this guarantee is identical to the wording specified in 40 CFR 280.96(c) as such regulations were constituted on the effective date shown immediately below.

Effective date:
[Name of guarantor]
[Authorized signature for guarantor]
[Name of person signing]
[Title of person signing]
Signature of witness or notary:

(d) An owner or operator who uses a guarantee to satisfy the requirements of §280.93 must establish a standby trust fund when the guarantee is obtained. Under the terms of the guarantee, all amounts paid by the guarantor under the guarantee will be deposited directly into the standby trust fund in accordance with instructions from the Director of the implementing agency under §280.108. This standby trust fund must meet the requirements specified in §280.103.

§280.97 Insurance and risk retention group coverage.

[§290.97 amended at 54 FR 47081, Nov. 9, 1989]

(a) An owner or operator may satisfy the requirements of §290.93 by obtaining liability insurance that conforms to the requirements of this section from a qualified insurer or risk retention group. Such insurance may be in the form of a separate insurance policy or an endorsement to an existing insurance policy.

(b) Each insurance policy must be amended by an endorsement worded as specified in paragraph (b)(1) of this section, or evidenced by a certificate of insurance worded as specified in paragraph (b)(2) of this section, except that instructions in brackets must be replaced with the relevant information and the brackets deleted:

(1) Endorsement

Name: [name of each covered location]
Address: [address of each covered location]
Policy Number:
Period of Coverage: [current policy period]
Name of [Insurer or Risk Retention Group]:
Address of [Insurer or Risk Retention Group]:
Name of Insured:
Address of Insured:

ENDORSEMENT:

1. This endorsement certifies that the policy to which the endorsement is attached provides liability insurance covering the following underground storage tanks:

[List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 40 CFR 280.22, or the corresponding state requirement, and the name and address of the facility.]

for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"; in accordance with and subject to the limits of liability, exclusions, conditions, and other terms of the policy; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the underground storage tank(s) identified above.

The limits of liability are [insert the dollar amount of the "each occurrence" and "annual aggregate" limits of the Insurer's or Group's liability; if the amount of coverage is different for different types of coverage or for different underground storage tanks or locations, indicate the amount of coverage for each type of coverage and/or for each underground storage tank or location], exclusive of legal defense costs, which are subject to a separate limit under the policy. This coverage is provided under [policy number]. The effective date of said policy is [date].

2. The insurance afforded with respect to such occurrences is subject to all of the terms and conditions of the policy; provided, however, that any provisions inconsistent with subsections (a) through (e) of this Paragraph 2 are hereby amended to conform with subsections (a) through (e);

a. Bankruptcy or insolvency of the insured shall not relieve the ["Insurer" or "Group"] of its obligations under the policy to which this endorsement is attached.

b. The ["Insurer" or "Group"] is liable for the payment of amounts within any deductible applicable to the policy to the provider of corrective action or a damaged third-party, with a right of reimbursement by the insured for any such payment made by the ["Insurer" or "Group"]. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated under another mechanism or combination of mechanisms as specified in 40 CFR 280.95–280.102.

c. Whenever requested by [a Director of an implementing agency], the ["Insurer" or "Group"] agrees to furnish to [the Director] a signed duplicate original of the policy and all endorsements.

d. Cancellation or any other termination of the insurance by the ["Insurer" or "Group"], except for non-payment of premium or misrepresentation by the insured, will be effective only upon written notice and only after the expiration of 60 days after a copy of such written notice is received by the insured. Cancellation for non-payment of premium or misrepresentation by the insured will be effective only upon written notice and only after expiration of a minimum of 10 days after a copy of such written notice is received by the insured.

[Insert for claims-made policies:

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e. The insurance covers claims otherwise covered by the policy that are reported to the ["Insurer" or "Group"] within six months of the effective date of cancellation or non-renewal of the policy except where the new or renewed policy has the same retroactive date or a retroactive date earlier than that of the prior policy, and which arise out of any covered occurrence that commenced after the policy retroactive date, if applicable, and prior to such policy renewal or termination date. Claims reported during such extended reporting period are subject to the terms, conditions, limits, including limits of liability, and exclusions of the policy.]

I hereby certify that the wording of this instrument is identical to the wording in 40 CFR 280.97(b)(1) and that the ["Insurer" or "Group"] is ["licensed to transact the business of insurance or eligible to provide insurance as an excess or surplus lines insurer in one or more states"].

[Signature of authorized representative of Insurer or Risk Retention Group]

[Name of person signing]

[Title of person signing], Authorized Representative of [name of Insurer or Risk Retention Group]

[Address of Representative]

(2) Certificate of Insurance

Name: [name of each covered location]

Address: [address of each covered location]

Policy Number:

Endorsement (if applicable):

Period of Coverage: [current policy period]

Name of [Insurer or Risk Retention Group]:

Address of [Insurer or Risk Retention Group]:

Name of Insured:

Address of Insured:

Certification:

1. [Name of Insurer or Risk Retention Group], [the "Insurer" or "Group"], as identified above, hereby certifies that it has issued liability insurance covering the following underground storage tank(s):

[List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 40 CFR 280.22, or the corresponding state requirement, and the name and address of the facility.]

for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"; in accordance with and subject to the limits of liability, exclusions, conditions, and other terms of the policy; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the underground storage tank(s) identified above.

The limits of liability are [insert the dollar amount of the "each occurrence" and "annual aggregate" limits of the Insurer's or Group's liability; if the amount of coverage is different for different types of coverage or for different underground storage tanks or locations, indicate the amount of coverage for each type of coverage and/or for each underground storage tank or location], exclusive of legal defense costs, which are subject to a separate limit under the policy. This coverage is provided under [policy number]. The effective date of said policy is [date].

2. The ["Insurer" or "Group"] further certifies the following with respect to the insurance described in Paragraph 1:

a. Bankruptcy or insolvency of the insured shall not relieve the ["Insurer" or "Group"] of its obligations under the policy to which this certificate applies.

b. The ["Insurer" or "Group"] is liable for the payment of amounts within any deductible applicable to the policy to the provider of corrective action or a damaged third-party, with a right of reimbursement by the insured for any such payment made by the ["Insurer" or "Group"]. This provision does not apply with respect to that amount of any deductible for which coverage is demonstrated under another mechanism or combination of mechanisms as specified in 40 CFR 280.95–280.102.

c. Whenever requested by [a Director of an implementing agency], the ["Insurer" or "Group"] agrees to furnish to [the Director] a signed duplicate original of the policy and all endorsements.

d. Cancellation or any other termination of the insurance by the ["Insurer" or "Group"], except for non-payment of premium or misrepresentation by the insured, will be effective only upon written notice and only after the expiration of 60 days after a copy of such written notice is received by the insured. Cancellation for non-payment of premium or misrepresentation by the insured will be effective only upon written notice and only after expiration of a minimum of 10 days after a copy of such written notice is received by the insured.

[Insert for claims-made policies:

e. The insurance covers claims otherwise covered by the policy that are reported to the ["Insurer" or "Group"] within six months of the effective date of cancellation or non-renewal of the policy except where the new or renewed policy has the same retroactive date or a retroactive date earlier than that of the prior policy, and which arise out of any covered occurrence that commenced after the policy retroactive date, if applicable, and prior to such policy renewal or termination date. Claims reported during such extended reporting period are subject to the terms, conditions, limits, including limits of liability, and exclusions of the policy.]

I hereby certify that the wording of this instrument is identical to the wording in 40 CFR 280.97(b)(2) and that the ["Insurer" or "Group"] is ["licensed to transact the business of insurance, or eligible to provide insurance as an excess or surplus lines insurer, in one or more states"].

[Signature of authorized representative of Insurer]

[Type name]

[Title], Authorized Representative of [name of Insurer or Risk Retention Group]

[Address of Representative]

(c) Each insurance policy must be issued by an insurer or a risk retention group that, at a minimum, is licensed to transact the business of insurance or eligible to provide insurance as an excess or surplus lines insurer in one or more states.

§280.98 Surety bond.

(a) An owner or operator may satisfy the requirements of §280.93 by obtaining a surety bond that conforms to the requirements of this section. The surety company issuing the bond must be among those listed as acceptable sureties on federal bonds in the latest Circular 570 of the U.S. Department of the Treasury.

(b) The surety bond must be worded as follows, except that instructions in brackets must be replaced with the relevant information and the brackets deleted:

PERFORMANCE BOND

Date bond executed:
Period of coverage:
Principal: [legal name and business address of owner or operator]
Type of organization: [insert "individual," "joint venture," "partnership," or "corporation"]
State of incorporation (if applicable):
Surety(ies): [name(s) and business address(es)]
Scope of Coverage: [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 40 CFR 280.22, or the corresponding state requirement, and the name and address of the facility. List the coverage guaranteed by the bond: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases" "arising from operating the underground storage tank"].
Penal sums of bond:
Per occurrence $
Annual aggregate $
Surety's bond number:

Know All Persons by These Presents, that we, the Principal and Surety(ies), hereto are firmly bound to [the implementing agency], in the above penal sums for the payment of which we bind ourselves, our heirs, executors, administrators, successors, and assigns jointly and severally; provided that, where the Surety(ies) are corporations acting as co-sureties, we, the Sureties, bind ourselves in such sums jointly and severally only for the purpose of allowing a joint action or actions against any or all of us, and for all other purposes each Surety binds itself, jointly and severally with the Principal, for the payment of such sums only as is set forth opposite the name of such Surety, but if no limit of liability is indicated, the limit of liability shall be the full amount of the penal sums.

Whereas said Principal is required under Subtitle I of the Resource Conservation and Recovery Act (RCRA), as amended, to provide financial assurance for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the underground storage tanks identified above, and

Whereas said Principal shall establish a standby trust fund as is required when a surety bond is used to provide such financial assurance;

Now, therefore, the conditions of the obligation are such that if the Principal shall faithfully ["take corrective action, in accordance with 40 CFR part 280, subpart F and the Director of the state implementing agency's instructions for," and/or "compensate injured third parties for bodily injury and property damage caused by" either "sudden" or "nonsudden" or "sudden and nonsudden"] accidental releases arising from operating the tank(s) indentified above, or if the Principal shall provide alternate financial assurance, as specified in 40 CFR part 280, subpart H, within 120 days after the date the notice of cancellation is received by the Principal from the Surety(ies), then this obligation shall be null and void; otherwise it is to remain in full force and effect.

Such obligation does not apply to any of the following:

(a) Any obligation of [insert owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;

(b) Bodily injury to an employee of [insert owner or operator] arising from, and in the course of, employment by [insert owner or operator];

(c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;

(d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [insert owner or operator] that is not the direct result of a release from a petroleum underground storage tank;

(e) Bodily injury or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 40 CFR 280.93.

The Surety(ies) shall become liable on this bond obligation only when the Principal has failed to fulfill the conditions described above.

Upon notification by [the Director of the implementing agency] that the Principal has failed to ["take corrective action, in accordance with 40 CFR part 280, subpart F and the Director's instructions," and/or "compensate injured third parties"] as guaranteed by this bond, the Surety(ies) shall either perform ["corrective action in accordance with 40 CFR part 280 and the Director's instructions," and/or "third-party liability compensation"] or place funds in an amount up to the annual aggregate penal sum into the standby trust fund as directed by [the Regional Administrator or the Director] under 40 CFR 280.108.

Upon notification by [the Director] that the Principal has failed to provide alternate financial assurance within 60 days after the date the notice of cancellation is received by the Principal from the Surety(ies) and that [the Director] has determined or suspects that a release has occurred, the Surety(ies) shall place funds in an amount not exceeding the annual aggregate penal sum into the standby trust fund as directed by [the Director] under 40 CFR 280.108.

The Surety(ies) hereby waive(s) notification of amendments to applicable laws, statutes, rules, and regulations and agrees that no such amendment shall in any way alleviate its (their) obligation on this bond.

The liability of the Surety(ies) shall not be discharged by any payment or succession of payments hereunder, unless and until such payment or payments shall amount in the annual aggregate to the penal sum shown on the face of the bond, but in no event shall the obligation of the Surety(ies) hereunder exceed the amount of said annual aggregate penal sum.

The Surety(ies) may cancel the bond by sending notice of cancellation by certified mail to the Principal, provided, however, that cancellation shall not occur during the 120 days beginning on the date of

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receipt of the notice of cancellation by the Principal, as evidenced by the return receipt.

The Principal may terminate this bond by sending written notice to the Surety(ies).

In Witness Thereof, the Principal and Surety(ies) have executed this Bond and have affixed their seals on the date set forth above.

The persons whose signatures appear below hereby certify that they are authorized to execute this surety bond on behalf of the Principal and Surety(ies) and that the wording of this surety bond is identical to the wording specified in 40 CFR 280.98(b) as such regulations were constituted on the date this bond was executed.

Principal

[Signature(s)]
[Names(s)]
[Title(s)]
[Corporate seal]

Corporate Surety(ies)

[Name and address]
[State of Incorporation:
[[Liability limit: $
[[Signature(s)]
[Names(s) and title(s)]
[Corporate seal]
[For every co-surety, provide signature(s), corporate seal, and other information in the same manner as for Surety above.]
Bond premium: $

(c) Under the terms of the bond, the surety will become liable on the bond obligation when the owner or operator fails to perform as guaranteed by the bond. In all cases, the surety's liability is limited to the per-occurrence and annual aggregate penal sums.

(d) The owner or operator who uses a surety bond to satisfy the requirements of §280.93 must establish a standby trust fund when the surety bond is acquired. Under the terms of the bond, all amounts paid by the surety under the bond will be deposited directly into the standby trust fund in accordance with instructions from the Director under §280.108. This standby trust fund must meet the requirements specified in §280.103.

§280.99 Letter of credit.

(a) An owner or operator may satisfy the requirements of §280.93 by obtaining an irrevocable standby letter of credit that conforms to the requirements of this section. The issuing institution must be an entity that has the authority to issue letters of credit in each state where used and whose letter-of-credit operations are regulated and examined by a federal or state agency.

(b) The letter of credit must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

IRREVOCABLE STANDBY LETTER OF CREDIT

[Name and address of issuing institution]
[Name and address of Director(s) of state implementing agency(ies)]

Dear Sir or Madam: We hereby establish our Irrevocable Standby Letter of Credit No. -- in your favor, at the request and for the account of [owner or operator name] of [address] up to the aggregate amount of [in words] U.S. dollars ($ [insert dollar amount]), available upon presentation [insert, if more than one Director of a state implementing agency is a beneficiary, "by any one of you"] of

(1) your sight draft, bearing reference to this letter of credit, No. --, and

(2) your signed statement reading as follows: "I certify that the amount of the draft is payable persuant to regulations issued under authority of Subtitle I of the Resource Conservation and Recovery Act of 1976, as amended."

This letter of credit may be drawn on to cover [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"] arising from operating the underground storage tank(s) identified below in the amount of [in words] $[insert dollar amount] per occurrence and [in words] $ [insert dollar amount] annual aggregate:

[List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 40 CFR 280.22, or the corresponding state requirement, and the name and address of the facility.]

The letter of credit may not be drawn on to cover any of the following:

(a) Any obligation of [insert owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;

(b) Bodily injury to an employee of [insert owner or operator] arising from, and in the course of, employment by [insert owner or operator];

(c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;

(d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [insert owner or operator] that is not the direct result of a release from a petroleum underground storage tank;

(e) Bodily injury or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 40 CFR 280.93.

This letter of credit is effective as of [date] and shall expire on [date], but such expiration date shall be automatically extended for a period of [at least the length of the original term] on [expiration date] and on each successive expiration date, unless, at least 120 days before the curent expiration date, we notify [owner or operator] by certified mail that we have decided not to extend this letter of credit beyond the current expiration date. In the event that [owner or operator] is so notified, any unused portion of the credit shall be available upon presentation of your sight draft for 120 days after the date of receipt by [owner or operator], as shown on the signed return receipt.

Whenever this letter of credit is drawn on under and in compliance with the terms of this credit, we shall duly honor such draft upon presentation to us, and we shall deposit the amount of the draft directly into the standby trust fund of [owner or operator] in accordance with your instructions.

We certify that the wording of this letter of credit is identical to the wording specified in 40 CFR 280.99(b) as such regulations were constituted on the date shown immediately below.

[Signature(s) and title(s) of official(s) of issuing institution]

[Sec. 280.99(b)]

[Date]

This credit is subject to [insert "the most recent edition of the Uniform Customs and Practice for Documentary Credits, published and copyrighted by the International Chamber of Commerce," or "the Uniform Commercial Code"].

[§280.99(b) amended at 59 FR 29959, June 10, 1994]

(c) An owner or operator who uses a letter of credit to satisfy the requirements of §280.93 must also establish a standby trust fund when the letter of credit is acquired. Under the terms of the letter of credit, all amounts paid pursuant to a draft by the Director of the implementing agency will be deposited by the issuing institution directly into the standby trust fund in accordance with instructions from the Director under §280.108. This standby trust fund must meet the requirements specified in §280.103.

(d) The letter of credit must be irrevocable with a term specified by the issuing institution. The letter of credit must provide that credit be automatically renewed for the same term as the original term, unless, at least 120 days before the current expiration date, the issuing institution notifies the owner or operator by certified mail of its decision not to renew the letter of credit. Under the terms of the letter of credit, the 120 days will begin on the date when the owner or operator receives the notice, as evidenced by the return receipt.

§280.100 Use of state-required mechanism.

[§280.100 amended at 53 FR 51274, Dec. 21, 1988]

(a) For underground storage tanks located in a state that does not have an approved program, and where the state requires owners or operators of underground storage tanks to demonstrate financial responsibility for taking corrective action and/or for compensating third parties for bodily injury and property damage, an owner or operator may use a state-required financial mechanism to meet the requirements of §280.93 if the Regional Administrator determines that the state mechanism is at least equivalent to the financial mechanisms specified in this subpart.

(b) The Regional Administrator will evaluate the equivalency of a state-required mechanism principally in terms of: certainty of the availability of funds for taking corrective action and/or for compensating third parties; the amount of funds that will be made available; and the types of costs covered. The Regional Administrator may also consider other factors as is necessary.

(c) The state, an owner or operator, or any other interested party may submit to the Regional Administrator a written petition requesting that one or more of the state-required mechanisms be considered acceptable for meeting the requirements of §280.93. The submission must include copies of the appropriate state statutory and regulatory requirements and must show the amount of funds for corrective action and/or for compensating third parties assured by the mechanism(s). The Regional Administrator may require the petitioner to submit additional information as is deemed necessary to make this determination.

(d) Any petition under this section may be submitted on behalf of all of the state's underground storage tank owners and operators.

(e) The Regional Administrator will notify the petitioner of his determination regarding the mechanism's acceptability in lieu of financial mechanisms specified in this subpart. Pending this determination, the owners and operators using such mechanisms will be deemed to be in compliance with the requirements of §280.93 for underground storage tanks located in the state for the amounts and types of costs covered by such mechanisms.

§280.101 State fund or other state assurance.

(a) An owner or operator may satisfy the requirements of §280.93 for underground storage tanks located in a state, where EPA is administering the requirements of this subpart, which assures that monies will be available from a state fund or state assurance program to cover costs up to the limits specified in §280.93 or otherwise assures that such costs will be paid if the Regional Administrator determines that the state's assurance is at least equivalent to the financial mechanisms specified in this subpart.

(b) The Regional Administrator will evaluate the equivalency of a state fund or other state assurance principally in terms of: Certainty of the availability of funds for taking corrective action and/or for compensating third parties; the amount of funds that will be made available; and the types of costs covered. The Regional Administrator may also consider other factors as is necessary.

(c) The state must submit to the Regional Administrator a description of the state fund or other state assurance to be supplied as financial assurance, along with a list of the classes of underground storage tanks to which the funds may be applied. The Regional Administrator may require the state to submit additional information as is deemed necessary to make a determination regarding the acceptability of the state fund or other state assurance. Pending the determination by the Regional Administrator, the owner or operator of a covered class of USTs will be deemed to be in compliance with the requirements of §280.93 for the amounts and types of costs covered by the state fund or other state assurance.

(d) The Regional Administrator will notify the state of his determination regarding the acceptability of the state's fund or other assurance in lieu of financial mechanisms specified in this subpart. Within 60 days after the Regional Administrator notifies a state that a state fund or other state assurance is acceptable, the state must provide to each owner or operator for which it is assuming financial responsibility a letter or certificate describing the nature of the state's assumption of responsibility. The letter or certificate from the state must include, or have attached to it, the following information: the facility's name and address and the amount of funds for corrective action and/or for compensating third parties that is assured by the state. The owner or operator must maintain this letter or certificate on file as proof of financial responsibility in accordance with §280.107(b)(5).

§280.102 Trust fund.

(a) An owner or operator may satisfy the requirements of §280.93 by establishing a trust fund that conforms to the requirements of this section. The trustee must be an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a federal agency or an agency of the state in which the fund is established.

(b) The wording of the trust agreement must be identical to the wording specified in §280.103(b)(1), and must be accompa-

[Sec. 280.102(b)]

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nied by a formal certification of acknowledgement as specified in §280.103(b)(2).

(c) The trust fund, when established, must be funded for the full required amount of coverage, or funded for part of the required amount of coverage and used in combination with other mechanism(s) that provide the remaining required coverage.

(d) If the value of the trust fund is greater than the required amount of coverage, the owner or operator may submit a written request to the Director of the implementing agency for release of the excess.

(e) If other financial assurance as specified in this subpart is substituted for all or part of the trust fund, the owner or operator may submit a written request to the Director of the implementing agency for release of the excess.

(f) Within 60 days after receiving a request from the owner or operator for release of funds as specified in paragraph (d) or (e) of this section, the Director of the implementing agency will instruct the trustee to release to the owner or operator such funds as the Director specifies in writing.

§280.103 Standby trust fund.

[§280.103 amended at 53 FR 51274, Dec. 21, 1988]

(a) An owner or operator using any one of the mechanisms authorized by §§280.96, 280.98, or 280.99 must establish a standby trust fund when the mechanism is acquired. The trustee of the standby trust fund must be an entity that has the authority to act as a trustee and whose trust operations are regulated and examined by a Federal agency or an agency of the state in which the fund is established.

(b) (1) The standby trust agreement, or trust agreement, must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

TRUST AGREEMENT

Trust agreement, the "Agreement," entered into as of [date] by and between [name of the owner or operator], a [name of state] [insert "corporation," "partnership," "association," or "proprictorship"], the "Grantor," and [name of corporate trustee], [insert "Incorporated in the state of " or "a national bank"], the "Trustee."

Whereas, the United States Environmental Protection Agency, "EPA," an agency of the United States Government, has established certain regulations applicable to the Grantor, requiring that an owner or operator of an underground storage tank shall provide assurance that funds will be available when needed for corrective action and third-party compensation for bodily injury and property damage caused by sudden and nonsudden accidental releases arising from the operation of the underground storage tank. The attached Schedule A lists the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located that are covered by the standpoint trust agreement.

[Whereas, the Grantor has elected to establish [insert either "a guarantee," "surety bond," or "letter of credit"] to provide all or part of such financial assurance for the underground storage tanks identified herein and is required to establish a standby trust fund able to accept payments from the instrument (This paragraph is only applicable to the standby trust agreement.)];

Whereas, the Grantor, acting through its duly authorized officers, has selected the Trustee to be the trustee under this agreement, and the Trustee is willing to act as trustee;

Now, therefore, the Grantor and the Trustee agree as follows:

Section 1. Definitions

As used in this Agreement:

(a) The term "Grantor" means the owner or operator who enters into this Agreement and any successors or assigns of the Grantor.

(b) The term "Trustee" means the Trustee who enters into this Agreement and any successor Trustee.

Section 2. Identification of the Financial Assurance Mechanism

This Agreement pertains to the [identify the financial assurance mechanism, either a guarantee, surety bond, or letter of credit, from which the standby trust fund is established to receive payments (This paragraph is only applicable to the standby trust agreement.)].

Section 3. Establishment of Fund

The Grantor and the Trustee hereby establish a trust fund, the "Fund," for the benefit of [implementing agency]. The Grantor and the Trustee intend that no third party have access to the Fund except as herein provided. [The Fund is established initially as a standby to receive payments and shall not consist of any property.] Payments made by the provider of financial assurance pursuant to [the Director of the implementing agency's] instruction are transferred to the Trustee and are referred to as the Fund, together with all earnings and profits thereon, less any payments or distributions made by the Trustee pursuant to this Agreement. The Fund shall be held by the Trustee, IN TRUST, as hereinafter provided. The Trustee shall not be responsible nor shall it undertake any responsibility for the amount or adequacy of, nor any duty to collect from the Grantor as provider of financial assurance, any payments necessary to discharge any liability of the Grantor established by [the state implementing agency]

Section 4. Payment for ["Corrective Action" and/or Third-Party Liability Claims"]

The Trustee shall make payments from the Fund as [the Director of the implementing agency] shall direct, in writing, to provide for the payment of the costs of [insert: "taking corrective action" and/or compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"] arising from operating the tanks covered by the financial assurance mechanism identified in this Agreement.

The Fund may not be drawn upon to cover any of the following:

(a) Any obligation of [insert owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;

(b) Bodily injury to an employee of [insert owner or operator] arising from, and in the course of employment by [insert owner or operator];

(c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;

(d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [insert owner or operator] that is not the direct result of a release from a petroleum underground storage tank;

(e) Bodily injury or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 40 CFR 280.93.

The Trustee shall reimburse the Grantor, or other persons as specified by [the Director], from the Fund for corrective action expenditures and/or third-party liability claims in such amounts as [the Director] shall direct in writing. In addition, the Trustee shall refund to the Grantor such amounts as [the Director] specifies in writing. Upon refund, such funds shall no longer constitute part of the Fund as defined herein.

Section 5. Payments Comprising the Fund

Payments made to the Trustee for the Fund shall consist of cash and securities acceptable to the Trustee.

Section 6. Trustee Management

The Trustee shall invest and reinvest the principal and income of the Fund and keep the Fund invested as a single fund, without distinction between principal and income, in accordance with general investment policies and guidelines which the Grantor may communicate in writing to the Trustee from time to time, subject, however, to the provisions of this Section. In investing, reinvesting, exchanging, selling, and managing the Fund, the Trustee shall discharge his duties with respect to the trust fund solely in the interest of the beneficiaries and with the care, skill, prudence, and diligence under the circumstances then prevailing which persons of prudence, acting in a like capacity and familiar with such matters, would use in the conduct of an enterprise of a like character and with like aims; except that:

(i) Securities or other obligations of the Grantor, or any other owner or operator of the tanks, or any of their affiliates as defined in the Investment Company Act of 1940, as amended, 15 U.S.C. 80a-2(a), shall not be acquired or held, unless they are securities or other obligations of the federal or a state government;

(ii) The Trustee is authorized to invest the Fund in time or demand deposits of the Trustee, to the extent insured by an agency of the federal or state government; and

(iii) The Trustee is authorized to hold cash awaiting investment or distribution uninvested for a reasonable time and without liability for the payment of interest thereon.

Section 7. Commingling and Investment

The Trustee is expressly authorized in its discretion:

(a) To transfer from time to time any or all of the assets of the Fund to any common, commingled, or collective trust fund created by the Trustee in which the Fund is eligible to participate, subject to all of the provisions thereof, to be commingled with the assets of other trusts participating therein; and

(b) To purchase shares in any investment company registered under the Investment Company Act of 1940, 15 U.S.C. 80a-1 et seq., including one which may be created, managed, underwritten, or to which investment advice is rendered or the shares of which are sold by the Trustee. The Trustee may vote such shares in its discretion.

Section 8. Express Powers of Trustee

Without in any way limiting the powers and discretions conferred upon the Trustee by the other provisions of this Agreement or by law, the Trustee is expressly authorized and empowered:

(a) To sell, exchange, convey, transfer, or otherwise dispose of any property held by it, by public or private sale. No person dealing with the Trustee shall be bound to see to the application of the purchase money or to inquire into the validity or expediency of any such sale or other disposition;

(b) To make, execute, acknowledge, and deliver any and all documents of transfer and conveyance and any and all other instruments that may be necessary or appropriate to carry out the powers herein granted;

(c) To register any securities held in the Fund in its own name or in the name of a nominee and to hold any security in bearer form or in book entry, or to combine certificates representing such securities with certificates of the same issue held by the Trustee in other fiduciary capacities, or to deposit or arrange for the deposit of such securities in a qualified central depository even though, when so deposited, such securities may be merged and held in bulk in the name of the nominee of such depository with other securities deposited therein by another person, or to deposit or arrange for the deposit of any securities issued by the United States Government, or any agency or instrumentality thereof, with a Federal Reserve bank, but the books and records of the Trustee shall at all times show that all such securities are part of the Fund;

(d) To deposit any cash in the Fund in interest-bearing accounts maintained or savings certificates issued by the Trustee, in its separate corporate capacity, or in any other banking institution affiliated with the Trustee, to the extent insured by an agency of the federal or state government; and

(e) To compromise or otherwise adjust all claims in favor of or against the Fund.

Section 9. Taxes and Expenses

All taxes of any kind that may be assessed or levied against or in respect of the Fund and all brokerage commissions incurred by the Fund shall be paid from the Fund. All other expenses incurred by the Trustee in connection with the administration of this Trust, including fees for legal services rendered to the Trustee, the compensation of the Trustee to the extent not paid directly by the Grantor, and all other proper charges and disbursements of the Trustee shall be paid from the Fund.

Section 10. Advice of Counsel

The Trustee may from time to time consult with counsel, who may be counsel to the Grantor, with respect to any questions arising as to the construction of this Agreement or any action to be taken hereunder. The Trustee shall be fully protected, to the extent permitted by law, in acting upon the advice of counsel.

Section 11. Trustee Compensation

The Trustee shall be entitled to reasonable compensation for its services as agreed upon in writing from time to time with the Grantor.

Section 12. Successor Trustee

The Trustee may resign or the Grantor may replace the Trustee, but such resignation or replacement shall not be effective until the Grantor has appointed a successor trustee and this successor accepts the appointment. The successor trustee shall have the same powers and duties as those conferred upon the Trustee hereunder. Upon the successor trustee's acceptance of the appointment, the Trustee

[Sec. 280.103(b)(1)]

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shall assign, transfer, and pay over to the successor trustee the funds and properties then constituting the Fund. If for any reason the Grantor cannot or does not act in the event of the resignation of the Trustee, the Trustee may apply to a court of competent jurisdiction for the appointment of a successor trustee or for instructions. The successor trustee shall specify the date on which it assumes administration of the trust in writing sent to the Grantor and the present Trustee by certified mail 10 days before such change becomes effective. Any expenses incurred by the Trustee as a result of any of the acts contemplated by this Section shall be paid as provided in Section 9.

Section 13. Instructions to the Trustee

All orders, requests, and instructions by the Grantor to the Trustee shall be in writing, signed by such persons as are designated in the attached Schedule B or such other designees as the Grantor may designate by amendment to Schedule B. The Trustee shall be fully protected in acting without inquiry in accordance with the Grantor's orders, requests, and instructions. All orders, requests, and instructions by [the Director of the implementing agency] to the Trustee shall be in writing, signed by [the Director], and the Trustee shall act and shall be fully protected in acting in accordance with such orders, requests, and instructions. The Trustee shall have the right to assume, in the absence of written notice to the contrary, that no event constituting a change or a termination of the authority of any person to act on behalf of the Grantor or [the director] hereunder has occurred. The Trustee shall have no duty to act in the absence of such orders, requests, and instructions from the Grantor and/or [the Director], except as provided for herein.

Section 14. Amendment of Agreement

This Agreement may be amended by an instrument in writing executed by the Grantor and the Trustee, or by the Trustee and [the Director of the implementing agency] if the Grantor ceases to exist.

Section 15. Irrevocability and Termination

Subject to the right of the parties to amend this Agreement as provided in Section 14, this Trust shall be irrevocable and shall continue until terminated at the written direction of the Grantor and the Trustee, or by the Trustee and [the Director of the implementing agency], if the Grantor ceases to exist. Upon termination of the Trust, all remaining trust property, less final trust administration expenses, shall be delivered to the Grantor.

Section 16. Immunity and Indemnification

The Trustee shall not incur personal liability of any nature in connection with any act or omission, made in good faith, in the administration of this Trust, or in carrying out any directions by the Grantor or [the Director of the implementing agency] issued in accordance with this Agreement. The Trustee shall be indemnified and saved harmless by the Grantor, from and against any personal liability to which the Trustee may be subjected by reason of any act or conduct in its official capacity, including all expenses reasonably incurred in its defense in the event the Grantor fails to provide such defense.

Section 17. Choice of Law

This Agreement shall be administered, construed, and enforced according to the laws of the state of [insert name of state], or the Comptroller of the Currency in the case of National Association banks.

Section 18. Interpretation

As used in this Agreement, words in the singular include the plural and words in the plural include the singular. The descriptive headings for each section of this Agreement shall not affect the interpretation or the legal efficacy of this Agreement.

In Witness whereof the parties have caused this Agreement to be executed by their respective officers duly authorized and their corporate seals (if applicable) to be hereunto affixed and attested as of the date first above written. The parties below certify that the wording of this Agreement is identical to the wording specified in 40 CFR 280.103(b)(1) as such regulations were constituted on the date written above.

[Signature of Grantor]
[Name of the Grantor]
[Title]
Attest:
[Signature of Trustee]
[Name of the Trustee]
[Title]
[Seal]
[Signature of Witness]
[Name of the Witness]
[Title]
[Seal]

(2) The standby trust agreement, or trust agreement must be accompanied by a formal certification of acknowledgement similar to the following. State requirements may differ on the proper content of this acknowledgment.

State of
County of

On this [date], before me personally came [owner or operator] to me known, who, being by me duly sworn, did depose and say that she/he resides at [address], that she/he is [title] of [corporation], the corporation described in and which executed the above instrument; that she/he knows the seal of said corporation; that the seal affixed to such instrument is such corporate seal; that it was so affixed by order of the Board of Directors of said corporation; and that she/he signed her/his name thereto by like order.

[Signature of Notary Public]
[Name of Notary Public]

(c) The Director of the implementing agency will instruct the trustee to refund the balance of the standby trust fund to the provider of financial assurance if the Director determines that no additional corrective action costs or third-party liability claims will occur as a result of a release covered by the financial assurance mechanism for which the standby trust fund was established.

(d) An owner or operator may establish one trust fund as the depository mechanism for all funds assured in compliance with this rule.

§280.104 Local government bond rating test.

[New §280.104 added at 58 FR 9050, February 18, 1993]

(a) A general purpose local government owner or operator and/or local government serving as a guarantor may satisfy the requirements of §280.93 by having a currently outstanding issue or issues of general obligation bonds of $1 million or more, excluding refunded obligations, with a Moody's rating of Aaa, Aa, A, or Baa, or a Standard & Poor's rating of AAA, AA, A, or BBB. Where a local government has multiple outstanding issues, or where a local government's bonds are rated by both Moody's and Standard and Poor's, the lowest rating must be used to

determine eligibility. Bonds that are backed by credit enhancement other than municipal bond insurance may not be considered in determining the amount of applicable bonds outstanding.

(b) A local government owner or operator or local government serving as a guarantor that is not a general-purpose local government and does not have the legal authority to issue general obligation bonds may satisfy the requirements of §280.93 by having a currently outstanding issue or issues of revenue bonds of $1 million or more, excluding refunded issues and by also having a Moody's rating of Aaa, A, A, or Baa, or a Standard & Poor's rating of AAA, AA, A, or BBB as the lowest rating for any rated revenue bond issued by the local government. Where bonds are rated by both Moody's and Standard & Poor's, the lower rating for each bond must be used to determine eligibility. Bonds that are backed by credit enhancement may not be considered in determining the amount of applicable bonds outstanding.

(c) The local government owner or operator and/or guarantor must maintain a copy of its bond rating published within the last 12 months by Moody's or Standard & Poor's.

(d) To demonstrate that it meets the local government bond rating test, the chief financial officer of a general purpose local government owner or operator and/or guarantor must sign a letter worded exactly as follows, except that the instructions in brackets are to be replaced by the relevant information and the brackets deleted:

Letter from Chief Financial Officer

I am the chief financial officer of [insert: name and address of local government owner or operator, or guarantor]. This letter is in support of the use of the bond rating test to demonstrate financial responsibility for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage"] caused by [insert: "sudden accidental releases" and/or "nonsudden accidental releases"] in the amount of at least [insert: dollar amount] per occurrence and [insert: dollar amount] annual aggregate arising from operating (an) underground storage tank(s).

Underground storage tanks at the following facilities are assured by this bond rating test: [List for each facility: the name and address of the facility where tanks are assured by the bond rating test].

The details of the issue date, maturity, outstanding amount, bond rating, and bond rating agency of all outstanding bond issues that are being used by [name of local government owner or operator, or guarantor] to demonstrate financial responsibility are as follows: [complete table]

Issue date	Maturity date	Outstanding amount	Bond rating	Rating agency
				[Moody's or Standard & Poor's]

The total outstanding obligation of [insert amount], excluding refunded bond issues, exceeds the minimum amount of $1 million. All outstanding general obligation bonds issued by this government that have been rated by Moody's or Standard &Poor's are rated as at least investment grade (Moody's Baa or Standard & Poor's BBB) based on the most recent ratings published within the last 12 months. Neither rating service has provided notification within the last 12 months of downgrading of bond ratings below investment grade or of withdrawal of bond rating other than for repayment of outstanding bond issues.

I hereby certify that the wording of this letter is identical to the wording specified in 40 CFR Part 280.104(d) as such regulations were constituted on the date shown immediately below.

(e) To demonstrate that it meets the local government bond rating test, the chief financial officer of local government owner or operator and/or guarantor other than a general purpose government must sign a letter worded exactly as follows, except that the instructions in brackets are to be replaced by the relevant information and the brackets deleted:

Letter from Chief Financial Officer

I am the chief financial officer of [insert: name and address of local government owner or operator, or guarantor]. This letter is in support of the use of the bond rating test to demonstrate financial responsibility for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage"] caused by [insert : "sudden accidental releases" and/or "nonsudden accidental releases"] in the amount of at least [insert: dollar amount] per occurrence and [insert: dollar amount] annual aggregate arising from operating (an) underground storage tank(s). This local government is not organized to provide general governmental services and does not have the legal authority under state law or constitutional provisions to issue general obligation debt.

Underground storage tanks at the following facilities are assured by this bond rating test: [List for each facility: the name and address of the facility where tanks are assured by the bond rating test].

The details of the issue date, maturity, outstanding amount, bond rating, and bond rating agency of all outstanding revenue bond issues that are being used by [name of local government owner or operator, or guarantor] to demonstrate financial responsibility are as follows: [complete table]

Issue date	Maturity date	Outstanding amount	Bond rating	Rating agency
				[Moody's or Standard & Poor's]

[Sec. 280.104(e)]

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Issue date	Maturity date	Outstanding amount	Bond rating	Rating agency

The total outstanding obligation of [insert amount], excluding refunded bond issues, exceeds the minimum amount of $1 million. All outstanding revenue bonds issued by this government that have been rated by Moody's or Standard & Poor's are rated as at least investment grade (Moody's Baa or Standard & Poor's BBB) based on the most recent ratings published within the last 12 months. The revenue bonds listed are not backed by third-party credit enhancement or are insured by a municipal bond insurance company. Neither rating service has provided notification within the last 12 months of downgrading of bond ratings below investment grade or of withdrawal of bond rating other than for repayment of outstanding bond issues.

I hereby certify that the wording of this letter is identical to the wording specified in 40 CFR Part 280.104(e) as such regulations were constituted on the date shown immediately below.

(f) The Director of the implementing agency may require reports of financial condition at any time from the local government owner or operator, and/or local government guarantor. If the Director finds, on the basis of such reports or other information, that the local government owner or operator, and/or guarantor, no longer meets the local government bond rating test requirements of §280.104, the local government owner or operator must obtain alternative coverage within 30 days after notification of such a finding.

(g) If a local government owner or operator using the bond rating test to provide financial assurance finds that it no longer meets the bond rating test requirements, the local government owner or operator must obtain alternative coverage within 150 days of the change in status.

§280.105 Local government financial test.

[New §280.105 added at 58 FR 9050, Feb. 18, 1993]

(a) A local government owner or operator may satisfy the requirements of §280.93 by passing the financial test specified in this section. To be eligible to use the financial test, the local government owner or operator must have the ability and authority to assess and levy taxes or to freely establish fees and charges. To pass the local government financial test, the owner or operator must meet the criteria of paragraphs (b)(2) and (b)(3) of this section based on year-end financial statements for the latest completed fiscal year.

(b) (1) The local government owner or operator must have the following information available, as shown in the year-end financial statements for the latest completed fiscal year:

(i) *Total revenues:* Consists of the sum of general fund operating and non-operating revenues including net local taxes, licenses and permits, fines and forfeitures, revenues from use of money and property, charges for services, investment earnings, sales (property, publications, etc.), intergovernmental revenues (restricted and unrestricted), and total revenues from all other governmental funds including enterprise, debt service, capital projects, and special revenues, but excluding revenues to funds held in a trust or agency capacity. For purposes of this test, the calculation of total revenues shall exclude all transfers between funds under the direct control of the local government using the financial test (interfund transfers), liquidation of investments, and issuance of debt.

(ii) *Total expenditures:* Consists of the sum of general fund operating and non-operating expenditures including public safety, public utilities, transportation, public works, environmental protection, cultural and recreational, community development, revenue sharing, employee benefits and compensation, office management, planning and zoning, capital projects, interest payments on debt, payments for retirement of debt principal, and total expenditures from all other governmental funds including enterprise, debt service, capital projects, and special revenues. For purposes of this test, the calculation of total expenditures shall exclude all transfers between funds under the direct control of the local government using the financial test (interfund transfers).

(iii) *Local revenues:* Consists of total revenues (as defined in paragraph (b)(1)(i) of this section) minus the sum of all transfers from other governmental entities, including all monies received from Federal, state, or local government sources.

(iv) *Debt service:* Consists of the sum of all interest and principal payments on all long-term credit obligations and all interest-bearing short-term credit obligations. Includes interest and principal payments on general obligation bonds, revenue bonds, notes, mortgages, judgments, and interest bearing warrants. Excludes payments on non-interest-bearing short-term obligations, interfund obligations, amounts owed in a trust or agency capacity, and advances and contingent loans from other governments.

(v) *Total funds:* Consists of the sum of cash and investment securities from all funds, including general, enterprise, debt service, capital projects, and special revenue funds, but excluding employee retirement funds, at the end of the local government's financial reporting year. Includes Federal securities, Federal agency securities, state and local government securities, and other securities such as bonds, notes and mortgages. For purposes of this test, the calculation of total funds shall exclude agency funds, private trust funds, accounts receivable, value of real property, and other non-security assets.

(vi) *Population* consists of the number of people in the area served by the local government.

(2) The local government's year-end financial statements, if independently audited, cannot include an adverse auditor's opinion or a disclaimer of opinion. The local government cannot have outstanding issues of general obligation or revenue bonds that are rated as less than investment grade.

(3) The local government owner or operator must have a letter signed by the chief financial officer worded as specified in paragraph (c) of this section.

(c) To demonstrate that it meets the financial test under paragraph (b) of this section, the chief financial officer of the local government owner or operator, must sign, within 120 days of the close of each financial reporting year, as defined by the twelve-month period for which financial statements used to support the financial

[Sec. 280.105(c)]

test are prepared, a letter worded exactly as follows, except that the instructions in brackets are to be replaced by the relevant information and the brackets deleted:

Letter From Chief Financial Officer

I am the chief financial officer of [insert: name and address of the owner or operator]. This letter is in support of the use of the local government financial test to demonstrate financial responsibility for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage"] caused by [insert: "sudden accidental releases" and/or "nonsudden accidental releases"] in the amount of at least [insert: dollar amount] per occurrence and [insert: dollar amount] annual aggregate arising from operating [an] underground storage tank[s].

Underground storage tanks at the following facilities are assured by this financial test [List for each facility: the name and address of the facility where tanks assured by this financial test are located. If separate mechanisms or combinations of mechanisms are being used to assure any of the tanks at this facility, list each tank assured by this financial test by the tank identification number provided in the notification submitted pursuant to 40 CFR Part 280.22 or the corresponding state requirements.]

This owner or operator has not received an adverse opinion, or a disclaimer of opinion from an independent auditor on its financial statements for the latest completed fiscal year. Any outstanding issues of general obligation or revenue bonds, if rated, have a Moody's rating of Aaa, Aa, A, or Baa or a Standard and Poor's rating of AAA, AA, A, or BBB; if rated by both firms, the bonds have a Moody's rating of Aaa, Aa, A, or Baa and a Standard and Poor's rating of AAA, AA, A, or BBB.

Worksheet for Municipal Financial Test

Part I: Basic Information

1. Total Revenues

a. Revenues (dollars) _____

Value of revenues excludes liquidation of investments and issuance of debt. Value includes all general fund operating and non-operating revenues, as well as all revenues from all other governmental funds including enterprise, debt service, capital projects, and special revenues, but excluding revenues to funds held in a trust or agency capacity.

b. Subtract interfund transfers (dollars)_____

c. Total Revenues (dollars)_____

2. Total Expenditures

a. Expenditures (dollars) _____

Value consists of the sum of general fund operating and non-operating expenditures including interest payments on debt, payments for retirement of debt principal, and total expenditures from all other governmental funds including enterprise, debt service, capital projects, and special revenues.

b. Subtract interfund transfers (dollars)_____

c. Total Expenditures (dollars)_____

3. Local Revenues

a. Total Revenues (from 1c) (dollars) _____

b. Subtract total intergovernmental transfers (dollars)_____

c. Local Revenues (dollars)_____

4. Debt Service

a. Interest and fiscal charges (dollars)_____

b. Add debt retirement (dollars)_____

c. Total Debt Service (dollars)_____

5. Total Funds (Dollars)_____

(Sum of amounts held as cash and investment securities from all funds, excluding amounts held for employee retirement funds, agency funds, and trust funds)

6. Population (Persons)_____

Part II: Application of Test

7. Total Revenues to Population

a. Total Revenues (from 1c)_____

b. Population (from 6)_____

c. Divide 7a by 7b _____

d. Subtract 417_____

e. Divide by 5,212_____

f. Multiply by 4.095_____

8. Total Expenses to Population

a. Total Expenses (from 2c)_____

b. Population (from 6)_____

c. Divide 8a by 8b _____

d. Subtract 524 _____

e. Divide by 5,401_____

f. Multiply by 4.095_____

9. Local Revenues to Total Revenues

a. Local Revenues (from 3c)_____

b. Total Revenues (from 1c)_____

c. Divide 9a by 9b _____

d. Subtract .695_____

e. Divide by .205_____

f. Multiply by 2.840 _____

10. Debt Service to Population

a. Debt Service (from 4d) _____

b. Population (from 6)_____

c. Divide 10a by 10b _____

d. Subtract 51 _____

e. Divide by 1,038_____

f. Multiply by -1.866_____

11. Debt Service to Total Revenues

a. Debt Service (from 4d)_____

b. Total Revenues (from 1c)_____

c. Divide 11a by 11b _____

d. Subtract .068 _____

e. Divide by .259 _____

f. Multiply by -3.533 _____

12. Total Revenues to Total Expenses

a. Total Revenues (from 1c)_____

b. Total Expenses (from 2c)_____

c. Divide 12a by 12b_____

d. Subtract .910 _____

e. Divide by .899 _____

f. Multiply by 3.458 _____

13. Funds Balance to Total Revenues

a. Total Funds (from 5) _____

b. Total Revenues (from 1c)_____

c. Divide 13a by 13b _____

d. Subtract .891 _____

e. Divide by 9.156_____

f. Multiply by 3.270 _____

14. Funds Balance to Total Expenses

a. Total Funds (from 5)_____

b. Total Expenses (from 2c)_____

c. Divide 14a by 14b_____

d. Subtract .866 _____

e. Divide by 6.409 _____

f. Multiply by 3.270 _____

[Sec. 280.105(c)]

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15. Total Funds to Population

_____

a. Total Funds (from 5) _____

b. Population (from 6)_____

c. Divide 15a by 15b _____

d. Subtract 270 _____

e. Divide by 4,548 _____

f. Multiply by 1.866 _____

16. Add 7f + 8f + 9f + 10f + 11f + 12f + 13f + 14f + 15f + 4.937_____

I hereby certify that the financial index shown on line 16 of the worksheet is greater than zero and that the wording of this letter is identical to the wording specified in 40 CFR Part 280.105(c) as such regulations were constituted on the date shown immediately below.

[Date]

[Signature]

[Name]

[Title]

(d) If a local government owner or operator using the test to provide financial assurance finds that it no longer meets the requirements of the financial test based on the year-end financial statements, the owner or operator must obtain alternative coverage within 150 days of the end of the year for which financial statements have been prepared.

(e) The Director of the implementing agency may require reports of financial condition at any time from the local government owner or operator. If the Director finds, on the basis of such reports or other information, that the local government owner or operator no longer meets the financial test requirements of § 280.105 (b) and (c), the owner or operator must obtain alternate coverage within 30 days after notification of such a finding.

(f) If the local government owner or operator fails to obtain alternate assurance within 150 days of finding that it no longer meets the requirements of the financial test based on the year-end financial statements or within 30 days of notification by the Director of the implementing agency that it no longer meets the requirements of the financial test, the owner or operator must notify the Director of such failure within 10 days.

§280.106 Local government guarantee.

[New §280.106 added at 58 FR 9050, Feb. 18, 1993]

(a) A local government owner or operator may satisfy the requirements of §280.93 by obtaining a guarantee that conforms to the requirements of this section. The guarantor must be either the state in which the local government owner or operator is located or a local government having a "substantial governmental relationship" with the owner and operator and issuing the guarantee as an act incident to that relationship. A local government acting as the guarantor must:

(1) demonstrate that it meets the bond rating test requirement of §280.104 and deliver a copy of the chief financial officer's letter as contained in §280.104(c) to the local government owner or operator; or

(2) demonstrate that it meets the worksheet test requirements of §280.105 and deliver a copy of the chief financial officer's letter as contained in §280.105(c) to the local government owner or operator; or

(3) demonstrate that it meets the local government fund requirements of §280.107(a), §280.107(b), or §280.107(c) and deliver a copy of the chief financial officer's letter as contained in §280.107 to the local government owner or operator.

(b) If the local government guarantor is unable to demonstrate financial assurance under any of §§280.104, 280.105, 280.107(a), 280.107(b), or 280.107(c), at the end of the financial reporting year, the guarantor shall send by certified mail, before cancellation or non-renewal of the guarantee, notice to the owner or operator. The guarantee will terminate no less than 120 days after the date the owner or operator receives the notification, as evidenced by the return receipt. The owner or operator must obtain alternative coverage as specified in §280.114(c).

(c) The guarantee agreement must be worded as specified in paragraph (d) or (e) of this section, depending on which of the following alternative guarantee arrangements is selected:

(1) If, in the default or incapacity of the owner or operator, the guarantor guarantees to fund a standby trust as directed by the Director of the implementing agency, the guarantee shall be worded as specified in paragraph (d) of this section.

(2) If, in the default or incapacity of the owner or operator, the guarantor guarantees to make payments as directed by the Director of the implementing agency for taking corrective action or compensating third parties for bodily injury and property damage, the guarantee shall be worded as specified in paragraph (e) of this section.

(d) If the guarantor is a state, the local government guarantee with standby trust must be worded exactly as follows, except that instructions in brackets are to be replaced with relevant information and the brackets deleted:

Local Government Guarantee With Standby Trust Made by a State

Guarantee made this [date] by [name of state], herein referred to as guarantor, to [the state implementing agency] and to any and all third parties, and obliges, on behalf of [local government owner or operator].

Recitals

(1) Guarantor is a state.

(2) [Local government owner or operator] owns or operates the following underground storage tank(s) covered by this guarantee: [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 40 CFR Part 280 or the corresponding state requirement, and the name and address of the facility.] This guarantee satisfies 40 CFR Part 280, Subpart H requirements for assuring funding for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the above-identified underground storage tank(s) in the amount of [insert dollar amount] per occurrence and [insert dollar amount] annual aggregate.

[Sec. 280.106(d)]

(3) Guarantor guarantees to [implementing agency] and to any and all third parties that:

In the event that [local government owner or operator] fails to provide alternative coverage within 60 days after receipt of a notice of cancellation of this guarantee and the [Director of the implementing agency] has determined or suspects that a release has occurred at an underground storage tank covered by this guarantee, the guarantor, upon instructions from the [Director] shall fund a standby trust fund in accordance with the provisions of 40 CFR part 280.112, in an amount not to exceed the coverage limits specified above.

In the event that the [Director] determines that [local government owner or operator] has failed to perform corrective action for releases arising out of the operation of the above-identified tank(s) in accordance with 40 CFR part 280, subpart F, the guarantor upon written instructions from the [Director] shall fund a standby trust fund in accordance with the provisions of 40 CFR part 280.112, in an amount not to exceed the coverage limits specified above.

If [owner or operator] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by ["sudden" and/or "nonsudden"] accidental releases arising from the operation of the above-identified tank(s), or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor, upon written instructions from the [Director], shall fund a standby trust in accordance with the provisions of 40 CFR part 280.112 to satisfy such judgment(s), award(s), or settlement agreement(s) up to the limits of coverage specified above.

(4) Guarantor agrees to notify [owner or operator] by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code naming guarantor as debtor, within 10 days after commencement of the proceeding.

(5) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [owner or operator] pursuant to 40 CFR part 280.

(6) Guarantor agrees to remain bound under this guarantee for so long as [local government owner or operator] must comply with the applicable financial responsibility requirements of 40 CFR part 280, Subpart H for the above identified tank(s), except that guarantor may cancel this guarantee by sending notice by certified mail to [owner or operator], such cancellation to become effective no earlier than 120 days after receipt of such notice by [owner or operator], as evidenced by the return receipt.

(7) The guarantor's obligation does not apply to any of the following:

(a) Any obligation of [local government owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;

(b) Bodily injury to an employee of [insert: local government owner or operator] arising from, and in the course of, employment by [insert: local government owner or operator];

(c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;

(d) Property damage to any property owned, rented, loaded to, in the care, custody, or control of, or occupied by [insert: local government owner or operator] that is not the direct result of a release from a petroleum underground storage tank;

(e) Bodily damage or property damage for which [insert owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 40 CFR part 280.93.

(8) Guarantor expressly waives notice of acceptance of this guarantee by [the implementing agency], by any or all third parties, or by [local government owner or operator],

I hereby certify that the wording of this guarantee is identical to the wording specified in 40 CFR part 280.106(d) as such regulations were constituted on the effective date shown immediately below.

Effective date: _____

[Name of guarantor]

[Authorized signature for guarantor]

[Name of person signing]

[Title of person signing]

Signature of witness or notary:

_____

If the guarantor is a local government, the local government guarantee with standby trust must be worded exactly as follows, except that instructions in brackets are to be replaced with relevant information and the brackets deleted:

Local Government Guarantee With Standby Trust Made by a Local Government

Guarantee made this [date] by [name of guaranteeing entity], a local government organized under the laws of [name of state], herein referred to as guarantor, to [the state implementing agency] and to any and all third parties, and obliges, on behalf of [local government owner or operator].

Recitals

(1) Guarantor meets or exceeds [select one: the local government bond rating test requirements of 40 CFR Part 280.104, the local government financial test requirements of 40 CFR Part 280.105, or the local government fund under 40 CFR Part 280.107(a), 280.107(b), or 280.107(c)].

(2) [Local government owner or operator] owns or operates the following underground storage tank(s) covered by this guarantee: [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 40 CFR Part 280 or the corresponding state requirement, and the name and address of the facility.] This guarantee satisfies 40 CFR Part 280, Subpart H requirements for assuring funding for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the above-identified underground storage tank(s) in the amount of [insert dollar amount] per occurrence and [insert: dollar amount] annual aggregate.

(3) Incident to our substantial governmental relationship with [local government owner or operator], guarantor guar-

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antees to [implementing agency] and to any and all third parties that:

In the event that [local government owner or operator] fails to provide alternative coverage within 60 days after receipt of a notice of cancellation of this guarantee and the [Director of the implementing agency] has determined or suspects that a release has occurred at an underground storage tank covered by this guarantee, the guarantor, upon instructions from the [Director] shall fund a standby trust fund in accordance with the provisions of 40 CFR Part 280.112, in an amount not to exceed the coverage limits specified above.

In the event that the [Director] determines that [local government owner or operator] has failed to perform corrective action for releases arising out of the operation of the above-identified tank(s) in accordance with 40 CFR Part 280, Subpart F, the guarantor upon written instructions from the [Director] shall fund a standby trust fund in accordance with the provisions of 40 CFR Part 280.112, in an amount not to exceed the coverage limits specified above.

If [owner or operator] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by ["sudden" and/or "nonsudden"] accidental releases arising from the operation of the above-identified tank(s), or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor, upon written instructions from the [Director], shall fund a standby trust in accordance with the provisions of 40 CFR Part 280.112 to satisfy such judgment(s), award(s), or settlement agreement(s) up to the limits of coverage specified above.

(4) Guarantor agrees that, if at the end of any fiscal year before cancellation of this guarantee, the guarantor fails to meet or exceed the requirements of the financial responsibility mechanism specified in paragraph (1), guarantor shall send within 120 days of such failure, by certified mail, notice to [local government owner or operator], as evidenced by the return receipt.

(5) Guarantor agrees to notify [owner or operator] by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code naming guarantor as debtor, within 10 days after commencement of the proceeding.

(6) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [owner or operator] pursuant to 40 CFR Part 280.

(7) Guarantor agrees to remain bound under this guarantee for so long as [local government owner or operator] must comply with the applicable financial responsibility requirements of 40 CFR Part 280, Subpart H for the above identified tank(s), except that guarantor may cancel this guarantee by sending notice by certified mail to [owner or operator], such cancellation to become effective no earlier than 120 days after receipt of such notice by [owner or operator], as evidenced by the return receipt.

(8) The guarantor's obligation does not apply to any of the following:

(a) Any obligation of [local government owner or operator] under a workers' compensation, disability benefits, or unemployment compensation law or other similar law;

(b) Bodily injury to an employee of [insert: local government owner or operator] arising from, and in the course of, employment by [insert: local government owner or operator];

(c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;

(d) Property damage to any property owned, rented, loaned to, in the care, custody, or control of, or occupied by [insert: local government owner or operator] that is not the direct result of a release from a petroleum underground storage tank;

(e) Bodily damage or property damage for which [insert: owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 40 CFR Part 280.93.

(9) Guarantor expressly waives notice of acceptance of this guarantee by [the implementing agency], by any or all third parties, or by [local government owner or operator].

I hereby certify that the wording of this guarantee is identical to the wording specified in 40 CFR Part 280.106(d) as such regulations were constituted on the effective date shown immediately below.

Effective date: _____

[Name of guarantor]

[Authorized signature for guarantor]

[Name of person signing]

[Title of person signing]

Signature of witness or notary:

_____

(e) If the guarantor is a state, the local government guarantee without standby trust must be worded exactly as follows, except that instructions in brackets are to be replaced with relevant information and the brackets deleted:

Local Government Guarantee Without Standby Trust Made by a State

Guarantee made this [date] by [name of state], herein referred to as guarantor, to [the state implementing agency] and to any and all third parties, and obliges, on behalf of [local government owner or operator].

Recitals

(1) Guarantor is a state.

(2) [Local government owner or operator] owns or operates the following underground storage tank(s) covered by this guarantee: [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 40 CFR Part 280 or the corresponding state requirement, and the name and address of the facility.] This guarantee satisfies 40 CFR Part 280, Subpart H requirements for assuring funding for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the above-identified underground storage tank(s) in the amount of [insert: dollar amount] per occurrence and [insert: dollar amount] annual aggregate.

(3) Guarantor guarantees to [implementing agency] and to any and all third parties and obliges that:

[Sec. 280.106(e)]

In the event that [local government owner or operator] fails to provide alternative coverage within 60 days after receipt of a notice of cancellation of this guarantee and the [Director of the implementing agency] has determined or suspects that a release has occurred at an underground storage tank covered by this guarantee, the guarantor, upon written instructions from the [Director] shall make funds available to pay for corrective actions and compensate third parties for bodily injury and property damage in an amount not to exceed the coverage limits specified above.

In the event that the [Director] determines that [local government owner or operator] has failed to perform corrective action for releases arising out of the operation of the above-identified tank(s) in accordance with 40 CFR Part 280, Subpart F, the guarantor upon written instructions from the [Director] shall make funds available to pay for corrective actions in an amount not to exceed the coverage limits specified above.

If [owner or operator] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by ["sudden" and/or "nonsudden"] accidental releases arising from the operation of the above-identified tank(s), or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor, upon written instructions from the [Director], shall make funds available to compensate third parties for bodily injury and property damage in an amount not to exceed the coverage limits specified above.

(4) Guarantor agrees to notify [owner or operator] by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code naming guarantor as debtor, within 10 days after commencement of the proceeding.

(5) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [owner or operator] pursuant to 40 CFR Part 280.

(6) Guarantor agrees to remain bound under this guarantee for so long as [local government owner or operator] must comply with the applicable financial responsibility requirements of 40 CFR Part 280, Subpart H for the above identified tank(s), except that guarantor may cancel this guarantee by sending notice by certified mail to [owner or operator], such cancellation to become effective no earlier than 120 days after receipt of such notice by [owner or operator], as evidenced by the return receipt. If notified of a probable release, the guarantor agrees to remain bound to the terms of this guarantee for all charges arising from the release, up to the coverage limits specified above, notwithstanding the cancellation of the guarantee with respect to future releases.

(7) The guarantor's obligation does not apply to any of the following:

(a) Any obligation of [local government owner or operator] under a workers' compensation disability benefits, or unemployment compensation law or other similar law;

(b) Bodily injury to an employee of [insert local government owner or operator] arising from, and in the course of, employment by [insert: local government owner or operator];

(c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;

(d) Property damage to any property owned, rented, loaded to, in the care, custody, or control of, or occupied by [insert: local government owner or operator] that is not the direct result of a release from a petroleum underground storage tank;

(e) Bodily damage or property damage for which [insert: owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 40 CFR Part 280.93.

(8) Guarantor expressly waives notice of acceptance of this guarantee by [the implementing agency], by any or all third parties, or by [local government owner or operator].

I hereby certify that the wording of this guarantee is identical to the wording specified in 40 CFR Part 280.106(e) as such regulations were constituted on the effective date shown immediately below.

Effective date: _____;
[Name of guarantor]
[Authorized signature for guarantor]
[Name of person signing]
[Title of person signing]
Signature of witness or notary:

_____

If the guarantor is a local government, the local government guarantee without standby trust must be worded exactly as follows, except that instructions in brackets are to be replaced with relevant information and the brackets deleted:

Local Government Guarantee Without Standby Trust Made by a Local Government

Guarantee made this [date] by [name of guaranteeing entity], a local government organized under the laws of [name of state], herein referred to as guarantor, to [the state implementing agency] and to any and all third parties, and obliges, on behalf of [local government owner or operator].

Recitals

(1) Guarantor meets or exceeds [select one: the local government bond rating test requirements of 40 CFR part 280.104, the local government financial test requirements of 40 part CFR 280.105, the local government fund under 40 CFR part 280.107(a), 280.107(b), or 280.107(c).

(2) [Local government owner or operator] owns or operates the following underground storage tank(s) covered by this guarantee: [List the number of tanks at each facility and the name(s) and address(es) of the facility(ies) where the tanks are located. If more than one instrument is used to assure different tanks at any one facility, for each tank covered by this instrument, list the tank identification number provided in the notification submitted pursuant to 40 CFR Part 280 or the corresponding state requirement, and the name and address of the facility.] This guarantee satisfies 40 CFR part 280, subpart H requirements for assuring funding for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases"; if coverage is different for different tanks or locations, indicate the type of coverage applicable to each tank or location] arising from operating the above-identified underground storage tank(s) in the amount of [insert: dollar amount] per occurrence and [insert: dollar amount] annual aggregate.

[Sec. 280.106(e)]

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(3) Incident to our substantial governmental relationship with [local government owner or operator], guarantor guarantees to [implementing agency] and to any and all third parties and obliges that:

In the event that [local government owner or operator] fails to provide alternative coverage within 60 days after receipt of a notice of cancellation of this guarantee and the [Director of the implementing agency] has determined or suspects that a release has occurred at an underground storage tank covered by this guarantee, the guarantor, upon written instructions from the [Director] shall make funds available to pay for corrective actions and compensate third parties for bodily injury and property damage in an amount not to exceed the coverage limits specified above.

In the event that the [Director] determines that [local government owner or operator] has failed to perform corrective action for releases arising out of the operation of the above-identified tank(s) in accordance with 40 CFR part 280, Subpart F, the guarantor upon written instructions from the [Director] shall make funds available to pay for corrective actions in an amount not to exceed the coverage limits specified above.

If [owner or operator] fails to satisfy a judgment or award based on a determination of liability for bodily injury or property damage to third parties caused by ["sudden" and/or "nonsudden"] accidental releases arising from the operation of the above-identified tank(s), or fails to pay an amount agreed to in settlement of a claim arising from or alleged to arise from such injury or damage, the guarantor, upon written instructions from the [Director], shall make funds available to compensate third parties for bodily injury and property damage in an amount not to exceed the coverage limits specified above.

(4) Guarantor agrees that if at the end of any fiscal year before cancellation of this guarantee, the guarantor fails to meet or exceed the requirements of the financial responsibility mechanism specified in paragraph (1), guarantor shall send within 120 days of such failure, by certified mail, notice to [local government owner or operator], as evidenced by the return receipt.

(5) Guarantor agrees to notify [owner or operator] by certified mail of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code naming guarantor as debtor, within 10 days after commencement of the proceeding.

(6) Guarantor agrees to remain bound under this guarantee notwithstanding any modification or alteration of any obligation of [owner or operator] pursuant to 40 CFR part 280.

(7) Guarantor agrees to remain bound under this guarantee for so long as [local government owner or operator] must comply with the applicable financial responsibility requirements of 40 CFR Part 280, Subpart H for the above identified tank(s), except that guarantor may cancel this guarantee by sending notice by certified mail to [owner or operator], such cancellation to become effective no earlier than 120 days after receipt of such notice by [owner or operator], as evidenced by the return receipt. If notified of a probable release, the guarantor agrees to remain bound to the terms of this guarantee for all charges arising from the release, up to the coverage limits specified above, notwithstanding the cancellation of the guarantee with respect to future releases.

(8) The guarantor's obligation does not apply to any of the following:

(a) Any obligation of [local government owner or operator] under a workers' compensation disability benefits, or unemployment compensation law or other similar law;

(b) Bodily injury to an employee of [insert: local government owner or operator] arising from, and in the course of, employment by [insert: local government owner or operator];

(c) Bodily injury or property damage arising from the ownership, maintenance, use, or entrustment to others of any aircraft, motor vehicle, or watercraft;

(d) Property damage to any property owned, rented, loaded to, in the care, custody, or control of, or occupied by [insert: local government owner or operator] that is not the direct result of a release from a petroleum underground storage tank;

(e) Bodily damage or property damage for which [insert: owner or operator] is obligated to pay damages by reason of the assumption of liability in a contract or agreement other than a contract or agreement entered into to meet the requirements of 40 CFR Part 280.93.

(9) Guarantor expressly waives notice of acceptance of this guarantee by [the implementing agency], by any or all third parties, or by [local government owner or operator],

I hereby certify that the wording of this guarantee is identical to the wording specified in 40 CFR Part 280.106(e) as such regulations were constituted on the effective date shown immediately below.

Effective date:

[Name of guarantor]

[Authorized signature for guarantor]

[Name of person signing]

[Title of person signing]

Signature of witness or notary:

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§280.107 Local government fund.

[§280.107 added at 58 FR 9050, Feb. 18, 1993]

A local government owner or operator may satisfy the requirements of §280.93 by establishing a dedicated fund account that conforms to the requirements of this section. Except as specified in paragraph (b), a dedicated fund may not be commingled with other funds or otherwise used in normal operations. A dedicated fund will be considered eligible if it meets one of the following requirements:

(a) The fund is dedicated by state constitutional provision, or local government statute, charter, ordinance, or order to pay for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of petroleum underground storage tanks and is funded for the full amount of coverage required under §280.93, or funded for part of the required amount of coverage and used in combination with other mechanism(s) that provide the remaining coverage; or

(b) The fund is dedicated by state constitutional provision, or local government statute, charter, ordinance, or order as a contingency fund for general emergencies, including taking corrective action and compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of petroleum underground storage tanks, and is funded for five times the full amount of coverage required under §280.93, or funded for part of the required amount of coverage and used in combination with other mechanism(s) that provide the remaining coverage. If

[Sec. 280.107(b)]

the fund is funded for less than five times the amount of coverage required under §280.93, the amount of financial responsibility demonstrated by the fund may not exceed one-fifth the amount in the fund; or

(c) The fund is dedicated by state constitutional provision, or local government statute, charter, ordinance or order to pay for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of petroleum underground storage tanks. A payment is made to the fund once every year for seven years until the fund is fully-funded. This seven year period is hereafter referred to as the "pay-in-period." The amount of each payment must be determined by this formula:

$$\frac{TF-CF}{Y}$$

Where TF is the total required financial assurance for the owner or operator, CF is the current amount in the fund, and Y is the number of years remaining in the pay-in-period, and;

(1) The local government owner or operator has available bonding authority, approved through voter referendum (if such approval is necessary prior to the issuance of bonds), for an amount equal to the difference between the required amount of coverage and the amount held in the dedicated fund. This bonding authority shall be available for taking corrective action and for compensating third parties for bodily injury and property damage caused by accidental releases arising from the operation of petroleum underground storage tanks, or

(2) The local government owner or operator has a letter signed by the appropriate state attorney general stating that the use of the bonding authority will not increase the local government's debt beyond the legal debt ceilings established by the relevant state laws. The letter must also state that prior voter approval is not necessary before use of the bonding authority.

(d) To demonstrate that it meets the requirements of the local government fund, the chief financial officer of the local government owner or operator and/or guarantor must sign a letter worded exactly as follows, except that the instructions in brackets are to be replaced by the relevant information and the brackets deleted:

Letter from Chief Financial Officer

I am the chief financial officer of [insert: name and address of local government owner or operator, or guarantor]. This letter is in support of the use of the local government fund mechanism to demonstrate financial responsibility for [insert: "taking corrective action" and/or "compensating third parties for bodily injury and property damage"] caused by [insert: "sudden accidental releases" and/or "nonsudden accidental releases"] in the amount of at least [insert: dollar amount] per occurrence and [insert: dollar amount] annual aggregate arising from operating (an) underground storage tank(s).

Underground storage tanks at the following facilities are assured by this local government fund mechanism: [List for each facility: the name and address of the facility where tanks are assured by the local government fund].

[Insert: "The local government fund is funded for the full amount of coverage required under §280.93, or funded for part of the required amount of coverage and used in combination with other mechanism(s) that provide the remaining coverage." or "The local government fund is funded for ten times the full amount of coverage required under §280.93, or funded for part of the required amount of coverage and used in combination with other mechanisms(s) that provide the remaining coverage," or "A payment is made to the fund once every year for seven years until the fund is fully-funded and [name of local government owner or operator] has available bonding authority, approved through voter referendum, of an amount equal to the difference between the required amount of coverage and the amount held in the dedicated fund" or "A payment is made to the fund once every year for seven years until the fund is fully-funded and I have attached a letter signed by the State Attorney General stating that (1) the use of the bonding authority will not increase the local government's debt beyond the legal debt ceilings established by the relevant state laws and (2) that prior voter approval is not necessary before use of the bonding authority"].

The details of the local government fund are as follows:

Amount in Fund (market value of fund at close of last fiscal year): _____

[If fund balance is incrementally funded as specified in §280.107(c), insert:

Amount added to fund in the most recently completed fiscal year: _____

Number of years remaining in the pay-in period: _____]

A copy of the state constitutional provision, or local government statute, charter, ordinance or order dedicating the fund is attached.

I hereby certify that the wording of this letter is identical to the wording specified in 40 CFR 280.107(d) as such regulations were constituted on the date shown immediately below.

[Date]
[Signature]
[Name]
[Title]

§280.108 Substitution of financial assurance mechanisms by owner or operator.

[Former §280.104 redesignated as new §280.108 at 58 FR 9050, Feb. 18, 1993]

(a) An owner or operator may substitute any alternate financial assurance mechanisms as specified in this subpart, provided that at all times he maintains an effective financial assurance mechanism or combination of mechanisms that satisfies the requirements of §280.93.

(b) After obtaining alternate financial assurance as specified in this subpart, an owner or operator may cancel a financial assurance mechanism by providing notice to the provider of financial assurance.

§280.109 Cancellation or nonrenewal by a provider of financial assurance.

[§280.105 amended at 54 FR 47081, Nov. 9, 1989; revised and redesignated as new §280.109 at 58 FR 9050, Feb. 18, 1993]

(a) Except as otherwise provided, a provider of financial assurance may cancel or fail to renew an assurance mechanism by sending a notice of termination by certified mail to the owner or operator.

(1) Termination of a local government guarantee, a guarantee, a surety bond, or a letter of credit may not occur until 120 days after the date on which the owner or operator receives the notice of termination, as evidenced by the return receipt.

(2) Termination of insurance or risk retention coverage, except for non-payment or misrepresentation by the insured, or

[Sec. 280.109(a)(2)]

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state-funded assurance may not occur until 60 days after the date on which the owner or operator receives the notice of termination, as evidenced by the return receipt. Termination for non-payment of premium or misrepresentation by the insured may not occur until a minimum of 10 days after the date on which the owner or operator receives the notice of termination, as evidenced by the return receipt.

(b) If a provider of financial responsibility cancels or fails to renew for reasons other than incapacity of the provider as specified in § 280.114, the owner or operator must obtain alternate coverage as specified in this section within 60 days after receipt of the notice of termination. If the owner or operator fails to obtain alternate coverage within 60 days after receipt of the notice of termination, the owner or operator must notify the Director of the implementing agency of such failure and submit:

(1) The name and address of the provider of financial assurance;

(2) The effective date of termination; and

(3) The evidence of the financial assistance mechanism subject to the termination maintained in accordance with §280.107(b).

§280.110 Reporting by owner or operator.

[Former §280.106 amended and redesignated as §280.110 at 58 FR 9050, Feb. 18, 1993]

(a) An owner or operator must submit the appropriate forms listed in §280.111(b) documenting current evidence of financial responsibility to the Director of the implementing agency:

(1) Within 30 days after the owner or operator identifies a release from an underground storage tank required to be reported under §280.53 or §280.61;

(2) If the owner or operator fails to obtain alternate coverage as required by this subpart, within 30 days after the owner or operator receives notice of:

(i) Commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming a provider of financial assurance as a debtor,

(ii) Suspension or revocation of the authority of a provider of financial assurance to issue a financial assurance mechanism,

(iii) Failure of a guarantor to meet the requirements of the financial test,

(iv) Other incapacity of a provider of financial assurance; or

(3) As required by §280.95(g) and §280.109(b).

(b) An owner or operator must certify compliance with the financial responsibility requirements of this part as specified in the new tank notification form when notifying the appropriate state or local agency of the installation of a new underground storage tank under §280.22.

(c) The Director of the Implementing Agency may require an owner or operator to submit evidence of financial assurance as described in §280.111(b) or other information relevant to compliance with this subpart at any time.

§280.111 Recordkeeping.

[Former §280.107 amended and redesignated as §280.111 at 58 FR 9050, Feb. 18, 1993]

(a) Owners or operators must maintain evidence of all financial assurance mechanisms used to demonstrate financial responsibility under this subpart for an underground storage tank until released from the requirements of this subpart under §208.113. An owner or operator must maintain such evidence at the underground storage tank site or the owner's or operator's place of work. Records maintained off-site must be made available upon request of the implementing agency.

(b) An owner or operator must maintain the following types of evidence of financial responsibility:

(1) An owner or operator using an assurance mechanism specified in §§280.95 through 280.100 or §280.102 or §§280.104 through 280.107 must maintain a copy of the instrument worded as specified.

(2) An owner or operator using a financial test or guarantee, or a local government financial test or a local government guarantee supported by the local government financial test must maintain a copy of the chief financial officer's letter based on year-end financial statements for the most recent completed financial reporting year. Such evidence must be on file no later than 120 days after the close of the financial reporting year.

(3) An owner or operator using a guarantee, surety bond, or letter of credit must maintain a copy of the signed standby trust fund agreement and copies of any amendments to the agreement.

(4) A local government owner or operator using a local government guarantee under §280.106(d) must maintain a copy of the signed standby trust fund agreement and copies of any amendments to the agreement.

(5) A local government owner or operator using the local government bond rating test under §280.104 must maintain a copy of its bond rating published within the last twelve months by Moody's or Standard & Poor's.

(6) A local government owner or operator using the local government guarantee under §280.106, where the guarantor's demonstration of financial responsibility relies on the bond rating test under §280.104 must maintain a copy of the guarantor's bond rating published within the last twelve months by Moody's or Standard & Poor's.

(7) An owner or operator using an insurance policy or risk retention group coverage must maintain a copy of the signed insurance policy or risk retention group coverage policy, with the endorsement or certificate of insurance and any amendments to the agreements.

(8) An owner or operator covered by a state fund or other state assurance must maintain on file a copy of any evidence of coverage supplied by or required by the state under §280.101(d).

(9) An owner or operator using a local government fund under § 280.107 must maintain the following documents:

(i) A copy of the state constitutional provision or local government statute, charter, ordinance, or order dedicating the fund, and

(ii) Year-end financial statements for the most recent completed financial reporting year showing the amount in the fund. If the fund is established under §280.107(a)(3) using incremental funding backed by bonding authority, the financial statements must show the previous year's balance, the amount of funding during the year, and the closing balance in the fund.

(iii) If the fund is established under §280.107(a)(3) using incremental funding backed by bonding authority, the owner or operator must also maintain documentation of the required bonding authority, including either the results of a voter referendum (under §280.107(a)(3)(i)), or attestation by the State Attorney General as specified under §280.107(a)(3)(ii).

[Sec. 280.111(b)(9)(iii)]

(10) A local government owner or operator using the local government guarantee supported by the local government fund must maintain a copy of the guarantor's year-end financial statements for the most recent completed financial reporting year showing the amount of the fund.

(11) (i) An owner or operator using an assurance mechanism specified in §§280.95 through 280.107 must maintain an updated copy of a certification of financial responsibility worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Certification of Financial Responsibility

[Owner or operator] hereby certifies that it is in compliance with the requirements ofsubpart H of 40 CFR part 280.

The financial assurance mechanism(s) used to demonstrate financial responsibility under subpart H of 40 CFR part 280 is (are) as follows:

[For each mechanism, list the type of mechanism, name of issuer, mechanism number (if applicable), amount of coverage, effective period of coverage and whether the mechanism covers "taking corrective action" and/or "compensating third parties for bodily injury and property damage caused by" either "sudden accidental releases" or "nonsudden accidental releases" or "accidental releases."]

[Signature of owner or operator]
[Name of owner or operator]
[Title]
[Date]
[Signature of witness or notary]
[Name of witness or notary]
[Date]

(ii) The owner or operator must update this certification whenever the financial assurance mechanism(s) used to demonstrate financial responsibility change(s).

§280.112 Drawing on financial assurance mechanisms.

[Former §280.108 amended and redesignated as new §280.112 at 58 FR 9050, Feb. 18, 1993]

(a) Except as specified in paragraph (d) of this section, the Director of the implementing agency shall require the guarantor, surety, or institution issuing a letter of credit to place the amount of funds stipulated by the Director, up to the limit of funds provided by the financial assurance mechanism, into the standby trust if:

(1) (i) The owner or operator fails to establish alternate financial assurance within 60 days after receiving notice of cancellation of the guarantee, surety bond, letter of credit, or, as applicable, other financial assurance mechanism; and

(ii) The Director determines or suspects that a release from an underground storage tank covered by the mechanism has occurred and so notifies the owner or operator or the owner or operator has notified the Director pursuant to subparts E or F of a release from an underground storage tank covered by the mechanism; or

(2) The conditions of paragraph (b)(1) or (b)(2) (i) or (ii) of this section are satisfied.

(b) The Director of the implementing agency may draw on a standby trust fund when:

(1) The Director makes a final determination that a release has occurred and immediate or long-term corrective action for the release is needed, and the owner or operator, after appropriate notice and opportunity to comply, has not conducted corrective action as required under 40 CFR part 280, subpart F; or

(2) The Director has received either:

(i) Certification from the owner or operator and the third-party liability claimant(s) and from attorneys representing the owner or operator and the third-party liability claimant(s) that a third-party liability claim should be paid. The certification must be worded as follows, except that instructions in brackets are to be replaced with the relevant information and the brackets deleted:

Certification of Valid Claim

The undersigned, as principals and as legal representatives of [insert: owner or operator] and [insert: name and address of third-party claimant], hereby certify that the claim of bodily injury [and/or] property damage caused by an accidental release arising from operating [owner's or operator's] underground storage tank should be paid in the amount of $[_____].

[Signatures]
Owner or Operator
Attorney for Owner or Operator
(Notary)
Date
[Signatures]
Claimant(s)
Attorney(s) for Claimant(s)
(Notary)
Date

or (ii) A valid final court order establishing a judgment against the owner or operator for bodily injury or property damage caused by an accidental release from an underground storage tank covered by financial assurance under this subpart and the Director determines that the owner or operator has not satisfied the judgment.

(c) If the Director of the implementing agency determines that the amount of corrective action costs and third-party liability claims eligible for payment under paragraph (b) of this section may exceed the balance of the standby trust fund and the obligation of the provider of financial assurance, the first priority for payment shall be corrective action costs necessary to protect human health and the environment. The Director shall pay third-party liability claims in the order in which the Director receives certifications under paragraph (b)(2)(i) of this section, and valid court orders under paragraph (b)(2)(ii) of this section.

(d) A governmental entity acting as guarantor under §280.106(e), the local government guarantee without standby trust, shall make payments as directed by the Director under the circumstances described in §280.112 (a), (b), and (c).

§280.113 Release from the requirements.

[Former §280.109 redesignated as new §280.113 at 58 FR 9050, Feb. 18, 1993]

An owner or operator is no longer required to maintain financial responsibility under this subpart for an underground storage tank after the tank has been properly closed or, if corrective action is required, after corrective action has been completed and the tank has been properly closed as required by 40 CFR part 280, subpart G.

§280.114 Bankruptcy or other incapacity of owner or operator or provider of financial assurance.

[Former §280.110 amended and redesignated as new §280.114 at 58 FR 9050, Feb. 18, 1993]

(a) Within 10 days after commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming an owner or operator as debtor, the owner or operator must notify the Director of the implementing agency by certified mail of such com-

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mencement and submit the appropriate forms listed in §280.111(b) documenting current financial responsibility.

(b) Within 10 days after commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming a guarantor providing financial assurance as debtor, such guarantor must notify the owner or operator by certified mail of such commencement as required under the terms of the guarantee specified in §280.96.

(c) Within 10 days after commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming a local government owner or operator as debtor, the local government owner or operator must notify the Director of the implementing agency by certified mail of such commencement and submit the appropriate forms listed in §280.111(b) documenting current financial responsibility.

(d) Within 10 days after commencement of a voluntary or involuntary proceeding under Title 11 (Bankruptcy), U.S. Code, naming a guarantor providing a local government financial assurance as debtor, such guarantor must notify the local government owner or operator by certified mail of such commencement as required under the terms of the guarantee specified in §280.106.

(e) An owner or operator who obtains financial assurance by a mechanism other than the financial test of self-insurance will be deemed to be without the required financial assurance in the event of a bankruptcy or incapacity of its provider of financial assurance, or a suspension or revocation of the authority of the provider of financial assurance to issue a guarantee, insurance policy, risk retention group coverage policy, surety bond, letter of credit, or state-required mechanism. The owner or operator must obtain alternate financial assurance as specified in this subpart within 30 days after receiving notice of such an event. If the owner or operator does not obtain alternate coverage within 30 days after such notification, he must notify the Director of the implementing agency.

(f) Within 30 days after receipt of notification that a state fund or other state assurance has become incapable of paying for assured corrective action or third-party compensation costs, the owner or operator must obtain alternate financial assurance.

§280.115 Replenishment of guarantees, letters of credit, or surety bonds.

[Former §280.111 amended and redesignated as §280.115 at 58 FR 9050, Feb. 18, 1993]

(a) If at any time after a standby trust is funded upon the instruction of the Director of the implementing agency with funds drawn from a guarantee, local government guarantee with standby trust, letter of credit, or surety bond, and the amount in the standby trust is reduced below the full amount of coverage required, the owner or operator shall by the anniversary date of the financial mechanism from which the funds were drawn:

(1) Replenish the value of financial assurance to equal the full amount of coverage required, or

(2) Acquire another financial assurance mechanism for the amount by which funds in the standby trust have been reduced.

(b) For purposes of this section, the full amount of coverage required is the amount of coverage to be provided by § 280.93 of this subpart. If a combination of mechanisms was used to provide the assurance funds which were drawn upon, replenishment shall occur by the earliest anniversary date among the mechanisms.

§280.116 Suspension of enforcement. [Reserved]

[Former §280.112 redesignated and reserved as §280.116 at 58 FR 9050, Feb. 18, 1993]

Subpart I—Lender Liability

[Subpart I added at 60 FR 46711, Sept. 7, 1995, effective Dec. 6, 1995]

§280.200 Definitions.

(a) *UST technical standards*, as used in this subpart, refers to the UST preventative and operating requirements under 40 CFR part 280, subparts B, C, D, G, and §280.50 of subpart E.

(b) *Petroleum production, refining, and marketing.*

(1) *Petroleum production* means the production of crude oil or other forms of petroleum (as defined in §280.12) as well as the production of petroleum products from purchased materials.

(2) *Petroleum refining* means the cracking, distillation, separation, conversion, upgrading, and finishing of refined petroleum or petroleum products.

(3) *Petroleum marketing* means the distribution, transfer, or sale of petroleum or petroleum products for wholesale or retail purposes.

(c) *Indicia of ownership* means evidence of a secured interest, evidence of an interest in a security interest, or evidence of an interest in real or personal property securing a loan or other obligation, including any legal or equitable title or deed to real or personal property acquired through or incident to foreclosure. Evidence of such interests include, but are not limited to, mortgages, deeds of trust, liens, surety bonds and guarantees of obligations, title held pursuant to a lease financing transaction in which the lessor does not select initially the leased property (hereinafter "lease financing transaction"), and legal or equitable title obtained pursuant to foreclosure. Evidence of such interests also includes assignments, pledges, or other rights to or other forms of encumbrance against property that are held primarily to protect a security interest. A person is not required to hold title or a security interest in order to maintain indicia of ownership.

(d) *A holder* is a person who, upon the effective date of this regulation or in the future, maintains indicia of ownership (as defined in § 280.200(c)) primarily to protect a security interest (as defined in § 280.200(f)(1)) in a petroleum UST or UST system or facility or property on which a petroleum UST or UST system is located. A holder includes the initial holder (such as a loan originator); any subsequent holder (such as a successor-in-interest or subsequent purchaser of the security interest on the secondary market); a guarantor of an obligation, surety, or any other person who holds ownership indicia primarily to protect a security interest; or a receiver or other person who acts on behalf or for the benefit of a holder.

(e) *A borrower, debtor, or obligor* is a person whose UST or UST system or facility or property on which the UST or UST system is located is encumbered by a security interest. These terms may be used interchangeably.

(f) *Primarily to protect a security interest* means that the holder's indicia of ownership are held primarily for the pur-

pose of securing payment or performance of an obligation.

(1) *Security interest* means an interest in a petroleum UST or UST system or in the facility or property on which a petroleum UST or UST system is located, created or established for the purpose of securing a loan or other obligation. Security interests include but are not limited to mortgages, deeds of trusts, liens, and title pursuant to lease financing transactions. Security interests may also arise from transactions such as sale and leasebacks, conditional sales, installment sales, trust receipt transactions, certain assignments, factoring agreements, accounts receivable financing arrangements, and consignments, if the transaction creates or establishes an interest in an UST or UST system or in the facility or property on which the UST or UST system is located, for the purpose of securing a loan or other obligation.

(2) *Primarily to protect a security interest,* as used in this subpart, does not include indicia of ownership held primarily for investment purposes, nor ownership indicia held primarily for purposes other than as protection for a security interest. A holder may have other, secondary reasons for maintaining indicia of ownership, but the primary reason why any ownership indicia are held must be as protection for a security interest.

(g) *Operation* means, for purposes of this subpart, the use, storage, filling, or dispensing of petroleum contained in an UST or UST system.

§280.210 Participation in management.

The term "participating in the management of an UST or UST system" means that, subsequent to the effective date of this subpart, December 6, 1995, the holder is engaging in decisionmaking control of, or activities related to, operation of the UST or UST system, as defined herein.

(a) Actions that are participation in management.

(1) Participation in the management of an UST or UST system means, for purposes of this subpart, actual participation by the holder in the management or control of decisionmaking related to the operation of an UST or UST system. Participation in management does not include the mere capacity or ability to influence or the unexercised right to control UST or UST system operations. A holder is participating in the management of the UST or UST system only if the holder either:

(i) Exercises decisionmaking control over the operational (as opposed to financial or administrative) aspects of the UST or UST system, such that the holder has undertaken responsibility for all or substantially all of the management of the UST or UST system; or

(ii) Exercises control at a level comparable to that of a manager of the borrower's enterprise, such that the holder has assumed or manifested responsibility for the overall management of the enterprise encompassing the day-to-day decisionmaking of the enterprise with respect to all, or substantially all, of the operational (as opposed to financial or administrative) aspects of the enterprise.

(2) Operational aspects of the enterprise relate to the use, storage, filling, or dispensing of petroleum contained in an UST or UST system, and include functions such as that of a facility or plant manager, operations manager, chief operating officer, or chief executive officer. Financial or administrative aspects include functions such as that of a credit manager, accounts payable/receivable manager, personnel manager, controller, chief financial officer, or similar functions. Operational aspects of the enterprise do not include the financial or administrative aspects of the enterprise, or actions associated with environmental compliance, or actions undertaken voluntarily to protect the environment in accordance with applicable requirements in 40 CFR part 280 or applicable state requirements in those states that have been delegated authority by EPA to administer the UST program pursuant to 42 USC 6991c and 40 CFR part 281.

(b) Actions that are not participation in management pre-foreclosure.

(1) Actions at the inception of the loan or other transaction. No act or omission prior to the time that indicia of ownership are held primarily to protect a security interest constitutes evidence of participation in management within the meaning of this subpart. A prospective holder who undertakes or requires an environmental investigation (which could include a site assessment, inspection, and/or audit) of the UST or UST system or facility or property on which the UST or UST system is located (in which indicia of ownership are to be held), or requires a prospective borrower to clean up contamination from the UST or UST system or to comply or come into compliance (whether prior or subsequent to the time that indicia of ownership are held primarily to protect a security interest) with any applicable law or regulation, is not by such action considered to be participating in the management of the UST or UST system or facility or property on which the UST or UST system is located.

(2) Loan policing and work out. Actions that are consistent with holding ownership indicia primarily to protect a security interest do not constitute participation in management for purposes of this subpart. The authority for the holder to take such actions may, but need not, be contained in contractual or other documents specifying requirements for financial, environmental, and other warranties, covenants, conditions, representations or promises from the borrower. Loan policing and work out activities cover and include all such activities up to foreclosure, exclusive of any activities that constitute participation in management.

(i) Policing the security interest or loan.

(A) A holder who engages in policing activities prior to foreclosure will remain within the exemption provided that the holder does not together with other actions participate in the management of the UST or UST system as provided in § 280.210(a). Such policing actions include, but are not limited to, requiring the borrower to clean up contamination from the UST or UST system during the term of the security interest; requiring the borrower to comply or come into compliance with applicable federal, state, and local environmental and other laws, rules, and regulations during the term of the security interest; securing or exercising authority to monitor or inspect the UST or UST system or facility or property on which the UST or UST system is located (including on-site inspections) in which indicia of ownership are maintained, or the borrower's business or financial condition during the term of the security interest; or taking other actions to adequately police the loan or security interest (such as requiring a borrower to comply with any warranties, covenants, conditions, representations, or promises from the borrower).

[Sec. 280.210(b)(2)(i)(A)]

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(B) Policing activities also include undertaking by the holder of UST environmental compliance actions and voluntary environmental actions taken in compliance with 40 CFR part 280, provided that the holder does not otherwise participate in the management or daily operation of the UST or UST system as provided in §280.210(a) and §280.230. Such allowable actions include, but are not limited to, release detection and release reporting, release response and corrective action, temporary or permanent closure of an UST or UST system, UST upgrading or replacement, and maintenance of corrosion protection. A holder who undertakes these actions must do so in compliance with the applicable requirements in 40 CFR part 280 or applicable state requirements in those states that have been delegated authority by EPA to administer the UST program pursuant to 42 U.S.C. 6991c and 40 CFR part 281. A holder may directly oversee these environmental compliance actions and voluntary environmental actions, and directly hire contractors to perform the work, and is not by such action considered to be participating in the management of the UST or UST system.

(ii) Loan work out. A holder who engages in work out activities prior to foreclosure will remain within the exemption provided that the holder does not together with other actions participate in the management of the UST or UST system as provided in § 280.210(a). For purposes of this rule, "work out" refers to those actions by which a holder, at any time prior to foreclosure, seeks to prevent, cure, or mitigate a default by the borrower or obligor; or to preserve, or prevent the diminution of, the value of the security. Work out activities include, but are not limited to, restructuring or renegotiating the terms of the security interest; requiring payment of additional rent or interest; exercising forbearance; requiring or exercising rights pursuant to an assignment of accounts or other amounts owing to an obligor; requiring or exercising rights pursuant to an escrow agreement pertaining to amounts owing to an obligor; providing specific or general financial or other advice, suggestions, counseling, or guidance; and exercising any right or remedy the holder is entitled to by law or under any warranties, covenants, conditions, representations, or promises from the borrower.

(c) Foreclosure on an UST or UST system or facility or property on which an UST or UST system is located, and participation in management activities post-foreclosure.

(1) Foreclosure.

(i) Indicia of ownership that are held primarily to protect a security interest include legal or equitable title or deed to real or personal property acquired through or incident to foreclosure. For purposes of this subpart, the term "foreclosure" means that legal, marketable or equitable title or deed has been issued, approved, and recorded, and that the holder has obtained access to the UST, UST system, UST facility, and property on which the UST or UST system is located, provided that the holder acted diligently to acquire marketable title or deed and to gain access to the UST, UST system, UST facility, and property on which the UST or UST system is located. The indicia of ownership held after foreclosure continue to be maintained primarily as protection for a security interest provided that the holder undertakes to sell, re-lease an UST or UST system or facility or property on which the UST or UST system is located, held pursuant to a lease financing transaction (whether by a new lease financing transaction or substitution of the lessee), or otherwise divest itself of the UST or UST system or facility or property on which the UST or UST system is located, in a reasonably expeditious manner, using whatever commercially reasonable means are relevant or appropriate with respect to the UST or UST system or facility or property on which the UST or UST system is located, taking all facts and circumstances into consideration, and provided that the holder does not participate in management (as defined in §280.210(a)) prior to or after foreclosure.

(ii) For purposes of establishing that a holder is seeking to sell, re-lease pursuant to a lease financing transaction (whether by a new lease financing transaction or substitution of the lessee), or divest in a reasonably expeditious manner an UST or UST system or facility or property on which the UST or UST system is located, the holder may use whatever commercially reasonable means as are relevant or appropriate with respect to the UST or UST system or facility or property on which the UST or UST system is located, or may employ the means specified in §280.210(c)(2). A holder that outbids, rejects, or fails to act upon a written *bona fide*, firm offer of fair consideration for the UST or UST system or facility or property on which the UST or UST system is located, as provided in § 280.210(c)(2), is not considered to hold indicia of ownership primarily to protect a security interest.

(2) Holding foreclosed property for disposition and liquidation. A holder, who does not participate in management prior to or after foreclosure, may sell, re-lease, pursuant to a lease financing transaction (whether by a new lease financing transaction or substitution of the lessee), an UST or UST system or facility or property on which the UST or UST system is located, liquidate, wind up operations, and take measures, prior to sale or other disposition, to preserve, protect, or prepare the secured UST or UST system or facility or property on which the UST or UST system is located. A holder may also arrange for an existing or new operator to continue or initiate operation of the UST or UST system. The holder may conduct these activities without voiding the security interest exemption, subject to the requirements of this subpart.

(i) A holder establishes that the ownership indicia maintained after foreclosure continue to be held primarily to protect a security interest by, within 12 months following foreclosure, listing the UST or UST system or the facility or property on which the UST or UST system is located, with a broker, dealer, or agent who deals with the type of property in question, or by advertising the UST or UST system or facility or property on which the UST or UST system is located, as being for sale or disposition on at least a monthly basis in either a real estate publication or a trade or other publication suitable for the UST or UST system or facility or property on which the UST or UST system is located, or a newspaper of general circulation (defined as one with a circulation over 10,000, or one suitable under any applicable federal, state, or local rules of court for publication required by court order or rules of civil procedure) covering the location of the UST or UST system or facility or property on which the UST or UST system is located. For purposes of this provision, the 12-month period begins to run from December 6, 1995 or from the

[Sec. 280.210(c)(2)(i)]

date that the marketable title or deed has been issued, approved and recorded, and the holder has obtained access to the UST, UST system, UST facility and property on which the UST or UST system is located, whichever is later, provided that the holder acted diligently to acquire marketable title or deed and to obtain access to the UST, UST system, UST facility and property on which the UST or UST system is located. If the holder fails to act diligently to acquire marketable title or deed or to gain access to the UST or UST system, the 12-month period begins to run from December 6, 1995 or from the date on which the holder first acquires either title to or possession of the secured UST or UST system, or facility or property on which the UST or UST system is located, whichever is later.

(ii) A holder that outbids, rejects, or fails to act upon an offer of fair consideration for the UST or UST system or the facility or property on which the UST or UST system is located, establishes by such outbidding, rejection, or failure to act, that the ownership indicia in the secured UST or UST system or facility or property on which the UST or UST system is located are not held primarily to protect the security interest, unless the holder is required, in order to avoid liability under federal or state law, to make a higher bid, to obtain a higher offer, or to seek or obtain an offer in a different manner.

(A) Fair consideration, in the case of a holder maintaining indicia of ownership primarily to protect a senior security interest in the UST or UST system or facility or property on which the UST or UST system is located, is the value of the security interest as defined in this section. The value of the security interest includes all debt and costs incurred by the security interest holder, and is calculated as an amount equal to or in excess of the sum of the outstanding principal (or comparable amount in the case of a lease that constitutes a security interest) owed to the holder immediately preceding the acquisition of full title (or possession in the case of a lease financing transaction) pursuant to foreclosure, plus any unpaid interest, rent, or penalties (whether arising before or after foreclosure). The value of the security interest also includes all reasonable and necessary costs, fees, or other charges incurred by the holder incident to work out, foreclosure, retention, preserving, protecting, and preparing, prior to sale, the UST or UST system or facility or property on which the UST or UST system is located, re-lease, pursuant to a lease financing transaction (whether by a new lease financing transaction or substitution of the lessee), of an UST or UST system or facility or property on which the UST or UST system is located, or other disposition. The value of the security interest also includes environmental investigation costs (which could include a site assessment, inspection, and/or audit of the UST or UST system or facility or property on which the UST or UST system is located), and corrective action costs incurred under §§ 280.51 through 280.67 or any other costs incurred as a result of reasonable efforts to comply with any other applicable federal, state or local law or regulation; less any amounts received by the holder in connection with any partial disposition of the property and any amounts paid by the borrower (if not already applied to the borrower's obligations) subsequent to the acquisition of full title (or possession in the case of a lease financing transaction) pursuant to foreclosure. In the case of a holder maintaining indicia of ownership primarily to protect a junior security interest, fair consideration is the value of all outstanding higher priority security interests plus the value of the security interest held by the junior holder, each calculated as set forth in this paragraph.

(B) Outbids, rejects, or fails to act upon an offer of fair consideration means that the holder outbids, rejects, or fails to act upon within 90 days of receipt, a written, *bona fide*, firm offer of fair consideration for the UST or UST system or facility or property on which the UST or UST system is located received at any time after six months following foreclosure, as defined in § 280.210(c). A "written, *bona fide*, firm offer" means a legally enforceable, commercially reasonable, cash offer solely for the foreclosed UST or UST system or facility or property on which the UST or UST system is located, including all material terms of the transaction, from a ready, willing, and able purchaser who demonstrates to the holder's satisfaction the ability to perform. For purposes of this provision, the six-month period begins to run from December 6, 1995 or from the date that marketable title or deed has been issued, approved and recorded to the holder, and the holder has obtained access to the UST, UST system, UST facility and property on which the UST or UST system is located, whichever is later, provided that the holder was acting diligently to acquire marketable title or deed and to obtain access to the UST or UST system, UST facility and property on which the UST or UST system is located. If the holder fails to act diligently to acquire marketable title or deed or to gain access to the UST or UST system, the six-month period begins to run from December 6, 1995 or from the date on which the holder first acquires either title to or possession of the secured UST or UST system, or facility or property on which the UST or UST system is located, whichever is later.

(3) Actions that are not participation in management post-foreclosure. A holder is not considered to be participating in the management of an UST or UST system or facility or property on which the UST or UST system is located when undertaking actions under 40 CFR part 280, provided that the holder does not otherwise participate in the management or daily operation of the UST or UST system as provided in § 280.210(a) and § 280.230. Such allowable actions include, but are not limited to, release detection and release reporting, release response and corrective action, temporary or permanent closure of an UST or UST system, UST upgrading or replacement, and maintenance of corrosion protection. A holder who undertakes these actions must do so in compliance with the applicable requirements in 40 CFR part 280 or applicable state requirements in those states that have been delegated authority by EPA to administer the UST program pursuant to 42 U.S.C. 6991c and 40 CFR part 281. A holder may directly oversee these environmental compliance actions and voluntary environmental actions, and directly hire contractors to perform the work, and is not by such action considered to be participating in the management of the UST or UST system.

§280.220 Ownership of an underground storage tank or underground storage tank system or facility or property on which an underground storage tank or underground storage tank system is located.

Ownership of an UST or UST system or facility or property on which an UST

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or UST system is located. A holder is not an "owner" of a petroleum UST or UST system or facility or property on which a petroleum UST or UST system is located for purposes of compliance with the UST technical standards as defined in § 280.200(a), the UST corrective action requirements under §§ 280.51 through 280.67, and the UST financial responsibility requirements under §§ 280.90 through 280.111, provided the person:

(a) Does not participate in the management of the UST or UST system as defined in § 280.210; and

(b) Does not engage in petroleum production, refining, and marketing as defined in § 280.200(b).

§280.230 Operating an underground storage tank or underground storage tank system.

(a) Operating an UST or UST system prior to foreclosure. A holder, prior to foreclosure, as defined in § 280.210(c), is not an "operator" of a petroleum UST or UST system for purposes of compliance with the UST technical standards as defined in §280.200(a), the UST corrective action requirements under §§ 280.51 through 280.67, and the UST financial responsibility requirements under §§ 280.90 through 280.111, provided that, after December 6, 1995, the holder is not in control of or does not have responsibility for the daily operation of the UST or UST system.

(b) Operating an UST or UST system after foreclosure. The following provisions apply to a holder who, through foreclosure, as defined in § 280.210(c), acquires a petroleum UST or UST system or facility or property on which a petroleum UST or UST system is located.

(1) A holder is not an "operator" of a petroleum UST or UST system for purposes of compliance with 40 CFR part 280 if there is an operator, other than the holder, who is in control of or has responsibility for the daily operation of the UST or UST system, and who can be held responsible for compliance with applicable requirements of 40 CFR part 280 or applicable state requirements in those states that have been delegated authority by EPA to administer the UST program pursuant to 42 U.S.C. 6991c and 40 CFR part 281.

(2) If another operator does not exist, as provided for under paragraph (b)(1) of this section, a holder is not an "operator" of the UST or UST system, for purposes of compliance with the UST technical standards as defined in § 280.200(a), the UST corrective action requirements under §§ 280.51 through 280.67, and the UST financial responsibility requirements under §§ 280.90 through 280.111, provided that the holder:

(i) Empties all of its known USTs and UST systems within 60 calendar days after foreclosure or within 60 calendar days after December 6, 1995, whichever is later, or another reasonable time period specified by the implementing agency, so that no more than 2.5 centimeters (one inch) of residue, or 0.3 percent by weight of the total capacity of the UST system, remains in the system; leaves vent lines open and functioning; and caps and secures all other lines, pumps, manways, and ancillary equipment; and

(ii) Empties those USTs and UST systems that are discovered after foreclosure within 60 calendar days after discovery or within 60 calendar days after December 6, 1995, whichever is later, or another reasonable time period specified by the implementing agency, so that no more than 2.5 centimeters (one inch) of residue, or 0.3 percent by weight of the total capacity of the UST system, remains in the system; leaves vent lines open and functioning; and caps and secures all other lines, pumps, manways, and ancillary equipment.

(3) If another operator does not exist, as provided for under paragraph (b)(1) of this section, in addition to satisfying the conditions under paragraph (b)(2) of this section, the holder must either:

(i) Permanently close the UST or UST system in accordance with §§ 280.71 through 280.74, except §280.72(b); or

(ii) Temporarily close the UST or UST system in accordance with the following applicable provisions of § 280.70:

(A) Continue operation and maintenance of corrosion protection in accordance with § 280.31;

(B) Report suspected releases to the implementing agency; and

(C) Conduct a site assessment in accordance with §280.72(a) if the UST system is temporarily closed for more than 12 months and the UST system does not meet either the performance standards in §280.20 for new UST systems or the upgrading requirements in § 280.21, except that the spill and overfill equipment requirements do not have to be met. The holder must report any suspected releases to the implementing agency. For purposes of this provision, the 12-month period begins to run from December 6, 1995 or from the date on which the UST system is emptied and secured under paragraph (b)(2) of this section, whichever is later.

(4) The UST system can remain in temporary closure until a subsequent purchaser has acquired marketable title to the UST or UST system or facility or property on which the UST or UST system is located. Once a subsequent purchaser acquires marketable title to the UST or UST system or facility or property on which the UST or UST system is located, the purchaser must decide whether to operate or close the UST or UST system in accordance with applicable requirements in 40 CFR part 280 or applicable state requirements in those states that have been delegated authority by EPA to administer the UST program pursuant to 42 U.S.C. 6991c and 40 CFR part 281.

APPENDIX I TO PART 280—NOTIFICATION FOR UNDERGROUND STORAGE TANKS (FORM)

[Part 280, Appendix I]

Notification for Underground Storage Tanks

FORM APPROVED
OMB NO. 2050-0068
APPROVAL EXPIRES 9-30-91

EPA estimates public reporting burden for this form to average 30 minutes per response, including time for reviewing instructions, gathering and maintaining the data needed, and completing and reviewing the form. Send comments regarding this burden estimate to Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M St., S.W., Washington, D.C. 20460; and to the Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, D.C. 20503, marked "Attention: Desk Officer for EPA."

STATE USE ONLY

I.D. Number

Date Received

GENERAL INFORMATION

Notification is required by Federal law for all underground tanks that have been used to store regulated substances since January 1, 1974, that are in the ground as of May 8, 1986, or that are brought into use after May 8, 1986. The information requested is required by Section 9002 of the Resource Conservation and Recovery Act, (RCRA), as amended.

The primary purpose of this notification program is to locate and evaluate underground tanks that store or have stored petroleum or hazardous substances. It is expected that the information you provide will be based on reasonably available records, or, in the absence of such records, your knowledge, belief, or recollection.

Who Must Notify? Section 9002 of RCRA, as amended, requires that, unless exempted, owners of underground tanks that store regulated substances must notify designated State or local agencies of the existence of their tanks. Owner means:

(a) in the case of an underground storage tank in use on November 8, 1984, or brought into use after that date, any person who owns an underground storage tank used for the storage, use, or dispensing of regulated substances; and

(b) in the case of any underground storage tank in use before November 8, 1984, but no longer in use on that date, any person who owned such tank immediately before the discontinuation of its use.

What Tanks Are Included? Underground storage tank is defined as any one or combination of tanks that (1) is used to contain an accumulation of "regulated substances," and (2) whose volume (including connected underground piping) is 10% or more beneath the ground. Some examples are underground tanks storing: 1. gasoline, used oil, or diesel fuel, and 2. industrial solvents, pesticides, herbicides or fumigants.

What Tanks Are Excluded? Tanks removed from the ground are not subject to notification. Other tanks excluded from notification are:

1. farm or residential tanks of 1,100 gallons or less capacity used for storing motor fuel for noncommercial purposes;
2. tanks used for storing heating oil for consumptive use on the premises where stored;
3. septic tanks;
4. pipeline facilities (including gathering lines) regulated under the Natural Gas Pipeline Safety Act of 1968, or the Hazardous Liquid Pipeline Safety Act of 1979, or which is an intrastate pipeline facility regulated under State laws;
5. surface impoundments, pits, ponds, or lagoons;
6. storm water or waste water collection systems;
7. flow-through process tanks;
8. liquid traps or associated gathering lines directly related to oil or gas production and gathering operations;
9. storage tanks situated in an underground area (such as a basement, cellar, mineworking, drift, shaft, or tunnel) if the storage tank is situated upon or above the surface of the floor.

What Substances Are Covered? The notification requirements apply to underground storage tanks that contain regulated substances. This includes any substance defined as hazardous in section 101 (14) of the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA), with the exception of those substances regulated as hazardous waste under Subtitle C of RCRA. It also includes petroleum, e.g., crude oil or any fraction thereof which is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute).

Where To Notify? Completed notification forms should be sent to the address given at the top of this page.

When To Notify? 1. Owners of underground storage tanks in use or that have been taken out of operation after January 1, 1974, but still in the ground, must notify by May 8, 1986. 2. Owners who bring underground storage tanks into use after May 8, 1986, must notify within 30 days of bringing the tanks into use.

Penalties: Any owner who knowingly fails to notify or submits false information shall be subject to a civil penalty not to exceed $10,000 for each tank for which notification is not given or for which false information is submitted.

INSTRUCTIONS

Please type or print in ink all items except "signature" in Section V. This form must be completed for each location containing underground storage tanks. If more than 5 tanks are owned at this location, photocopy the reverse side, and staple continuation sheets to this form.

Indicate number of continuation sheets attached ☐

I. OWNERSHIP OF TANK(S)

Owner Name (Corporation, Individual, Public Agency, or Other Entity)

Street Address

County

City | State | ZIP Code

Area Code | Phone Number

Type of Owner (*Mark all that apply* ☒)

☐ Current ☐ State or Local Gov't ☐ Private or Corporate

☐ Former ☐ Federal Gov't (GSA facility I.D. no _____) ☐ Ownership uncertain

II. LOCATION OF TANK(S)

(If same as Section 1, mark box here ☐)

Facility Name or Company Site Identifier, as applicable

Street Address or State Road, as applicable

County

City (nearest) | State | ZIP Code

Indicate number of tanks at this location ☐

Mark box here if tank(s) are located on land within an Indian reservation or on other Indian trust lands ☐

III. CONTACT PERSON AT TANK LOCATION

Name (If same as Section 1, mark box here ☐) | Job Title | Area Code | Phone Number

IV. TYPE OF NOTIFICATION

☐ Mark box here only if this is an amended or subsequent notification for this location.

V. CERTIFICATION (Read and sign after completing Section VI.)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete.

Name and official title of owner or owner's authorized representative	Signature	Date Signed

CONTINUE ON REVERSE SIDE

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Owner Name (from Section I) _____ Location (from Section II) _____ Page No. ____ of ____ Pages

VI DESCRIPTION OF UNDERGROUND STORAGE TANKS *(Complete for each tank at this location.)*

Tank Identification No. (e.g., ABC-123), or Arbitrarily Assigned Sequential Number (e.g., 1,2,3...)	Tank No.	Tank No.	Tank No.	Tank No.	Tank No.
1. Status of Tank *(Mark all that apply ☒)* Currently in Use	☐	☐	☐	☐	☐
Temporarily Out of Use	☐	☐	☐	☐	☐
Permanently Out of Use	☐	☐	☐	☐	☐
Brought into Use after 5/8/86	☐	☐	☐	☐	☐
2. Estimated Age (Years)					
3. Estimated Total Capacity (Gallons)					
4. Material of Construction *(Mark one ☒)* Steel	☐	☐	☐	☐	☐
Concrete	☐	☐	☐	☐	☐
Fiberglass Reinforced Plastic	☐	☐	☐	☐	☐
Unknown	☐	☐	☐	☐	☐
Other, Please Specify	_____	_____	_____	_____	_____
5. Internal Protection *(Mark all that apply ☒)* Cathodic Protection	☐	☐	☐	☐	☐
Interior Lining (e.g., epoxy resins)	☐	☐	☐	☐	☐
None	☐	☐	☐	☐	☐
Unknown	☐	☐	☐	☐	☐
Other, Please Specify	_____	_____	_____	_____	_____
6. External Protection *(Mark all that apply ☒)* Cathodic Protection	☐	☐	☐	☐	☐
Painted (e.g., asphaltic)	☐	☐	☐	☐	☐
Fiberglass Reinforced Plastic Coated	☐	☐	☐	☐	☐
None	☐	☐	☐	☐	☐
Unknown	☐	☐	☐	☐	☐
Other, Please Specify	_____	_____	_____	_____	_____
7. Piping *(Mark all that apply ☒)* Bare Steel	☐	☐	☐	☐	☐
Galvanized Steel	☐	☐	☐	☐	☐
Fiberglass Reinforced Plastic	☐	☐	☐	☐	☐
Cathodically Protected	☐	☐	☐	☐	☐
Unknown	☐	☐	☐	☐	☐
Other, Please Specify	_____	_____	_____	_____	_____
8. Substance Currently or Last Stored in Greatest Quantity by Volume *(Mark all that apply ☒)* **a. Empty**	☐	☐	☐	☐	☐
b. Petroleum					
Diesel	☐	☐	☐	☐	☐
Kerosene	☐	☐	☐	☐	☐
Gasoline (including alcohol blends)	☐	☐	☐	☐	☐
Used Oil	☐	☐	☐	☐	☐
Other, Please Specify	_____	_____	_____	_____	_____
c. Hazardous Substance	☐	☐	☐	☐	☐
Please Indicate Name of Principal CERCLA Substance	_____	_____	_____	_____	_____
OR Chemical Abstract Service (CAS) No.	_____	_____	_____	_____	_____
Mark box ☒ if tank stores a mixture of substances	☐	☐	☐	☐	☐
d. Unknown	☐	☐	☐	☐	☐
9. Additional Information (for tanks permanently taken out of service) a. Estimated date last used (mo/yr)	/	/	/	/	/
b. Estimated quantity of substance remaining (gal.)	_____	_____	_____	_____	_____
c. Mark box ☒ if tank was filled with inert material (e.g., sand, concrete)	☐	☐	☐	☐	☐

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[Part 280, Appendix I]

Owner Name (from Section I) _____ Location (from Section II) _____ Page No. ____ of ____ Pages

VII. CERTIFICATION OF COMPLIANCE (COMPLETE FOR ALL NEW TANKS AT THIS LOCATION)

10. Installation (mark all that apply)

- ☐ The installer has been certified by the tank and piping manufacturers.
- ☐ The installer has been certified or licensed by the implementing agency
- ☐ The installation has been inspected and certified by a registered professional engineer
- ☐ The installation has been inspected and approved by the implementing agency
- ☐ All work listed on the manufacturer's installation checklists has been completed
- ☐ Another method was used as allowed by the implementing agency. Please specify

_____

11. Release Detection (mark all that apply)

- ☐ Manual tank gauging
- ☐ Tank tightness testing with inventory controls
- ☐ Automatic tank gauging
- ☐ Vapor monitoring
- ☐ Ground-water monitoring
- ☐ Interstitial monitoring within a secondary barrier
- ☐ Interstitial monitoring within secondary containment
- ☐ Automatic line leak detectors
- ☐ Line tightness testing
- ☐ Another method allowed by the implementing agency. Please specify

_____

12. Corrosion Protection (if applicable)

- ☐ As specified for coated steel tanks with cathodic protection
- ☐ As specified for coated steel piping with cathodic protection
- ☐ Another method allowed by the implementing agency. Please specify

_____

13. I have financial responsibility in accordance with Subpart I. Please specify

Method _____

Insurer _____

Policy Number _____

14. OATH. I certify that the information concerning installation provided in Item 10 is true to the best of my belief and knowledge

Installer _____ _____
Name Date

_____
Position

_____
Company

EPA Form 7530-1 (9-88)

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[Part 280, Appendix I]

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APPENDIX II TO PART 280—LIST OF AGENCIES DESIGNATED TO RECEIVE NOTIFICATIONS

Alabama (EPA Form), Alabama Department of Environmental Management, Ground Water Section/Water Division, 1751 Congressman W.L. Dickinson Drive, Montgomery, Alabama 36130, 205/271-7823

Alaska (EPA Form), Department of Environmental Conservation, Box 0, Juneau, Alaska 99811-1800, 970/465-2653

American Samoa (EPA Form), Executive Secretary, Environmental Quality Commission, Office of the Governor, American Samoan Government, Pago Pago, American Samoa 96799; Attention: UST Notification

Arizona (EPA Form), Attention: UST Coordinator, Arizona Department of Environmental Quality, Environmental Health Services, 2005 N. Central, Phoenix, Arizona 85004

Arkansas (EPA Form), Arkansas Department of Pollution Control and Ecology, P.O. Box 9583, Little Rock, Arkansas 72219, 501/562-7444

California (State Form), Executive Director, State Water Resources Control Board, P.O. Box 100, Sacramento, California 95801, 916/445-1533

Colorado (EPA Form), Section Chief, Colorado Department of Health, Waste Management Division, Underground Tank Program, 4210 East 11th Avenue, Denver, Colorado 80220, 303/320-8333

Connecticut (State Form), Hazardous Materials Management Unit, Department of Environmental Protection, State Office Building, 165 Capitol Avenue, Hartford, Connecticut 06106

Delaware (State Form), Division of Air and Waste Management, Department of Natural Resources and Environmental Control, P.O. Box 1401, 89 Kings Highway, Dover, Delaware 19903, 302/726-5409

District of Columbia (EPA Form), Attention: UST Notification Form, Department of Consumer and Regulatory Affairs, Pesticides and Hazardous Waste Management Branch, Room 114, 5010 Overlook Avenue SW., Washington, DC 20032

Florida (State Form), Florida Department of Environmental Regulation, Solid Waste Section, Twin Towers Office Building, 2600 Blair Stone Road, Tallahassee, Florida 32399, 904/487-4398

Georgia (EPA Form), Georgia Department of Natural Resources, Environmental Protection Division, Underground Storage Tank Program, 3420 Norman Berry Drive, 7th Floor, Hapeville, Georgia 30354, 404/656-7404

Guam (State Form), Administrator, Guam Environmental Protection Agency, P.O. Box 2999, Agana, Guam 96910, Overseas Operator (Commercial call 646-8863)

Hawaii (EPA Form), Administrator, Hazardous Waste Program, 645 Halekauwila Street, Honolulu, Hawaii 96813, 808/548-2270

Idaho (EPA Form), Underground Storage Tank Coordinator, Water Quality Bureau, Division of Environmental Quality, Idaho Department of Health and Welfare, 450 W. State Street, Boise, Idaho 83720, 208/334-4251

Illinois (EPA Form), Underground Storage Tank Coordinator, Division of Fire Prevention, Office of State Fire Marshal, 3150 Executive Park Drive, Springfield, Illinois 62703-4599

Indiana (EPA Form), Underground Storage Tank Program, Office of Environmental Response, Indiana Department of Environmental Management, 105 South Meridian Street, Indianapolis, Indiana 46225

Iowa (State Form), UST Coordinator, Iowa Department of Natural Resources, Henry A. Wallace Building, 900 East Grand, Des Moines, Iowa 50219, 512/281-8135

Kansas (EPA Form), Kansas Department of Health and Environment, Forbes Field, Building 740, Topeka, Kansas 66620, 913/296-1594

Kentucky (State Form), Department of Environmental Protection, Hazardous Waste Branch, Fort Boone Plaza, Building #2, 18 Reilly Road, Frankfort, Kentucky 40601, 501/564-6716

Louisiana (State Form), Secretary, Louisiana Department of Environmental Quality, P.O. Box 44066, Baton Rouge, Louisiana 70804, 501/342-1265

Maine (State Form), Attention: Underground Tanks Program, Bureau of Oil and Hazardous Material Control, Department of Environmental Protection, State House-Station 17, Augusta, Maine 04333

Maryland (EPA Form), Science and Health Advisory Group, Office of Environmental Programs, 201 West Preston Street, Baltimore, Maryland 21201

Massachusetts (EPA Form), UST Registry, Department of Public Safety, 1010 Commonwealth Avenue, Boston, Massachusetts 02215, 617/566-4500

Michigan (EPA Form), Michigan Department of State Police, Fire Marshal Division, General Office Building, 7150 Harris Drive, Lansing, Michigan 48913

Minnesota (State Form), Underground Storage Tank Program, Division of Solid and Hazardous Wastes, Minnesota Pollution Control Agency, 520 West Lafayette Road, St. Paul, Minnesota 55155

Mississippi (State Form), Department of Natural Resources, Bureau of Pollution Control, Underground Storage Tank Section, P.O. Box 10385, Jackson, Mississippi 39209, 601/961-5171

Missouri (EPA Form), UST Coordinator, Missouri Department of Natural Resources, P.O. Box 176, Jefferson City, Missouri 65102, 314/751-7428

Montana (EPA Form), Solid and Hazardous Waste Bureau, Department of Health and Environmental Science, Cogswell Bldg., Room B-201, Helena, Montana 59620

Nebraska (EPA Form), Nebraska State Fire Marshal, P.O. Box 94677, Lincoln, Nebraska 68509-4677, 402/471-9465

Nevada (EPA Form), Attention: UST Coordinator, Division of Environmental Protection, Department of Conservation and Natural Resources, Capitol Complex 201 S. Fall Street, Carson City, Nevada 89710, 800/992-0900, Ext. 4670, 702/885-4670

New Hampshire (EPA Form), NH Dept. of Environmental Services, Water Supply and Pollution Control Division, Hazen Drive, P.O. Box 95,

Concord, New Hampshire 03301, Attention: UST Registration

New Jersey (State Form), Underground Storage Tank Coordinator, Department of Environmental Protection, Division of Water Resources (CN-029), Trenton, New Jersey 08625, 609/292-0424

New Mexico (EPA Form), New Mexico Environmental Improvement Division, Groundwater/Hazardous Waste Bureau, P.O. Box 968, Santa Fe, New Mexico 37504, 505/827-2933

New York (EPA Form), Bulk Storage Section, Division of Water, Department of Environmental Conservation, 50 Wolf Road, Room 326, Albany, New York 12233-0001, 518/457-4351

North Carolina (EPA Form), Division of Environmental Management, Ground-Water Operations Branch, Department of Natural Resources and Community Development, P.O. Box 27687, Raleigh, North Carolina 27611, 919/733-3221

North Dakota (State Form), Division of Hazardous Management and Special Studies, North Dakota Department of Health, Box 5520, Bismarck, North Dakota 58502-5520

Northern Mariana Islands (EPA Form), Chief, Division of Environmental Quality, P.O. Box 1304, Commonwealth of Northern Mariana Islands, Saipan, CM 96950, Cable Address: Gov. NMI Saipan, Overseas Operator: 6984

Ohio (State Form), State Fire Marshal's Office, Department of Commerce, 8895 E. Main Street, Reynoldsburg, Ohio 43068, State Hotline: 800/282-1927

Oklahoma (EPA Form), Underground Storage Tank Program, Oklahoma Corporation Comm., Jim Thorpe Building, Oklahoma City, Oklahoma 73105

Oregon (State Form), Underground Storage Tank Program, Hazardous and Solid Waste Division, Department of Environmental Quality, 811 S.W. Sixth Avenue, Portland, Oregon 98204, 503/229-5788

Pennsylvania (EPA Form), PA Department of Environmental Resources, Bureau of Water Quality Management, Ground Water Unit, 9th Floor Fulton Building, P.O. Box 2063, Harrisburg, Pennsylvania 17120

Puerto Rico (EPA Form), Director, Water Quality Control Area, Environmental Quality Board, Commonwealth of Puerto Rico, Santurce, Puerto Rico, 809/725-0717

Rhode Island (EPA Form), UST Registration, Department of Environmental Management, 83 Park Street, Providence, Rhode Island 02903, 401/277-2234

South Carolina (State Form), Ground-Water Protection Division, South Carolina Department of Health and Environmental Control, 2600 Bull Street, Columbia, South Carolina 29201, 803/758-5213

South Dakota (EPA Form), Office of Water Quality, Department of Water and Natural Resources, Joe Foss Building, Pierre, South Dakota 57501,

Tennessee (EPA Form), Tennessee Department of Health and Environment, Division of Superfund Underground Storage Tank Section, 150 Ninth Avenue, North, Nashville, Tennessee 37219-5404, 615/741-0690

Texas (EPA Form), Underground Storage Tank Program, Texas Water Commission, P.O. Box 13087, Austin, Texas 78711

Utah (EPA Form), Division of Environmental Health, P.O. Box 45500, Salt Lake City, Utah 84145-0500

Vermont (State Form), Underground Storage Tank Program, Vermont AEC/Waste Management Division, State Office Building, Montpelier, Vermont 05602, 802/828-3395

Virginia (EPA Form), Virginia Water Control Board, P.O. Box 11143, Richmond, Virginia 23230-1143, 804/257-6685

Virgin Islands (EPA Form), 205(J) Coordinator, Division of Natural Resources Management, 14 F Building 111, Watergut Homes, Christiansted, St. Croix, Virgin Islands 00820

Washington (State Form), Underground Storage Tank Notification, Solid and Hazardous Waste Program, Department of Ecology, M/S PV-11, Olympia, Washington 98504-8711, 206/459-6316

West Virginia (EPA Form), Attention: UST Notification, Solid and Hazardous Waste, Ground Water Branch, West Virginia Department of Natural Resources, 1201 Greenbriar Street, Charleston, West Virginia 25311

Wisconsin (State Form), Bureau of Petroleum Inspection, P.O. Box 7969, Madison, Wisconsin 53707, 608/266-7605

Wyoming (EPA Form), Water Quality Division, Department of Environmental Quality, Herschler Building, 4th Floor West, 122 West 25th Street, Cheyenne, Wyoming 82002, 307/777-7781.

APPENDIX III TO PART 280— STATEMENT FOR SHIPPING TICKETS AND INVOICES

NOTE.— A Federal law (the Resource Conservation and Recovery Act (RCRA), as amended (Pub. L. 98-616)) requires owners of certain underground storage tanks to notify designated State or local agencies by May 8, 1986, of the existence of their tanks. Notifications for tanks brought into use after May 8, 1986, must be made within 30 days. Consult EPA's regulations, issued on November 8, 1985 (40 CFR part 280) to determine if you are affected by this law.

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APPENDIX B

FLORIDA ADMINISTRATIVE CODES CHAPTERS

62-761
AND
62-762

FAC 62-761

CHAPTER 62-761
Underground Storage Tank Systems

62-761.100	Intent
62-761.200	Definitions
62-761.210	Reference Standards
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62-761.410	Registration Fees
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62-761.510	Performance Standards for Existing Vehicular Fuel Petroleum Storage Tank Systems
62-761.520	Performance Standards for Other Existing Petroleum and Petroleum Product Storage Tank Systems (Non-Vehicular Fuels)
62-761.550	Performance Standards for New Hazardous Substance Storage Tank Systems
62-761.560	Performance Standards for Existing Hazardous Substance Storage Tank Systems
62-761.600	General Release Detection Standards
62-761.610	Release Detection Standards for Existing Vehicular Fuel Storage Tanks Greater Than 550 Gallons
62-761.620	Release Detection Standards for Other Regulated Substance Storage Tanks
62-761.630	Release Detection Standards for Integral Piping
62-761.640	Test Methods for Release Detection
62-761.680	Tightness Testing Standards
62-761.700	Repairs to Storage Tank Systems
62-761.710	Record Keeping
62-761.720	Inventory Requirements
62-761.730	Operating Requirements for Cathodic Protection
62-761.740	Certified Contractors
62-761.800	Out of Service and Closure Requirements
62-761.820	Discharge Response
62-761.840	Locally Administered Programs
62-761.850	Approval of Alternate Procedures
62-761.860	Approval of Storage Tank Systems and Release Detection Equipment
62-761.900	Forms

62-761.100 Intent. The purpose of this rule is to provide standards for the construction, installation, maintenance, registration, removal and disposal of underground storage tank systems, which consist of underground tanks and their on-site integral piping systems and associated release detection, which store regulated substances and which have individual storage tank capacities of greater than 110 gallons. This rule implements the

requirements of Chapter 376, Florida Statutes. Final agency action related to the functions which may be carried out by a locally administered program under contract with the Department pursuant to Section 376.3073, F.S., shall be taken by the Department.
Specific Authority 376.303, FS.
Law Implemented 376.303, FS.
History -- New 12-10-90, Formerly 17-761.100, Amended 7-30-96.

62-761.200 Definitions. The definitions found in Florida Statutes 376.301 are adopted herein, including those definitions for the terms "facility", "pollutant", and "discharge". In addition, the following words, phrases or terms used in this rule, unless the context indicates otherwise, shall have the following meaning:

(1) "Ammonia" includes all liquid organic amines and all inorganic liquid preparations which, when discharged, release free ammonia (NH_3), or ammonium ion (NH_4+).

(2) "Cathodic protection" means a method of preventing corrosion of a metal surface by making that surface the cathode of an electrochemical cell through the use of devices such as galvanic anodes or impressed current.

(3) "Cathodic protection tester" means a person who can demonstrate an understanding of the principles and measurements of all common types of cathodic protection systems as applied to buried or submerged metal piping and tank systems. At a minimum, such persons shall have education and experience in soil resistivity, stray current, structure-to-soil potential, and component electrical isolation measurements of buried metal piping and tank systems.

(4) "Certified Contractor" means a Pollutant Storage System Specialty Contractor certified by the Department of Professional Regulation to meet the requirements of Section 489.113, F.S.

(5) "Chlorine" includes all liquid organic and inorganic compounds in liquid form which, when discharged, may release free chlorine (Cl or Cl_2).

(6) "Compatible" means the ability of two or more substances to maintain their respective physical and chemical properties upon contact with one another for the design life of the storage tank system under conditions likely to be encountered in the storage tank system.

(7) "Composite tank" means a steel underground tank which has been coated with a fiberglass reinforced plastic composite, or other acceptable coating approved and built to specifications under UL 1746, ACT 100, or STI-F894-89.

(8) "Corrosion professional" means a person who, by reason of thorough knowledge of the physical sciences and the principles of engineering and mathematics acquired by a professional education and related practical experience, is qualified to engage in the practice of corrosion control on buried or submerged metal components of a storage tank system. Such a person shall be accredited or certified as being qualified by the National Association of Corrosion Engineers or be a registered professional engineer.

(9) "Dielectric material" means a material that does not conduct direct electrical current.

(10) "Discovery" means either actual knowledge or knowledge of facts which could reasonably lead to actual knowledge of the existence of a discharge or an unmaintained storage tank system.

(11) "Double walled tank" means an approved UL storage tank with 360° containment of a primary inner-tank that is also UL approved.

(12) "Existing storage tank system" means a storage tank system used to contain pollutants for which installation has begun before the effective date of this rule or which contains hazardous substances, for which installation has begun on or before June 30, 1992. Installation is considered to have commenced if:

(a) The owner or operator has obtained all federal, state, and local approvals or permits necessary to begin physical construction of the site or installation of the tank system; and

(b) Either a continuous on-site physical storage tank system construction or installation program has begun or the owner or operator has entered into contractual obligations, which cannot be cancelled or modified without substantial loss, for physical storage tank system construction at the site or installation of a storage tank system to be completed within a reasonable time.

(13) "Flow-through process tank" is a tank that forms an integral part of a production process through which there is a steady, variable, recurring, or intermittent flow of materials during the operation of the process. Flow-through process tanks do not include storage tanks used for the storage of regulated substances before their introduction into the production process or for the storage of finished products or by-products from the production process.

(14) "Hazardous substance storage tank system" means a storage tank system that contains a hazardous substance defined in Section 101(14) of the federal Comprehensive Environmental Response, Compensation and Liability Act of 1980 (but not including any substance regulated as a hazardous waste under Subtitle C of the Resource Conservation and Recovery Act), ammonia, chlorine, pesticides and their derivatives, or any mixture of such substances and petroleum or petroleum products, and which is not a petroleum underground storage tank system.

(15) "Heating oil" means any petroleum based fuel used in the operation of heating equipment, boilers, or furnaces.

(16) "Hydraulic lift tank" means a tank that holds hydraulic fluid for a closed-loop mechanical system used to operate lifts, elevators, and other similar devices.

(17) "In-service" means a storage tank system that contains regulated substances or has regulated substances regularly added to or withdrawn from the system.

(18) "Integral piping" means all continuous, on-site piping up to and including the dispenser shear valve or the union of the piping and dispenser, and all other valves, elbows, joints, flanges, and flexible connectors attached to a storage tank system through which regulated substances flow.

(19) "Liner" means an impervious material, excluding clay, that meets the performance standards of Rule 62-761.500(7), F.A.C., that is used as a method of secondary containment to prevent a discharge of any regulated substance from a storage tank system.

(20) "Liquid trap" means sumps, well cellars, and other traps used in association with oil and gas production, gathering and extraction operations (including gas production plants) to collect oil, water, and other liquids. These liquid traps may temporarily collect liquids for subsequent disposition or reinjection into a production or pipeline stream, or may collect and separate liquids from a gas stream.

(21) "Maintenance" means the normal operational upkeep to prevent a storage tank system from releasing regulated substances.

(22) "New hazardous substance storage tank system" means a hazardous substance storage tank system for which installation began on or after January 1, 1991.

(23) "New petroleum storage tank system" means a petroleum storage tank system for which installation began after June 30, 1992.

(24) "Non-residential" means that the storage tank system is not used at a dwelling.

(25) "Operational life" refers to the period from the start of installation of the storage tank system to the closure of the storage tank system.

(26) "Out of service" means a storage tank system that has been emptied of regulated substances and no longer has regulated substances regularly added to or withdrawn from the system, and that is intended to be returned to service within two years of taking the storage tank system out of service. The storage tank system is empty when all regulated substances have been removed so that no more than one inch in depth or 0.3 percent by weight of total system capacity of regulated substances remains in the storage tank system.

(27) "Overfill" is a discharge that occurs when a tank is filled beyond its capacity.

(28) "Pesticides" means all preparations, products, and substances included in the Department of Agriculture and Consumer Services' Rule 5E-2.002, F.A.C.

(29) "Petroleum storage tank system" means a storage tank system that contains petroleum or petroleum product or a mixture of petroleum or petroleum product with small quantities (de minimis, as per 40 CFR Section 280.12) of other regulated substances.

(30) "Pipe" means any hollow cylindrical or tubular conveyance which is constructed of approved non-earthen materials (e.g., cathodically protected metal, plastic or fiberglass) and through which regulated substances are designed to flow.

(31) "Pipeline facilities" are new and existing pipe rights-of-way and any associated equipment, gathering lines, facilities, or buildings.

(32) "Regulated substance" means (a) any pollutant, or (b) any substance defined in Section 101(14) of the

Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980 (but not including any substance regulated as a hazardous waste under Subtitle C of the Resource Recovery and Conservation Act), that is liquid at standard conditions of temperature and pressure (60 degrees Fahrenheit and 14.7 pounds per square inch absolute).

(33) "Release" means "discharge" as that term is defined in Chapter 376, F.S.

(34) "Release detection" means a method of determining whether a discharge of a regulated substance has occurred from the storage tank system into the environment or into the interstitial space between a storage tank system and its secondary containment.

(35) "Repair" means the repair or replacement of any damaged parts of a storage tank system to meet the standards contained in Rule 62-761.700, F.A.C.

(36) "Secondary Containment" means a system that is used to improve release detection and release prevention, and includes a double walled tank, a double walled integral piping system or a single walled tank or integral piping system that is protected by an outside liner. For cathodically protected tanks and integral piping, the secondary containment shall not interfere with the cathodic protection system.

(37) "Significant loss or gain" means a loss or gain of a regulated substance from a storage tank system which exceeds one percent of the storage system capacity, one percent of the total weekly output, or 50 gallons, whichever is greater.

(38) "Storage Tank System" means an underground storage tank with all integral piping and release detection components.

(39) "Tank" means an enclosed underground stationary device which is constructed primarily of approved, non-earthen materials that provides structural support, which is designed or used to store regulated substances, and the volume of which (including the volume of underground pipes connected thereto) is 10 percent or more beneath the surface of the ground.

(40) "Tightness test" means a precision test performed in accordance with Rule 62-761.680, F.A.C., in order to determine the integrity of a storage tank system by a tank tester registered with the Department of Professional Regulation under Section 489.113, F.S.

(41) "Underground area" means an underground room, such as a basement, cellar, shaft or vault, providing enough space for physical inspection of the exterior of the tank situated on or above the floor.

(42) "Unmaintained" means a storage system which has been emptied of regulated substances and no longer has regulated substances regularly added to or withdrawn from the system, and which is not returned or intended to be returned to in-service status within 2 years of its being in service.

(43) "Vehicular fuel" means a petroleum product used to fuel a motor vehicle, including but not limited to those used on and off roads, aircraft, rail and watercraft.

Specific Authority 376.303, FS.
Law Implemented 376.303, FS.

History -- New 12-10-90, Amended 5-4-92; 3-7-94, Formerly 17-761.200.

62-761.210 Reference Standards.

(1) Referenced standards are available for inspection at the Department of Environmental Protection's District and Tallahassee Offices and from the following sources:

(a) American Petroleum Institute (API), 1220 L Street, N.W. Washington, D.C. 20005, (202)682-8372;

(b) American Society for Testing and Materials (ASTM), 1916 Race Street, Philadelphia, Pennsylvania 19103 (215)299-5400;

(c) Association for Composite Tanks (ACT), 108 North State Street, Suite 720, Chicago, Illinois 60602, (301)235-6000;

(d) National Association of Corrosion Engineers (NACE), P.O. Box 218340, Houston, Texas 77218, (713)492-0535;

(e) National Fire Protection Association (NFPA), Batterymarch Park, Quincy, Massachusetts 02269, (800)344-3555;

(f) Petroleum Equipment Institute (PEI), Post Office Box 2380, Tulsa, Oklahoma 74101, (918)494-9696;

(g) Steel Tank Institute (STI), 570 Oakwood Road, Lake Zurich, Illinois 60047, (708)438-8265; and

(h) Underwriters Laboratories (UL), 333 Pfingsten Road, Northbrook, Illinois 60062, (708)272-8800.

(2) Titles of documents.

Specific references to documents listed in (a) through (i) below are made throughout this Chapter. Each of these documents or parts thereof are adopted and incorporated as standards only to the extent that they are specifically referenced in this Chapter.

(a) American Petroleum Institute Standards:

1. RP 1604, 1987 as supplemented March 6, 1989, "Removal and Disposal of Used Underground Petroleum Storage Tanks";

2. RP 1615, 1987 as supplemented March 6, 1989, "Installation of Underground Petroleum Product Storage Systems";

3. RP 1621, 1987 as supplemented March 6, 1989, "Bulk Liquid Stock Control at Retail Outlets";

4. RP 1631, 1987, "Interior Lining of Underground Storage Tanks";

5. RP 1632, 1987 as supplemented, March 6, 1989, "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems"; and

6. RP 1637, 1986 "Using the API Color-Symbol System to Mark Equipment and Vehicles for Product Identification at Service Stations and Distribution Terminals".

(b) American Society for Testing and Materials Specification D4021-86, "Standard Specification for Glass Fiber Reinforced Polyester Underground Petroleum Storage Tanks".

(c) Association for Composite Tanks ACT-100 "Specifications for the Fabrication of FRP Clad Underground Storage Tanks".

(d) Code of Federal Regulations, Title 40, Part 280.

(e) National Association of Corrosion Engineers:

1. Standard Number RP-0169-83 "Control of External Corrosion on Underground or Submerged Metallic Piping Systems" (1983); and

2. Standard Number RP-0285-85 "Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems" (1985).

(f) National Fire Protection Association: Standard Number 30, "Flammable and Combustible Liquids Code" (1987).

(g) Petroleum Equipment Institute Publication PEI/RP100-87 "Recommended Practices for Installation of Underground Liquid Storage Systems" (1987).

(h) Steel Tank Institute:

1. STI Specification for STI-P3 System of External Corrosion Protection of Underground Steel Storage Tanks, (1983);

2. STI R892-89, "Recommended Practice for Corrosion Protection of Underground Piping Networks Associated with Liquid Storage and Dispensing Systems", and;

3. STI F894-89, "Specification for External Corrosion Protection of FRP Composite Steel Underground Storage Tanks".

(i) Underwriters Laboratories Standards:

1. Standard 58 "Steel Underground Tanks for Flammable and Combustible Liquids" (1981);

2. "Standard 567, "Pipe Connectors for Flammable, Combustible and LP Gas";

3. UL Subject 971, "UL Listed Non-Metal Pipe";

4. Standard 1316, "Standard for Glass Fiber Reinforced Plastic Underground Storage Tanks for Petroleum Products"; and

5. Standard 1746, "Corrosion Protection Systems for Underground Storage Tanks" (1989).

Specific Authority 376.303, FS.
Law Implemented 376.303, FS.
History -- New 12-10-90, Formerly 17-761.210.

62-761.300 Applicability.

(1) The requirements of this Chapter apply to all owners and operators of facilities with an underground storage tank system that contains regulated substances.

(2) The following systems are exempt from the requirements of this Chapter:

(a) Any storage tank system holding any hazardous waste listed or identified under Subtitle C of the Resource Conservation and Recovery Act, or a mixture of such hazardous waste and other regulated substances;

(b) Any wastewater treatment tank system that is part of a wastewater treatment facility or an evaporation/degradation system for pesticide equipment rinse water regulated under Rule 62-660, F.A.C.;

(c) Equipment or machinery that contains regulated substances for operational purposes such as hydraulic lift or fluid tank systems and electrical equipment tank systems;

(d) Any storage tank system whose individual capacity is 110 gallons or less;

(e) Any storage tank system that contains small quantities (de minimus, as per 40 CFR Section 280.12) of regulated substances;

(f) Any emergency spill or overflow containment storage tank system that is emptied as soon as possible after use;

(g) Any agricultural storage tank system of 550 gallons or less capacity;

(h) Any storage tank system used for storing heating oil for consumptive use on the premises where stored;

(i) Any septic tank system;

(j) Any pipeline facility;

(k) Any surface impoundment, pit, pond, or lagoon;

(l) Any stormwater or wastewater collection system;

(m) Any flow-through process tank system;

(n) Any liquid trap or associated gathering lines directly related to oil or gas production and gathering operations;

(o) Any storage tank system situated in an underground area if the storage tank is situated upon or above the floor;

(p) Any residential storage tank system;

(q) Any facility covered by Section 376.011-376.21, F.S., except for marine fueling facilities with underground tank systems where the facility has no individual tank with a capacity greater than 30,000 gallons;

(r) Any storage tank system regulated by Chapter 377, F.S.;

(s) Any storage tank system storing solid or gaseous pollutants;

(t) Any storage tank system that is part of an emergency generator system at nuclear power generation facilities regulated by the Nuclear Regulatory Commission under 10 CFR Part 50 Appendix A; or

(u) Airport hydrant piping regulated by Rule 62-762, F.A.C.

(3) The requirements of this rule shall supercede Chapter 62-61, F.A.C., upon the effective date of this rule.

Specific Authority 376.303, FS.
Law Implemented 376.303, FS.
History-- New 12-10-90, Formerly 17-761.300.

62-761.400 Registration. The owner of any in-service, out of service or unmaintained storage tank system which has a capacity of greater than 110 gallons shall register the storage tank system with the Department on DEP Form 62-761.900(2). A complete registration form shall be submitted to the Department at least 10 days before the start of installation. The owner of an existing storage tank system not previously required to register with the Department shall register the storage tank system no later than 90 days after the effective date of this Chapter.

Specific Authority 376.303, FS.
Law Implemented 376.303, FS.
History -- New 12-10-90, Formerly 17-761.400.

62-761.410 Registration Fees.

(1) Registration fees are due from the storage tank owner as indicated in this subsection for all registered in-service, out of service and unmaintained facilities. Pursuant to federal law, federally owned or operated facilities are not required to pay registration fees.

(2) A registration fee of $50.00 per tank shall be submitted for each initial registration of a storage tank system. The fee

shall be paid within 30 days after receipt of notification by the Department.

(3) A renewal fee of $25.00 per tank for each storage tank system not meeting the closure requirements in Rule 62-761.800, F.A.C., shall be submitted by July 1 each year.

(4) A replacement fee of $25.00 per tank shall be submitted for each tank that is replaced for the purpose of facility upgrading. The fee shall be paid within 30 days after receipt of notification by the Department.

(5) A late fee of $20.00 per tank shall be collected for any renewal that is received after July 31.

(6) Each facility shall receive a registration placard upon payment of all applicable fees. The placard shall be displayed in plain view in the office, kiosk or other suitable location at the facility where the tanks are located.

Specific Authority 376.303, FS.
Law Implemented 376.303, FS.
History -- New 12-10-90, Formerly 17-761.40.

62-761.450 Notification.

(1) The owner or operator of a storage tank system shall notify the Department of the following items on Form 62-761.900(2):

(a) The date and method of closure at least 30 days before closure of any storage tank system;

(b) Any change in ownership, no later than 30 days after ownership has been transferred, of any storage tank system. Notice of change of ownership shall be provided by the transferor. The notice shall include a copy of the bill of sale or letter of acceptance by the transferee;

(c) Replacement or upgrading of any storage tank system at least 10 days before replacement or upgrading occurs, except for emergency replacements of tanks, integral piping or release detection equipment necessitated by a discharge. Notification of emergency replacements shall be provided within 10 days of the emergency replacement.

(d) Placement of a tank that is in service to out of service status at least 30 days before the out of service status begins; and

(e) Any other change in facility status, including changes in the type of regulated substances stored, within 30 days of the change. A change within the same type or blend of regulated substances need not be reported (e.g. regular unleaded to premium unleaded gasoline).

(2) Within 30 days after installation or replacement of any storage tank system, the certified contractor shall submit a certification form to the Department on Form 62-761.900(5).

(3) The owner or operator of a storage tank system shall notify the Department of the establishment of or changes to the method of demonstrating financial responsibility as required in Rule 62-761.480, F.A.C., within 30 days on Form 62-761.900(2).

(4) Owners or operators shall provide at least 24 hours notice, verbal or written, to the Department or to a locally administered program under contract with the Department, prior to

the start of a storage tank system closure, upgrading or installation.

Specific Authority 376.303, FS.
Law Implemented 376.303, FS.
History -- New 12-10-90, Formerly 17-761.450.

62-761.460 Reporting. The owner or operator shall report the following items to the Department and, if the storage tank system is in a county with a locally administered program under contract with the Department, to that locally administered program on Form 62-761.900(1):

(1) Receipt of any tightness test results that exceed allowable tolerances within 10 days after the date of receipt of the test results, and results of any confirmation tightness test within 30 days of the date of the first test. The report shall be accompanied by a copy of the tightness test report;

(2) Any spill, overfill or other discharge of regulated substances from a storage tank system that equals or exceeds its reportable quantities under the federal Comprehensive Environmental Response, Compensation and Liability Act of 1980, 40 CFR Section 302, within one working day of discovery of the discharge, or any spill, overfill or other discharge of petroleum or petroleum product that results in a release to the environment that exceeds 25 gallons or that causes a sheen on surface water;

(3) Suspected releases within one working day of discovery. Suspected releases shall include:

(a) The discovery by owners and operators or others of released regulated substances from an underground storage tank system at the facility or in the surrounding area (such as the presence of free product or vapors in soils, basements, sewer and utility lines, and nearby surface water) in excess of the quantities set forth in subsection (2);

(b) Unusual operating conditions observed by owners and operators (such as the erratic behavior of product dispensing equipment, the sudden loss of product from the underground storage tank system, or any unexplained presence of water in the tank), unless system equipment is found to be defective but not leaking, and is immediately repaired or replaced; or

(c) Monitoring results from a release detection method required under Rule 62-761.600 through 62-761.640, F.A.C., or from a closure assessment required under Rule 62-761.800(3), F.A.C., that indicate a release may have occurred, including but not limited to the positive response of a leak detection device, a significant increase in contamination levels above background, a sheen, layer or odor of regulated substances in a ground water sample, a sheen or layer of regulated substances on surface water, an exceedance of ground or surface water standards, or vapor levels in excess of those allowed by Rule 62-761.640(2)(e), F.A.C., unless:

1. The monitoring device is found to be defective, and is immediately repaired and recalibrated, or is replaced and calibrated, and additional monitoring does not confirm the initial result; or

2. In the case of inventory control, the investigation conducted pursuant to Rule 62-761.720(2), F.A.C., does not confirm the initial result; or

(d) Manual tank gauging results for tanks of 550 gallons or less conducted pursuant to Rule 62-761.640(5), F.A.C., if the variation between beginning and ending measurements exceeds 10 gallons for any weekly test or 5 gallons for the average of 4 consecutive weekly tests.

Specific Authority 376.303, FS.
Law Implemented 376.303, FS.
History -- New 12-10-90, Formerly 17-761.450.

62-761.480 Financial Responsibility.

(1) The owner or operator of a storage tank system containing petroleum products shall demonstrate to the Department the ability to pay for facility cleanup and third-party liability resulting from a discharge at the facility. Such demonstration shall be made in accordance with Code of Federal Regulations, Title 40, Part 280, Subpart H. Owners or operators of storage tank systems containing hazardous substances shall comply with any applicable federal financial responsibility requirements.

(2) Financial responsibility may be met by participation in the Florida Petroleum Liability Insurance and Restoration Program.

(3) Notwithstanding the owner's or operator's financial responsibility status, the owner or operator shall, in accordance with Chapter 376 and 403, F.S., be liable for any discharge at the facility.

Specific Authority 376.303, 376.309, FS.
Law Implemented 376.303, 376.309, FS.
History -- New 12-10-90, Formerly 17-761.480.

62-761.500 Performance Standards for New Storage Tank Systems. To prevent releases from structural failure, corrosion, spills or overfills for as long as the storage tank system is used to store regulated substances, all owners and operators of new storage tank systems shall comply with the requirements of this section. All new storage tank systems shall be made of or lined with materials that are compatible with the regulated substance stored in the system.

(1) Tanks. All new tanks except for hazardous substance storage tank, installed at a facility after June 30, 1992, shall be constructed with secondary containment and shall meet the following standards:

(a) All new tanks shall be constructed of one or more of the following materials and in accordance with the listed Referenced Standards:

1. Fiberglass reinforced plastic listed and approved in accordance with UL Standard 1316 and ASTM Standard D4021-86 or certified by a nationally recognized laboratory that these standards are met; or

2. Cathodically protected coated steel listed and approved in accordance with UL Standard 1746, STI Specification for STI-P3

System of External Corrosion Protection of Underground Steel Storage Tanks, NACE Standard RP-0285-85 or certified by a nationally recognized laboratory that these standards are met, provided that:

a. The tank is coated with a suitable dielectric material;

b. Any field installed cathodic protection system is designed by a corrosion professional;

c. Any impressed current system is designed to allow for a determination of current operating status; and

d. All cathodic protection systems are operated and maintained in accordance with Rule 62-761.730, F.A.C.; or

3. Steel coated with a fiberglass reinforced plastic composite listed and approved in accordance with UL Standard 1746, ACT-100, STI-F894-89 or certified by a nationally recognized laboratory that these standards are met; or

4. Any other material, design, construction or corrosion protection as determined by the Department to be sufficient to prevent any discharge of regulated substance. The determination shall be made in accordance with Rule 62-761.860, F.A.C.

(b) Any new tank constructed of an approved material as established in this subsection which is manufactured with previously used or remanufactured components shall be certified by Underwriters Laboratory or by a comparable certified product testing laboratory before being installed. The provisions of Rule 62-761.860, F.A.C., shall apply to the requirements of this subparagraph.

(c) Any tank which is excavated and removed during its useful life and is intended to be placed back in service shall meet the performance standards of this subsection and shall be recertified and warranted by the original manufacturer or recertified by the successor who shall confirm all original warranties before the tank is installed. Proof of recertification shall be provided to the Department no later than 10 days after completion of installation. The provisions of Rule 62-761.850, F.A.C., do not apply to the requirements of this paragraph.

(2) Integral Piping. All integral piping in contact with soil installed at a facility after the effective date of this rule shall be constructed with secondary containment. Integral piping in contact with soil shall be constructed of one or more of the following materials and in accordance with the following referenced standards:

(a) Fiberglass reinforced plastic in accordance with the UL 971 and UL 567;

(b) Cathodically protected coated steel in accordance with API RP 1632, NACE RP-0169-83, and STI R892-89 provided that:

1. The piping is coated with a suitable dielectric material;

2. Any field installed cathodic protection system is designed by a corrosion professional;

3. Any impressed current system is designed to allow for a determination of operating status; and

4. All cathodic protection systems are operated and maintained in accordance with Rule 62-761.730, F.A.C.

(c) Other material, design, construction or corrosion protection as determined by the Department to be sufficient to

prevent any discharge of regulated substance. The determination shall be made in accordance with Rule 62-761.860, F.A.C.

(3) Installation. All tanks, integral piping, secondary containment, and release detection components which are connected to or associated with the tank or integral piping system shall be installed according to the manufacturer's instructions by a certified contractor. A tightness test which meets the requirements of Rule 62-761.680, F.A.C., and which does not exceed allowable tolerances shall be performed on the storage tank and integral piping before any regulated substance is dispensed from the storage tank system.

(4) Siting.

(a) No new storage tank system shall be installed within 50 feet of any existing potable water supply well. This prohibition shall not apply to the replacement of an existing storage tank system with a system of the same capacity or less within the same excavation, provided that the replacement storage tank system is installed with secondary containment.

(b) Secondary containment shall be installed for any new or replacement storage tank system placed within:

1. 300 feet of any existing potable water supply well serving a community or a nontransient, noncommunity water system as defined in Section 403.852, F.S.; or

2. 100 feet of any existing potable water supply well serving any private, other public or noncommunity water system as defined in Section 403.852, F.S. or Section 403.862, F.S.

(5) Spill Containment and Overfill Protection.

(a) All owners or operators shall ensure that discharges from spills or overfills do not occur. The owner or operator shall ensure that the volume available in the tank is greater than the volume of regulated substances to be transferred to the tank before the transfer is made and shall insure that the transfer is continuously monitored to prevent overfilling and spilling.

(b) Owners or operators of storage tank systems shall use a spill containment system or other spill containment equipment of sufficient volume to prevent the discharge of a regulated substance when the transfer hose is detached from the fill pipe, and overfill protection to automatically shut off flow to the tank when the tank is more than 95% full or to restrict flow to the tank when the tank is more than 90% full.

(6) Dispensers. For all storage tank systems installed, upgraded, or replaced after the effective date of this rule, liners shall be installed directly beneath dispensers at the terminus of the integral piping to contain discharges caused by dispenser maintenance activities. Dispenser liners shall be designed and constructed to provide access for periodic examination and removal of collected product.

(7) Liners.

(a) Any synthetic liner used as secondary containment must be puncture resistant, have a permeability rate to the regulated substances stored of $1x10^{-7}$ cm/sec. or less, and be of a type approved by the Department pursuant to Rule 62-761.860, F.A.C. Criteria to be reviewed by the Department for approval of a

synthetic liner shall include thickness, strength, durability, and compatibility.

(b) Any concrete liner shall be designed to be product tight, sealed and of sufficient thickness and strength to prevent a discharge during its operating life.

(c) All liners shall be designed and installed to direct any discharge from a storage tank system to a monitoring point within the liner.

Specific Authority 376.303, FS.
Law Implemented 376.303, FS.
History -- New 12-10-90, Amended 5-4-92, Formerly 17-761.500.

62-761.510 Performance Standards for Existing Vehicular Fuel Petroleum Storage Tank Systems. No later than December 31 of the appropriate year shown in Table I below, all existing vehicular fuel petroleum storage tank systems or components thereof which are not constructed with secondary containment and of materials approved for new storage tank system construction shall be replaced with a storage tank system or component meeting the requirements for new storage tank systems under Rule 62-761.500, F.A.C., or permanently closed in accordance with Rule 62-761.800, F.A.C.

(1) A tank which is constructed with corrosion resistant materials or was initially installed with cathodic protection or has been internally lined before June 30, 1992 shall install secondary containment by December 31, 2009.

(2) Integral piping which is constructed with corrosion resistant materials or was initially installed with cathodic protection before June 30, 1992 in accordance with Table I and which is installed with in-line leak detectors with automatic shutoff by December 31, 1998, in accordance with Rule 62-761.630(2), F.A.C., is not required to install secondary containment until December 31, 2009.

(3) Integral piping shall be replaced, dispenser liners installed, overfill protection and spill containment equipment, and secondary containment installed in accordance with Rule 62-761.500, F.A.C., by no later than December 31 of the appropriate year shown in Table I.

TABLE I

Year Tank or Integral Piping Installed	1989	1992	1995	1998	2009
*Before 1970	OR	B		AL	E
*1970 - 1975		SBL		A	E
*1976 - 1980		B	SL	A	E
*1981 - 09/01/84		B		SAL	E
*After 09/01/84		B		SAL	E
Other		B		SAL	E

*All systems with a capacity of between 110 gallons to 550 gallons, all marine fueling facilities and those systems of greater than 550 gallon capacity that use less than 1,000 gallons per month or 10,000 gallons per year.

O = Retrofit for corrosion protection under Chapter 17-61, F.A.C.
A = Secondary containment of integral piping or in-line leak detectors with automatic shutoff for integral piping protected from corrosion.
B = Spill containment.
L = Dispenser liners, overfill protection, and replacement of swing joints or flex connectors not protected from corrosion.
S = Secondary containment for storage tanks and integral piping not protected from corrosion.
E = Secondary containment for existing storage tanks systems protected from corrosion.
Specific Authority 376.303, FS.
Law Implemented 376.303, FS.
History -- New 12-10-90, Amended 5-4-92, Formerly 17-761.510.

62-761.520 Performance Standards for Other Existing Petroleum and Petroleum Product Storage Tank Systems (Non-Vehicular Fuels). No later than December 31, 1998, all existing petroleum product storage tank systems, excluding those containing vehicular fuel, shall:

(1) If not protected from corrosion, comply with the requirements for new storage tank systems under Rule 62-761.500, F.A.C., and install secondary containment; or

(2) If protected from corrosion, comply with the requirements for new storage tank systems under Rule 62-761.500, F.A.C., and install secondary containment by December 31, 2009; or

(3) Permanently close in accordance with Rule 62-761.800, F.A.C.

Specific Authority 376.303, FS.
Law Implemented 376.303, FS.
History -- New 12-10-90, Amended 5-4-92, Formerly 17-761.520.

62-761.550 Performance Standards for New Hazardous Substance Storage Tank Systems.

(1) Any new hazardous substance storage tanks and integral piping shall comply with the standards of Rule 62-761.500, F.A.C., and shall have secondary containment.

(2) Release detection for new hazardous substance storage tank systems shall be installed using one of the interstitial monitoring options contained in Rule 62-761.640(3) or (4), F.A.C.

Specific Authority 376.303, FS.
Law Implemented 376.303, FS.
History -- New 12-10-90, Formerly 17-761.550.

62-761.560 Performance Standards for Existing Hazardous Substance Storage Tank Systems.

(1) Any existing hazardous substance storage tank system shall be upgraded by December 31, 1998 to meet the standards of Rule 62-761.500, F.A.C., except that any such upgrading shall incorporate secondary containment of the hazardous substance storage tank system.

(2) Release detection for existing hazardous substance storage tank systems shall, unless the system has been upgraded in accordance with Rule 62-761.560(1), F.A.C., be installed using one of the monitoring options contained in Rule 62-761.640, F.A.C., in accordance with the compliance schedule referenced under Table II of Rule 62-761.600, F.A.C.

Specific Authority 376.303, FS.
Law Implemented 376.303, FS.
History -- New 12-10-90, Formerly 17-761.560.

62-761.600 General Release Detection Standards.

(1) Owners and operators of all storage tank systems shall provide a method, or combination of methods, of release detection that:

(a) Can detect a discharge from the tank and integral piping which shows a significant increase in contamination levels above background and which is capable of detecting a significant increase in contamination levels above background;

(b) Is installed, calibrated, operated and maintained in accordance with the manufacturer's instructions, including routine maintenance and service checks for operability; and

(c) Meets the performance requirements in Rule 62-761.640, F.A.C. The owner and operator shall retain any performance claims and their manner of determination, described in writing by the equipment manufacturer or installer, for the life of the storage tank system.

(2) Any storage tank system which cannot provide release detection in accordance with this section shall be closed in accordance with Rule 62-761.800, F.A.C., by the date upon which release detection is to be provided.

(3) Release detection for all new petroleum or hazardous substance storage tank systems shall be provided upon installation. Release detection for all existing storage tank systems, except for vehicular fuel storage tank systems of greater than 550 gallons capacity, shall be provided by December 31 of the year shown in Table II. Release detection for existing vehicular fuel petroleum storage tank systems of greater than 550 gallons capacity shall be installed upon the effective date of this rule.

TABLE II

Year Storage Tank System Installed	Year Release Detection Required 1990	1991	1992	1993
Before 1970 or unknown	P/RD			
1970 - 1974	P	RD		
1975 - 1979	P		RD	
1980 - 1990	P			RD

P = Installation of Release Detection for Pressurized Piping
RD = Installation of Release Detection for Tanks and Suction Piping.

(4) Any storage tank system that stores fuel solely for use by emergency power generators shall not be subject to the release detection standards of Rule 62-761.600 through 62-761.640, F.A.C.

(5) Release detection shall be monitored for evidence of a discharge from the storage tank system at least every 30 days.

(6) Monitoring wells installed prior to the effective date of this Chapter shall, by December 31, 1998, meet the standards in Rule 62-761.640(1), F.A.C. Monitoring wells which cannot meet the standards in Rule 62-761.640(1), F.A.C., by that date shall be properly closed in accordance with Rule 62-532.500(4), F.A.C., and replaced with an approved method of release detection.

Specific Authority 376.303, FS.
Law Implemented 376.303, FS.
History -- New 12-10-90, Formerly 17-761.600.

62-761.610 Release Detection Standards for Existing Vehicular Fuel Storage Tanks Greater Than 550 Gallons.

All existing vehicular fuel petroleum storage tanks of greater than 550 gallons capacity shall be equipped with one or more of the following release detection systems:

(1) An interstitial leak detection system between the walls of a double-walled tank;

(2) A single monitoring well or vapor detector located within a liner which meets the standards in Rule62-761.500(7) F.A.C., provided the well or detector is placed at the low point of the liner so that collected liquids will drain to the monitoring point;

(3) A continuously operating release detection system placed around a tank in an excavation or in the secondary containment in accordance with the manufacturer's requirements;

(4) A network of at least four monitoring wells located in a tank excavation;

(5) A ground water monitoring plan, spill prevention control and countermeasure plan or other similar release detection method, if a demonstration can be made that the ground water monitoring plan, spill prevention control and countermeasure plan or release detection method can detect a 0.2 gallon per hour leak rate or a release of 150 gallons within a month with a

probability of detection of 0.95 and a probability of false alarm of 0.05. Any method of release detection contained in this subsection which was installed before December 22, 1990, need not be capable of detecting the leak rate or quantity specified in this subsection until the applicable date specified under the schedule in Table II in Rule 62-761.600, F.A.C.: or

(6) An automatic tank gauge system used in conjunction with two monitoring wells located in the tank excavation.

Specific Authority 376.303, FS.
Law Implemented 376.303, FS.
History -- New 12-10-90, Formerly 17-761.610.

62-761.620 Release Detection Standards for Other Existing Regulated Substance Storage Tanks.

All existing regulated substance storage tanks, except for existing vehicular fuel petroleum storage tanks shall, in accordance with the storage tank system release detection schedule established in Table II of Rule 62-761.600, F.A.C., be equipped with one or more of the following release detection systems:

(1) An interstitial leak detection system between the walls of a double-walled tank;

(2) A single monitoring well or vapor detector located within a liner which meets the standards in Rule 62-761.500(7), F.A.C.;

(3) A continuously operating release detection system placed around a tank in an excavation or in the secondary containment in accordance with the manufacturer's requirements;

(4) A network of at least two monitoring wells within the excavation for a single tank of 2000 gallons or less, or at least four monitoring wells within the excavation for a single tank of greater than 2000 gallons or for two or more tanks;

(5) Manual tank gauging for tanks of 550 gallons or less nominal capacity;

(6) An automatic tank gauge system used in conjunction with two monitoring wells located in the tank excavation; or

(7) Any other type of release detection method that can detect a 0.2 gallon per hour leak rate or a release of 150 gallons within a month with a probability of detection of 0.95 and a probability of false alarm of 0.05.

Specific Authority 376.303, FS.
Law Implemented 376.303, FS.
History -- New 12-10-90, Formerly 17-761.620

62-761.630 Release Detection Standards for Integral Piping.

(1) All integral piping in contact with soil installed after the effective date of this rule shall be equipped with secondary containment. Release detection for any such piping shall consist of:

(a) Interstitial monitoring of double walled piping capable of detecting a discharge through the inner wall, or;

(b) Interstitial monitoring for integral piping with liners:

1. Capable of detecting a discharge through the inner wall; and

2. Constructed so ground water, rainfall or soil moisture will not render the testing or sampling method used inoperative so that a discharge could go undetected for more than 30 days.

(2) After December 31, 1998, in accordance with Table I, single-walled corrosion protection integral piping shall have in line leak detectors that meet the test methods for release detection in Rule 62-761.640(7), F.A.C.

Specific Authority 376.303, FS.
Law Implemented 376.303, FS.
History -- New 12-10-90, Formerly 17-761.630.

62-761.640 Test Methods for Release Detection. Release detection for tanks and, if applicable, integral piping used to meet the requirements of this Chapter shall consist of one of the following methods:

(1) Ground water monitoring.

(a) Monitoring for regulated substances in the ground water may be conducted for regulated substances which are immiscible in water and have a specific gravity of less than one. Any continuous monitoring devices or manual methods used for sampling in monitoring wells shall be capable of detecting the presence of any amount of free product, including a sheen, on the top of the ground water or a significant increase in contamination levels above background.

(b) Monitoring wells may be used in areas where ground water is never less than four feet from the ground surface during high water periods and never more than 18 feet from the ground surface during low water periods, except for monitoring wells installed before the effective date of the rule that are less than 25 feet deep, and in areas where the hydraulic conductivity of the soils between the storage tank system and the monitoring wells or devices is not less than 0.01 cm/sec (e.g. the soil should consist of gravel, coarse to medium sands, coarse silts or other permeable materials).

(c) Monitoring wells shall be constructed and installed by a licensed water well contractor when required by Rule 62-531, F.A.C.

(d) The area within and immediately below the storage tank system excavation zone shall be assessed to insure that the requirements of this subsection are capable of being complied with and to establish the number and positioning of monitoring wells necessary to detect releases from any portion of the tank or tanks that routinely contain regulated substances.

(e) Any monitoring well constructed and installed to meet the requirements of this subsection shall:

1. Be a minimum of two inches in interior diameter;
2. Be slotted from the bottom to two feet below ground surface;
3. Have a minimum slot size of .010 inch;
4. Be completed by backfilling with appropriate clean sand or gravel filter pack to prevent blockage of the slots;
5. Be constructed of schedule 40 PVC or other material which is compatible to the regulated substance stored;

6. Be sealed into the bore hole from the surface to the top of the filter pack plug with neat cement grout or other equivalent materials. Bentonite slurry grouts shall not be used;
7. If placed below grade, be equipped with a manhole cover with a one inch minimum grade increase above the surrounding surface;
8. Unless the monitoring well is aboveground with an extended exterior casing, be equipped with a minimum six inch diameter manhole;
9. Be equipped with a locking watertight cap marked in accordance with API RP 1615 and be kept locked at all times except when being sampled;
10. Extend at least five feet below the normal water level but no deeper than 20 feet from ground surface, unless such a depth penetrates a confining layer below the tank excavation, in which case a ground water monitoring well shall be placed above the confining layer, or extend to within six inches of the bottom of a liner or a confining layer. Any well that penetrates a confining layer shall immediately be properly abandoned pursuant to Rule 62-532, F.A.C.; and
11. Be properly developed before initial sampling.

(2) Vapor monitoring. Vapor monitoring may be conducted using vapor detection wells placed within the tank excavation backfill, provided:

(a) The material used as backfill is sufficiently porous to readily allow diffusion of vapors into the excavation from a discharge;

(b) The regulated substance being stored is sufficiently volatile to result in a vapor level that is detectable by a monitoring device inserted into the vapor detection wells in the event of a discharge;

(c) The measurement of vapors by the vapor detection wells is not rendered inoperative by ground water, rainfall or soil moisture or other known interferences so that a discharge could go undetected for more than 30 days;

(d) The level of background contamination in the excavation and backfill will not interfere with the method used to detect a discharge;

(e) The vapor detection wells are designed, operated and maintained to detect;

1. A vapor concentration of 500 parts per million total petroleum hydrocarbons or less for storage tank systems containing gasoline or equivalent petroleum products;
2. A vapor concentration of 50 parts per million total petroleum hydrocarbons or less for storage tank systems containing kerosene, diesel fuel or other equivalent petroleum products;
3. Concentrations of hazardous substances or their constituents which would indicate that a release occurred for hazardous substance storage tank systems; and
4. Any significant increase in concentration above background of the regulated substance stored, any indicator constituent thereof, or any tracer compound used for enhancement of release detection; and

5. The vapor sample collection method must be representative of the entire air column of the vapor monitoring well; and

(f) With the exception of the water level requirements of this section, the vapor detection wells meet the construction standards for ground water monitoring wells or are otherwise approved by the Department.

(3) Interstitial monitoring for double walled tanks. Interstitial monitoring for double walled tanks shall be capable of detecting a discharge through the inner wall.

(4) Interstitial monitoring for tanks with liners. Interstitial monitoring for tanks equipped with liners shall:

(a) Be capable of detecting a discharge through the inner wall;

(b) Be constructed so ground water, rainfall or soil moisture will not render the testing or sampling method used inoperative so that a discharge could go undetected for more than 30 days; and

(c) In the event monitoring wells are used, meet the construction standards for ground water monitoring wells.

(5) Manual tank gauging for tanks of 550 gallons or less shall meet the following requirements:

(a) Tank liquid level measurements shall be taken at the beginning and ending of a period of at least 36 hours during which no liquid is added to or removed from the tank;

(b) Level measurements shall be based on an average of two consecutive stick readings taken at both the beginning and ending of the period; and

(c) The equipment used shall be capable of measuring the level of product over the full range of the tank's height to the nearest one-eighth of an inch.

(6) Automatic tank gauge systems shall be capable of detecting 0.2 gallons per hour leak rate with a probability of detection of 0.95 and a probability of false alarm of 0.05.

(7) In line leak detectors shall alert the owner or operator of the presence of a discharge by shutting off the flow of regulated substances and by triggering a high intensity audible or visual alarm. It shall be capable of detecting discharges of 0.3 gallons per hour at a pressure of ten pounds per square inch within one hour. An annual test of the detector shall be conducted in accordance with the manufacturer's requirements.

(8) Applicable tank release detection methods. Any of the external methods used for tank release detection may be used for integral piping if they are designed to detect a discharge from any portion of the integral piping.

Specific Authority 376.303, FS.
Law Implemented 376.303, FS.
History -- New 12-10-90, Formerly 17-761.640.

62-761.680 Tightness Testing. Tank and integral piping tightness testing must be capable of detecting a 0.1 gallon per hour leak rate with a probability of detection of 0.95 and a probability of false alarm of 0.05 from any portion of the tank and integral piping that routinely contains product while accounting for the effects of thermal expansion or contraction of

the product, vapor pockets, tank deformation, evaporation or condensation, and the location of the water table.

Specific Authority 376.303, FS.
Law Implemented 376.303, FS.
History -- New 12-10-90, Formerly 17-761.680.

62-761.700 Repairs to Storage Tank Systems.

(1) In the event any component of a storage tank system is discovered to have discharged or contributed to the discharge of a regulated substance, that component shall be isolated from the system, if possible, and not used until the component has been repaired or replaced. If the storage tank system cannot be operated in compliance with this chapter without the component, the storage tank system shall not be operated until the component has been repaired or replaced. If a tank has discharged or has contributed to the discharge of a regulated substance, that tank shall be taken out of service until the tank has been repaired or replaced.

(2) All repairs to storage tank systems shall be made in a manner which will prevent any discharge from the storage tank system due to structural failure or corrosion for the remaining useful life of the storage tank system.

(3) All repairs to storage tank systems shall be made in accordance with NFPA Standard 30 or other applicable reference standards.

(4) All repairs to fiberglass reinforced plastic tanks shall be made by an authorized representative of the tank manufacturer or its successor or in accordance with a code of practice developed by a nationally recognized trade association or an independent testing laboratory.

(5) All pipe sections and fittings from which a regulated substance has been discharged or which is otherwise damaged shall be replaced. Fiberglass pipe sections and fittings may, instead of replacement, be repaired in accordance with manufacturer's specifications.

(6) All repaired components of a storage tank system shall be tightness tested before being placed back in service. Integral piping shall be tightness tested before being placed back into service whenever dispensers connected to that piping are replaced.

(7) Within six months of the repair of any cathodically protected storage tank system, the cathodic protection shall be tested in accordance with Rule 62-761.730, F.A.C., to ensure its proper operation.

(8) Owners and operators shall maintain records of any repairs, excluding routine maintenance, to a storage tank system for the remaining life of the system.

(9) A tank may be repaired with internal lining if:

(a) The internal lining is installed in accordance with the requirements of API RP 1631, and documentation is available from the installer that demonstrates these requirements have been met;

(b) Within 10 years after the installation of internal lining, and every five years thereafter, the lined tank is inspected internally and found to be structurally sound with the

internal lining still performing in accordance with original design specifications; and

(c) A tightness test which meets the requirements of Rule 62-761.680, F.A.C., and which does not exceed allowable tolerances shall be performed on the tank and integral piping before the tank is placed back into service and every five years after installation of the internal lining.

(10) A tank my be repaired with internal lining and cathodic protection if:

(a) The internal lining is installed in accordance with the requirements of API RP 1631,

(b) The cathodic protection system meets the requirements of Rule 62-761.500(1)(a)2.b., c. and d., F.A.C., and

(c) A tightness test that meets the requirements of Rule 62-761.680, F.A.C., and which does not exceed allowable tolerances is performed before the tank and integral piping is placed back into service and every five years after installation.

Specific Authority 376.303, FS.
Law Implemented 376.303, FS.
History -- New 12-10-90, Amended 5-4-92, Formerly 17-761.700.

62-761.710 Record Keeping.

(1) All records required to be kept pursuant to this Chapter shall, unless otherwise specified in the text of those rules, be maintained for two years and shall be available for inspection by the Department at the facility. If records are not kept at the facility they shall be available at the facility or other location acceptable to the Department upon five working days notice. Records of the following are required:

(a) Measurements and reconciliations of inventory;

(b) Results of examinations of monitoring wells and other release detection systems;

(c) Dates of upgrading or replacement of existing storage tank systems;

(d) Results of maintenance examinations of storage tank systems;

(e) Results of all tightness tests of storage tank systems;

(f) Results of tests of integral piping;

(g) Descriptions and dates of repairs;

(h) Closure assessment reports if the location continues as a facility;

(i) Release detection equipment performance claims as specified in Rule 62-761.600(1)(c), F.A.C.; and

(j) Certification of Financial Responsibility on Form 62-761.900(3).

Specific Authority 376.303, FS.
Law Implemented 376.303, FS.
History -- New 12-10-90, Formerly 17-761.710.

62-761.720 Inventory Requirements.

(1) Owners or operators shall maintain inventory records for each tank that contains vehicular fuel. Inventory records shall be reconciled weekly. Unless a more frequent recording period is desired, the following information shall be recorded each week:

(a) The type of vehicular fuel;

(b) Physical inventory;

(c) Inputs and outputs of vehicular fuel; and

(d) Amount of water in the tank.

(2) Losses or gains from each recording period shall be averaged. For any average which indicates a significant loss or gain, the owner or operator shall investigate the cause of any discrepancy. The investigation shall not stop until the source of the discrepancy has been found, using the following investigative procedure:

(a) Inventory, input, and output records shall be checked for arithmetical error;

(b) Inventory shall be checked for error in measurement;

(c) If the significant loss or gain is not reconcilable by steps (a) and (b), or cannot be affirmatively demonstrated to be the result of theft, the accessible parts of the storage system shall be checked for damage or leaks;

(d) Monitoring wells and release detection systems shall be checked for signs of a discharge;

(e) Calibration of the inventory measuring system and any dispensers shall be checked; and

(f) If the investigation does not reveal the source of the inventory discrepancy and if such discrepancy continues for three consecutive weeks, or if the Department determines it to be necessary, the entire storage tank system shall be tightness tested in accordance with the manufacturer's guidelines and Rule 62-761.680, F.A.C.

(3) Owners and operators of tanks equipped with secondary containment are exempt from inventory requirements of this section for those tanks.

Specific Authority 376.303, FS.
Law Implemented: 376.303, FS.
History -- New 12-10-90, Formerly 17-761.720.

62-761.730 Operating Requirements for Cathodic Protection.

(1) All cathodic protection systems shall be operated and maintained to provide continuous corrosion protection to the metal components of those portions of the tank and integral piping in contact with the ground.

(2) All storage tank systems equipped with any type of cathodic protection must be inspected and tested by a corrosion professional or a cathodic protection tester within six months of installation and at least every three years thereafter in accordance with the criteria contained in NACE RP-0285-85.

(3) All storage tank systems equipped with impressed current cathodic protection shall be inspected every 60 days to ensure the cathodic protection is functioning in accordance with design criteria.

(4) All owners or operators of storage tank systems using any type of cathodic protection must maintain records of the results of the testing from the last two inspections of sacrificial anode systems or from the last three inspections for impressed current systems as required in this section.

Specific Authority 376.303, FS.
Law Implemented 376.303, FS.
History -- New 12-10-90, Formerly 17-761.730.

62-761.740 Certified Contractors. The following activities relating to a storage tank system which contains or contained pollutants shall be performed by a certified contractor:
(1) installation of a tank or integral piping;
(2) removal of a tank or integral piping;
(3) lining of a storage tank;
(4) installation of secondary containment;
(5) installation of overfill protection and spill containment;
(6) installation of in-tank automatic inventory recordkeeping devices;
(7) installation of in-tank leak detection monitoring devices;
(8) installation of cathodic protection systems; and
(9) installation of dispenser liners.
Specific Authority 376.303, FS.
Law Implemented 376.303, FS.
History -- New 12-10-90, Formerly 17-761.740.

62-761.800 Out of Service and Closure Requirements.
(1) Out of Service Storage Tank Systems.
(a) Owners or operators of storage tank systems which are taken out of service for any period of time shall:
1. Continue to operate and maintain corrosion protection in accordance with Rule 62-761.730, F.A.C., except that impressed current cathodic protection shall be inspected every six months; and
2. Inspect release detection devices in accordance with applicable provisions of Rule 62-761.600 through 62-761.640, F.A.C., every six months.
(b) Owners or operators of storage tank systems which are taken out of service for three months or more shall also:
1. Leave vent lines open and functioning; and
2. Cap and secure all other lines, pumps, manways, and ancillary equipment.
(c) Owners or operators returning an out of service storage tank system to service must perform a tightness test on the system which meets the requirements of Rule 62.761.680, F.A.C., and which demonstrates that the system does not exceed allowable tolerances. If the storage tank system is required to be upgraded during the period in which it is out of service, the storage tank system shall be upgraded or replaced before it is returned to service.
(d) Any owner or operator of a storage tank system who intends to keep a storage tank system in out of service status for more than two years must apply for and receive an alternate procedure pursuant to Rule 62-761.850, F.A.C. Any such alternate procedure shall be conditioned upon the storage tank system being equipped with appropriate release detection equipment as set

forth in this Chapter or upon a closure assessment being conducted.
(2) Closure of Storage Tank Systems.
(a) Owners of unmaintained storage tank systems must permanently close the system within 90 days of the effective date of this rule or of discovery of the existence of the unmaintained storage tank system.
(b) Any storage tank system constructed of unprotected bare steel which is out of service for more than 12 months shall be permanently closed unless the system meets the performance standards for new storage tank systems in Rule 62-761.500, F.A.C., or is upgraded pursuant to Rule 62-761.510, F.A.C.
(c) Owners or operators of storage tank systems shall notify the Department at least 30 days before closure of a storage tank system.
(d) Storage tank systems shall be closed after removal of all liquids and accumulated sludges either by having the tank removed from the ground by a certified contractor or by filling it with a solid inert material of sufficient density to prevent a structural collapse of the closed system. API RP 1604 may be used to comply with this section. All removed tanks shall be disposed in accordance with API RP 1604 or NFPA 30 (1987), Appendix B.
(e) Storage tank systems may be used to store material other than regulated substances provided:
1. All liquid and accumulated sludge are removed from the tank; and
2. A closure assessment is conducted in accordance with this section.
(f) Unless maintained for contamination assessment purposes, all monitoring wells shall be properly abandoned according to applicable state and local government requirements.
(3) Closure Assessment of Storage Tank Systems.
(a) Before permanent closure, replacement or change in service from a regulated substance to a non-regulated substance is completed, owners shall determine if a release has occurred and sample for the presence of a release where contamination is most likely to be present at the facility. A closure assessment is not required for eligible facilities participating in the Early Detection Incentive (EDI) and Reimbursement Programs pursuant to Section 376.3071, F.S. In selecting sample types, sample locations, and measurement methods, owners must consider the method of closure, the nature of the stored substance, the type of backfill, the depth of ground water and other factors appropriate for identifying the presence of a release. Owners shall ensure that all samples or measurements taken during a closure are accomplished with proper quality assurance and quality control.
(b) If water samples are collected during a closure assessment, they shall be analyzed in accordance with EPA Test Method 602 for storage tank systems containing gasoline or equivalent petroleum products, or EPA Test Method 602 and 610 for storage tank systems containing kerosene, diesel fuel, or other equivalent petroleum products. If vapor

samples are collected during a closure assessment, they shall be screened with a flame ionization detector, or a photo ionization detector if a demonstration can be made that the results are equivalent to those obtained from a flame ionization detector.

(c) A report of the closure assessment shall be prepared and submitted to the Department or to a locally administered program under contract with the Department by the owner within 60 days of completion of tank removal or filling the tank with inert material. The report shall include sample types, sample locations and measurement methods, a site map, methods of maintaining quality assurance and quality control, and results of all analyses of samples from the site and submitted on Form 62-761.900(6).

(d) If contaminated soils, contaminated ground water, free product, or vapor levels in excess of those listed in Rule 62-761.640(2)(e), F.A.C., are discovered, owners shall begin appropriate corrective action. If the contamination present is subject to the provisions of Chapter 62-770, F.A.C., corrective action shall be conducted in accordance with that cleanup criteria rule.

Specific Authority 376.303, FS.
Law Implemented 376.303, FS.
History -- New 12-10-90, Formerly 17-761.800.

62-761.820 Discharge Response

(1) When evidence of a discharge from a storage tank system is discovered and reported in accordance with Rule 62-761.460, F.A.C., the owner or operator shall remove as much of the regulated substance from the system as is necessary to prevent further release to the environment. Fire, explosion, and vapor hazards shall be identified and mitigated. The storage tank system shall be repaired, if possible, in accordance with Rule 62-761.700, F.A.C. If the storage tank system cannot be repaired, it shall be closed in accordance with Rule 17-761.800(2), F.A.C.

(2) Any owner or operator of a facility discharging a regulated substance shall immediately undertake to contain, remove, and abate the discharge in accordance with Chapter 376 and 403, F.S. If the contamination present is subject to the provisions of Chapter 62-770, F.A.C., corrective action shall be conducted in accordance with that cleanup criteria rule.

Specific Authority 376.303, FS.
Law Implemented 376.303, FS.
History -- New 12-10-90, Formerly 17-761.820.

62-761.840 Locally Administered Programs.

(1) Pursuant to Section 376.3073, F.S., the Department may contract with local governments for the administration of certain departmental responsibilities under this rule. A list of participating locally administered programs may be obtained from the Department.

(2) Final agency action related to the functions which may be carried out by a locally administered program shall be taken by the Department.

(3) This section does not apply to local governments with approved local programs authorized pursuant to Section 376.317, F.S., except to the extent that those local governments have contracted with the Department for specific duties. Those local programs may have independent authority to take final action related to their ordinances. Final agency action resulting from a contracted function will continue to be taken by the Department.

Specific Authority 376.303, FS.
Law Implemented 376.303, FS.
History -- New 12-19-90, Formerly 17-761.840.

62-761.850 Approval of Alternate Procedures.

(1) The owner or operator of a facility subject to the provisions of this Chapter may request in writing a determination from the Department that any requirement of this Chapter should not apply to such facility, and shall request approval of alternate procedures.

(2) The request shall set forth at a minimum the following information:

(a) The facility for which an exception is sought;

(b) The specific provision of Rule 62-761, F.A.C., from which an exception is sought;

(c) The basis for the exception;

(d) The alternate procedure or requirement for which approval is sought and a demonstration that the alternate procedure or requirement provides a substantially equivalent degree of protection for the lands, surface waters, or ground waters of the state as the established requirement; and

(e) A demonstration that the alternate procedure or requirement is at least as effective as the established procedure or requirement.

(3) The Secretary or his designee shall approve or deny each alternate procedure using the criteria in subsection (2) and shall provide written notice of such action.

Specific Authority 376.303, FS.
Law Implemented 376.303, FS.
History -- New 12-10-90, Formerly 17-761.850.

62-761.860 Approval of Storage Tank Systems and Release Detection Equipment. Storage tank systems, including the tank, integral piping, and release detection components (equipment) shall be constructed in accordance with the applicable referenced standards of Rule 62-761.210, F.A.C.

An owner or operator of a facility may seek Department approval of equipment different than such standards before installation or use. Any provisions of this Chapter which reference this section are subject to the approval procedures set forth herein. Information related to the request for approval shall be submitted to the Department with a demonstration that the equipment will provide equivalent protection or meet the appropriate performance standards contained in this Chapter. Equipment approval requests may include, but not be limited to, storage tanks, liners, piping, overfill protection, spill

containment, release detection and reuse or remanufacturing of tanks. Within thirty days of request, the Department may request additional information if necessary. The Department shall approve or deny completed requests within 90 days of receipt.
Specific Authority 376.303, FS.
Law Implemented 376.303, FS.
History -- New 12-10-90, Formerly 17-761.860.

62-761.900 Stationary Tank Forms. The forms used by the Department in the Stationary Tank Program are adopted and incorporated by reference in this section. The forms are listed by rule number, which is also the form number, and with the subject title and effective date. Copies of forms may be obtained by writing to the Administrator, Storage Tank Regulation Section, Division of Waste Management, Department of Environmental Protection, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

(1) Discharge Reporting Form, 12-10-90.
(2) Storage Tank Registration Form, 12-10-90.
(3) Financial Responsibility Form, 12-10-90.
(4) Alternate Procedure Form, 12-10-90.
(5) Underground Storage Tank Installation and Removal Form, 12-10-90.
(6) Closure Assessment Form, 12-10-90.

Specific Authority 376.303, FS.
Law Implemented 376.303, FS.
History -- New: 12-10-90, Formerly 17-761.900.

FAC 62-762

CHAPTER 62-762
Aboveground Storage Tank Systems

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62-762.100 Intent. The purpose of this rule is to provide standards for the construction, installation, maintenance, registration, removal and disposal of stationary aboveground storage tank systems which consist of aboveground tanks and their on-site integral piping systems and associated release detection which store pollutants and which have storage capacities of greater than 550 gallons. This rule implements the requirements of Chapter 376, Florida Statutes.
Specific Authority: 376.303, F.S.
Law Implemented: 376.303, F.S.
History: New 3-12-91, Formerly 17-762.100.

62-762.200 Definitions. The definitions found in Florida Statutes 376.301 are adopted herein, including those definitions for the terms "facility", "pollutant", and "discharge". In addition, the following words, phrases or terms used in this Rule, unless the context indicates otherwise, shall have the following meaning:

(1) "Airport hydrant piping" means the integral underground piping system, including hydrant pits, associated with aboveground bulk petroleum storage tank systems serving major airports.

(2) "Ammonia" includes all liquid organic amines and all inorganic liquid compounds that are liquids at standard temperature and pressure which, when discharged, release free ammonia (NH_3), or ammonium ion (NH_4+).

(3) "Bulk product piping" means any piping originating at the first landward valve from a vessel loading or unloading area delivering pollutants up to and including the first valve within the storage tank secondary containment area of a bulk product facility and any integral piping six inches internal diameter or greater which is utilized for transporting pollutants.

(4) "Cathodic protection" means a method of preventing corrosion of a metal surface by making that surface the cathode of an electrochemical cell through the use of devices such as galvanic anodes or impressed current.

(5) "Cathodic protection tester" means a person who can demonstrate an understanding of the principles and measurements of all common types of cathodic protection systems as applied to buried or submerged metal piping and tanks systems. At a minimum, such persons shall have education and experience in soil resistivity, stray current, structure-to-soil potential, and compohent electrical isolation measurements of buried metal piping and tank systems.

(6) "Chlorine" includes all liquid organic and inorganic compounds that are liquids at standard temperature and pressure which, when discharged, release free chlorine (C1 or $C1_2$). Aqueous solutions of sodium hypochlorite shall not be included in this definition.

(7) "Compatible" means the ability of two or more substances to maintain their respective physical and chemical properties upon contact with one another for the design life of the storage tank system under conditions likely to be encountered in the storage tank system.

(8) "Corrosion professional" means a person who, by reason of thorough knowledge of the physical sciences and the principles of engineering and mathematics acquired by a professional education and related practical experience, is

qualified to engage in the practice of corrosion control on buried or submerged metal components of a storage tank system. Such a person shall be accredited or certified as being qualified by the National Association of Corrosion Engineers or be a registered professional engineer.

(9) "Dielectric material" means a material that does not conduct direct electrical current.

(10) "Discovery".

(a) As related to a discharge, "Discovery" means:

1. Free product in monitoring wells, sewer lines, and utility lines, nearby surface water, or other similar locations;

2. Observance of contaminated soil or odor of petroleum products or other pollutants resulting from a discharge of more than 25 gallons on a pervious surface;

3. Observance of contaminated soil or odor of petroleum products or other pollutants resulting from a loss of 100 gallons on an impervious surface other than secondary containment or 500 gallons inside a secondary containment area;

4. Unusual operating conditions unless the system and equipment is found to be defective but not leaking and is immediately repaired or replaced;

5. Results of tank or line testing which reveal a discharge;

6. Discharges exceeding 25 gallons on a pervious surface;

7. A loss of 100 gallons on an impervious surface other than secondary containment, or 500 gallons inside a secondary containment area; or

8. Positive response of a detection device, analytical test of monitoring well sample, or laboratory report; unless the monitoring device is found to be defective, and is immediately recalibrated, or is replaced and calibrated and additional monitoring does not confirm the previous result.

(b) As related to unmaintained storage tanks, "Discovery" means actual knowledge of the existence of an unmaintained storage tank.

(11) "Existing storage tank system" means a storage tank system used to contain pollutants for which installation has begun before the effective date of this rule. Installation is considered to have begun if:

(a) The owner or operator has obtained or has applied for all federal, state, and local approvals or permits necessary to begin physical construction of the site or installation of the tank system; and if,

(b) Either a continuous on-site physical construction or installation program has begun or the owner or operator has

entered into contractual obligations which cannot be cancelled or modified without substantial economic loss.

(12) "Field-erected storage tank" means a storage tank which is constructed by assembling it on-site at the facility.

(13) "Flow-through process tank" is a tank that forms an integral part of a production process through which there is a steady, variable, recurring, or intermittent flow of materials during the operation of the process. Flow-through process tanks include tanks associated with vapor recovery units and oil-water separators. Flow-through process tanks do not include storage tanks used for the storage of pollutants before their introduction into the production process or for the storage of finished products or by-products from the production process.

(14) "Heating oil" means any petroleum based fuel used in the operation of heating equipment, boilers, or furnaces.

(15) "Hydraulic lift tank" means a tank that holds hydraulic fluid for a closed-loop mechanical system used to operate lifts, elevators, and other similar devices.

(16) "Impervious" means a material with low permeability which is compatible with a stored pollutant and meets the definition of a liner as defined in Section 62-761.200 (19), F.A.C.

(17) "In contact with the soil" means that any portion of a tank or integral piping physically touches the soil or is separated from the soil only by a casing, wrapping, or a structure which is not impervious.

(18) "In-service" means a storage tank system that contains pollutants or has pollutants regularly added to or withdrawn from the system.

(19) "Integral piping" means all continuous, on-site piping up to the union of the piping and dispensing equipment and all other valves, elbows, joints, flanges, and flexible connectors attached to a storage tank system through which pollutants flow.

(20) "Liner" means an impervious material that meets the performance standards of Rule 62-762.500(6), F.A.C., that is used as a method of secondary containment to prevent the discharge of any pollutant from a storage tank system.

(21) "Maintenance" means the normal operational upkeep to prevent a storage tank system from releasing pollutants.

(22) "New storage tank system" means a storage tank system that will be used to contain an accumulation of pollutants and for which installation begins after the effective date of this rule.

(23) "Non-residential" means that the tank is not used at a dwelling.

(24) "Out of service" means a storage tank system that has been emptied of pollutants and no longer has pollutants regularly added to or withdrawn from the system, and that is intended to be returned to service. The storage tank system is empty when all pollutants have been removed so that no more than one inch in depth or 0.3 percent by weight of total system capacity of pollutants remains in the storage tank system.

(25) "Overfill" is a discharge that occurs when a tank is filled beyond its capacity.

(26) "Pesticides" means all preparations, products, and substances included in the Department of Agriculture and Consumer Services' Rule 5E-2.002, F.A.C.

(28) "Pipe" means any hollow cylindrical or tubular conveyance which is constructed of approved non-earthen materials (e.g., cathodically protected metal, plastic or fiberglass) and through which pollutants are designed to flow.

(29) "Pipeline facilities" are new and existing pipe systems, rights-of-way and any associated equipment, gathering lines, facilities, or buildings used to transport pollutants, but does not include airport hydrant piping and bulk product piping.

(30) "Pressure test" means a pressure test, hydrostatic test or other appropriate tests performed in accordance with referenced standards in order to determine the integrity of the integral piping including tests performed on integral piping less than three inches in diameter where tightness tests cannot be performed for any operational reason.

(31) "Release" means "discharge" as that term is defined in Chapter 376, F.S.

(32) "Release detection" means a method of determining whether a discharge of a pollutant has occurred from the storage tank system into the environment or into the secondary containment.

(33) "Repair" means the repair or replacement of any defective or damaged parts of a storage tank system to meet the standards contained in Rule 62-762.700, F.A.C.

(34) "Secondary containment" means any system that is used to provide release detection and release prevention. examples include a double-walled tank, a double walled integral piping system, or a single-walled tank or integral piping system that is protected by an enclosed concrete vault, liner, or an impervious containment area.

(35) "Shop-fabricated storage tank" means a storage tank hic is constructed at the tank manufacturer's plant and transported to the facility for installation.

(36) "Significant loss" means a loss of pollutant in a storage tank system which exceeds one percent of the storage system capacity, one percent of the total weekly output, or 50 gallons, whichever is greater.

(37) "Storage tank system" means an aboveground storage tank with all integral piping and release detection components.

(38) "Tank" means an enclosed aboveground stationary device which is constructed primarily of approved non-earthen materials that provide structural support, which is designed to store pollutants and the volume of which (including integral piping) is less than 10 percent beneath the surface of the ground.

(39) "Tightness test" means a precision test, performed in accordance with Rule 62-761.680, F.A.C., in order to determine the integrity of integral piping, with an internal diameter of less than three inches, in contact with the soil, by a tester registered with the Department of Professional Regulation under Section 489.113, F.S.

(40) "Unmaintained" means a storage tank that has been emptied of pollutants and no longer has pollutants regularly added to or withdrawn from the tank and which is not returned or intended to be returned to in-service status. Storage tanks which are or were subject to Rule 62-61, F.A.C., which have been abandoned in accordance with Rule 62-61.050(3)(c), F.A.C., or storage tank systems which have been abandoned by emptying them so that no more than one inch in depth or 0.3% by weight of total system capacity of pollutants remains in the storage tank system and reported to the Department prior to the effective date of this rule shall not be considered "unmaintained".

(41) "Upgrade" means an improvement to a storage tank, such as adding secondary containment or cathodic protection, that is made to meet the performance standards of this rule.

(42) "Vehicular fuel" means a petroleum product used to fuel a motor vehicle, including but not limited to, those used on and off roads and rails, aircraft, and watercraft.

Specific Authority: 376.303, F.S.
Law Implemented: 376.303, F.S.
History: New 3-12-91; Amended 3-7-94, Formerly 17-762.200.

62-762.210 Referenced Standards.

(1) Referenced standards are available for inspection at the Department of Environmental Protection's District and Tallahassee Offices and from the following sources:

(a) American Petroleum Institute (API), 1220 L Street, N.W., Washington, D.C., 20005, (202) 682-8372;

(b) National Association of Corrosion Engineers (NACE), Post Office Box 218340, Houston, Texas 77218, (713) 492-0535;

(c) National Fire Protection Association (NFPA), Batterymarch Park, Quincy, Massachusetts 02269, (800) 344-3555;

(d) Steel Tank Institute (STI), 570 Oakwood Road, Lake Zurich, Illinois 60047, (708) 438-8265; and

(e) Underwriters Laboratories (UL), 333 Pfingsten Road, Northbrook, Illinois 60062, (708) 272-8800.

(2) Titles of Documents.

Specific references to documents listed in (a) through (e) below are made throughout this Chapter. Each of these documents or parts thereof are adopted and incorporated as standards only to the extent that they are specifically referenced in this Chapter.

(a) American Petroleum Institute:

1. Specification Number 12B, 1977 as supplemented 1985, "Specification for Bolted Tanks for Storage of Production Liquids", Twelfth Edition;

2. Specification Number 12D, 1982 as supplemented 1985, "Specification for Field Welded Tanks for Storage of Production Liquids", Ninth Edition;

3. Specification Number 12F, 1982 as supplemented 1988, "Specification for Shop Welded Tanks for Storage of Production Liquids", Tenth Edition;

4. Specification Number 12P, September 1, 1986, "Specification for Fiberglass Reinforced Plastic Tanks", First Edition;

5. Standard Number 620, 1985, "Recommended Rules for Design and Construction of Large Welded Low-pressure Storage Tanks", Eighth Edition;

6. Standard Number 650, 1988, "Welded Steel Tanks for Oil Storage", Eighth Edition;

7. RP 651, (Draft-October 1990) "Cathodic Protection of Aboveground Petroleum Storage Tanks";

8. RP 652, (Draft-October 1990) "Lining of Aboveground Petroleum Storage Tanks;

9. Standard Number 653, (Draft-October 1990) "Tank Inspection, Repair, Alteration and Reconstruction ", First Edition;

10. Publication 1110, 1981, "Recommended Practice for the Pressure Testing of Liquid Petroleum Pipelines";

11. RP 1615, 1987 as supplemented, March 6, 1989, "Installation of Underground Petroleum Product Storage Systems";

12. RP 1632, 1987 as supplemented March 6, 1989, "Cathodic Protection of Underground Petroleum Storage Tanks and Piping Systems";

13. RP 1637, 1986, "Using the API Color-symbol System to Mark Equipment and Vehicles for Production Identification at Service Stations and Distribution Terminals"; and

14. RP 2350, March 1987, "Overfill Protection for Petroleum Storage Tanks."

(b) National Association of Corrosion Engineers:

1. Standard Number RP-0169-83 "Control of External Corrosion on Underground or Submerged Metallic Piping Systems" (1983); and

2. Standard Number RP-0285-85 "Control of External Corrosion on Metallic Buried, Partially Buried, or Submerged Liquid Storage Systems" 1985.

(c) National Fire Protection Association: Standard Number 30, 1987 "Flammable and Combustible Liquids Code".

(d) Steel Tank Institute R892-89, "Recommended Practice for Corrosion Protection of Underground Piping Networks Associated with Liquid Storage and Dispensing Systems".

(e) Underwriters Laboratories:

1. Specification 142 "Steel Aboveground Tanks for Flammable and Combustible Liquids" (1982);

2. "Standard 567, "Pipe Connectors for Flammable, Combustible and LP Gas"; and

3. UL Subject 971, "UL Listed Non-metal Pipe".

Specific Authority: 376.303, F.S.
Law Implemented: 376.303, F.S.
History: New 3-12-91, Formerly 17-762.210.

62-762.300 Applicability.

(1) This Chapter applies to all owners and operators of facilities with an aboveground storage tank system with torage capacities over 550 gallons that contain pollutants.

(2) The following systems, including their integral piping, are exempt from the requirements of this Chapter:

(a) Any storage tank containing LP gas;

(b) Any skid or mobile tank that is moved to a different location at least every 180 days;

(c) Any tank which contains asphalt or pollutants having a softening point above 100° F;

(d) Any flow-through process tank system;

(e) Any pipeline facility;

(f) Any stormwater or waste water collection or discharge system;

(g) Any emergency spill or overflow containment storage tank system that is emptied as soon as possible after use and which remains normally empty;

(h) Any equipment or machinery that contains pollutants for operational purposes including, but not limited to, hydraulic lift tanks or fluid and electrical equipment tanks;

(i) Any storage tank system that is part of an emergency generator system at nuclear power generation facilities regulated by the Nuclear Regulatory Commission under 10 CFR 50 Appendix A;

(j) Any storage tank system storing pollutants which are solid or gaseous at standard temperature and pressure;

(k) Any storage tank system containing hazardous wastes as listed or defined under Subtitle C of the Resource Conservation and Recovery Act or any mixture of such hazardous wastes with pollutants;

(l) Any evaporational/degradation system for pesticide equipment rinse water regulated under Rule 62-660, F.A.C.;

(m) Any storage tank system with a storage capacity of less than 30,000 gallons used for storing heating oil for consumptive use on the premises where stored;

(n) Any storage tank system that contains small quantities (de minimus, as per 40 CFR Section 280.12) of pollutants;

(o) Any storage tank system regulated by Chapter 377, Florida Statutes;

(p) Any storage tank system located entirely within an enclosed building or vault with an adequate roof and walls to prevent rainwater from reaching the system and with an impervious floor containing no valves, drains, or other openings that would permit pollutants to be discharged from the system;

(q) Any storage tank system regulated under the Toxic Substances Control Act (15 U.S.C. 2065);

(r) Storage tank systems used for the purpose of temporary storage of mixtures of pesticides and diluent intended for reapplication as pesticides; and

(s) Storage tank systems which are not in contact with the soil, that are constructed of non-corrosive, materials that contain less than 80% fertilizer materials and which are applied on site.

(3) The requirements of this rule shall supersede Chapter 62-61, F.A.C. upon the effective date of this rule.

Specific Authority: 376.303, F.S.
Law Implemented: 376.303,F.S.
History: New 3-12-91, Formerly 17-762.300.

62-762.400 Registration.

(1) The owner of any storage tank system which is in an in-service, out of service or unmaintained status and which has a capacity of more than 550 gallons shall register the storage tank system with the Department on DEP Form 62-761.900(2). A complete registration form shall be submitted to the Department at least 10 days before the start of installation. The owner of an existing tank system not previously required to be registered with the Department shall file the registration form no later than 180 days after the effective date of this Chapter.

(2) The owner of any bulk product facility as defined in Section 376.301 (2) shall register with the Department on Form 62-761.900 (2) by July 1, 1991.

Specific Authority: 376.303, F.S.
Law Implemented: 376.303, F.S.
History: New 3-12-91, Formerly 17-762.400.

62-762.410 Registration Fees.

(1) Registration fees are due from the storage tank owner as indicated in this subsection from all registered in-service and out of service facilities. Pursuant to federal law, federally-owned or operated facilities are exempt from registration fees.

(2) Bulk Product Facilities.

(a) A registration fee of $50.00 per tank shall be submitted for each initial registration of bulk product facility tanks by October 1, 1991. The fee shall be paid within 30 days after receipt of notification by the Department.

(b) Owners of storage tanks with capacities of 250,000 gallons or less shall submit an annual registration fee of $25 per tank by July 1 of each year.

(c) Owners of storage tanks with capacities of greater than 250,000 gallons shall submit an annual registration fee of one dollar per every 10,000 gallons of storage capacity per tank, not to exceed $1,000.00 per tank, by July 1 of each year.

(d) In no circumstance will the owner of any facility pay an annual fee greater than $5,000 for all storage tanks located at the facility.

(3) Other Facilities.

(a) A registration fee of $50.00 per tank shall be submitted for each initial registration of tanks with capacities of more than 550 gallons. The fee shall be paid within 30 days after receipt of notification by the Department.

(b) A renewal fee of $25.00 per tank for each storage tank system not meeting the closure requirements in Rule 62-762.800, F.A.C., shall be submitted by July 1 each year.

(c) A replacement fee of $25.00 per tank shall be submitted for each tank that is replaced for the purpose of facility upgrading. The fee shall be paid within 30 days after receipt of notification by the Department.

(d) In addition to the registration fee, a late fee of $20.00 per tank shall be collected from any renewal that is received after July 31.

(4) Each facility shall receive a registration placard upon payment of all applicable fees. The placard shall be displayed in plain view in the office, kiosk or other suitable location at the facility where the tanks are located.

Specific Authority: 376.303, F.S.
Law Implemented: 376.303, F.S.
History: New 3-12-91, Formerly 17-762.410.

62-762.450 Notification.

(1) The owner or operator of a storage tank system shall notify the Department of the following items on Form 62-761.900(2):

(a) The date and method of closure at least 30 days before closure of any storage tank system;

(b) Any change in ownership, no later than 30 days after ownership has been transferred, of any storage tank system. Notice of change of ownership shall be provided by the transferor. The notice shall include a copy of the bill of sale or a letter of acceptance by the transferee;

(c) Replacement or upgrading of any storage tank system at least 10 days before replacement or upgrading occurs, except for emergency replacements of tanks, integral piping or release detection equipment necessitated by a discharge. Notification of emergency replacement shall be provided within 10 days of the emergency replacement.

(d) Placement of a tank that is in service to out of service status at least 10 days before the out of service status begins in accordance with Rule 62-762.800(1), F.A.C.; and

(e) Any other change in facility status, including changes in the type of pollutant stored, within 30 days of the change. Changes of different types or blends of petroleum need not be reported.

(2) The owner or operator of a storage tank system shall notify the Department of the establishment or changes to the method of demonstrating financial responsibility as required in Rule 62-762.480, F.A.C., within 30 days on Form 62-761.900(3).

(3) Owners or operators shall provide at least 24 hours notice, verbal or written, to the Department or to a locally administered program under contract with the Department, prior to the start of a storage tank system closure, internal inspection performed in accordance with API Standard No. 653, upgrading or installation.

(4) Owners or operators shall provide notice, verbal or written, to the Department or to a locally administered program under contract with the Department, within one working day of discovery of the loss of a pollutant from a storage tank system exceeding 100 gallons on impervious surfaces other than secondary containment and 500 gallons inside the secondary containment area.

Specific Authority: 376.303, 376.309, F.S.
Law Implemented: 376.303, 376.309, F.S.
History: New 3-12-91, Formerly 17-762.450.

62-762.460 Reporting. The owner or operator shall report the following items to the Department and, if the storage tank system is in a county with a locally administered program under contract with the Department, to that locally administered program on Form 62-761.900(1):

(1) Receipt of any integral piping tightness test results that exceed allowable tolerances within 10 days after receipt of the test results, and results of any confirmation integral tightness test within 30 days of the date of the first test. The report shall be accompanied by a copy of the test report;

(2) Unless a pollutant has a more stringent reporting requirement listed under 40 CFR Section 302 of the federal Comprehensive Environmental Response Compensation and Liability Act of 1980, any discharge of a pollutant from a storage tank system exceeding 25 gallons on pervious surfaces within one working day of discovery of the discharge; and

(3) A positive response of a release detection device, monitoring well test, sample or laboratory report within one working day of discovery unless the positive response is the result of a prior known release. A positive response shall include, but is not limited to, failure of a tightness test, failure of a pressure test on piping containing pollutants, a sheen or layer of petroleum product or odors of pollutants in a ground water sample, a sheen or layer of petroleum product on surface water, an exceedance of ground or surface water standards for the pollutant stored, or vapor levels in excess of those allowed by Rule 62-761.640 (2)(e), 1., 2., 4., or 5., F.A.C.

Specific Authority: 376.303, F.S.

Law Implemented: 376.303, F.S.
History: New 3-12-91, Formerly 17-762.460.

62-762.480 Financial Responsibility.

(1) The owner or operator of a storage tank system shall demonstrate to the Department the ability to pay for facility cleanup and third-party liability resulting from a discharge at any facility. Except for the coverage limits specified in this subsection, the minimum requirements for financial responsibility shall be the same minimum requirements provided by the Code of Federal Regulations, Title 40, Part 280, Subpart H for underground storage tanks and shall be made by January 1, 1995.

(a) Owners or operators of a storage tank system with a capacity of 250,000 gallons or less shall demonstrate financial responsibility for facility cleanup and third-party liability to a minimum of $1 million per incident and $2 million annual aggregate.

(b) Owners or operators of a storage tank system with a capacity greater than 250,000 gallons shall demonstrate financial responsibility for facility cleanup and third-party liability to a minimum of $3 million per incident and $6 million annual aggregate.

(2) Financial responsibility for owners or operators of petroleum product storage systems may be met or supplemented by participation in the Florida Petroleum Liability Insurance and Restoration Program in accordance with Rule 62-769, F.A.C.

(3) Notwithstanding the owner's or operator's financial responsibility status, the owner or operator may, in accordance with Chapter 376 and 403, F.S., be liable for any discharge at the facility.

Specific Authority: 376.303, 376.309, F.S.
Law Implemented: 376.303, 376.309, F.S.
History: New 3-12-91, Formerly 17-762.480.

62-762.500 Performance Standards for New Storage Tank Systems. All owners or operators of new storage tank systems shall comply with the requirements of this section.

(1) New aboveground storage systems with capacities of more than 550 gallons that contain pollutants shall meet the requirements of this section at the time of construction. New or replacement field-erected tanks constructed within an existing common containment area containing existing field-erected tanks shall meet the requirements of subsection (6) of this section by December 31, 1999. Secondary containment shall be installed beneath the tank.

(2) New storage tank systems shall be made of or lined with materials that are compatible with the pollutant stored in the system.

(3) Tanks. All new tanks installed at a facility shall meet the following standards:

(a) New aboveground storage tanks constructed of steel shall meet or exceed the requirements found in UL No. 142, API Standard No. 620, API Standard No. 650, API Standard No. 12B, API Standard No. 12D or API Standard No. 12F. Fiberglass reinforced plastic tanks shall meet or exceed the requirements found in API Specification 12P. Any aboveground tank constructed of other materials shall not be installed unless such materials have been approved by the Department pursuant to Rule 62-762.860, F.A.C. All rotationally-molded polyethylene tanks used for the storage of pollutants other than petroleum products are approved provided they are installed in accordance with manufacturers specifications, meet corrosion compatibility requirements (as indicated by the manufacturer), and have secondary containment in accordance with Rule 62-762.500 (6), F.A.C.

(b) All new aboveground storage tanks shall be installed in a manner consistent with the applicable requirements found in NFPA No. 30. Approval from the local fire marshal or building department may be needed before construction starts, but shall not substitute for the requirements of NFPA No. 30.

(c) All new aboveground tanks shall be supported on a well drained stable foundation which prevents movement, rolling or structurally unacceptable settling of the tank and is designed to minimize corrosion of the tank bottom.

(d) Cathodic protection for tank bottoms.

1. Bottoms of new metal tanks which rest on or in the soil contained within the secondary containment system shall be cathodically protected with sacrificial anodes or an impressed current system which is designed, constructed and installed in accordance with API RP 651 and NACE Standard Number RP-0285-85.

2. A corrosion professional shall supervise the installation of the cathodic protection system where this is necessary to assure that the system has been installed as designed.

3. Each cathodic protection system shall have a test station or a method of monitoring which enables the owner or operator to check on the adequacy of cathodic protection.

(e) Exterior Coatings.

Exterior coatings shall be designed and applied to prevent corrosion and deterioration, or for non-metallic tanks, to protect the tank from degradation by ultraviolet

light. The condition of the paint or surface coating system shall be maintained to ensure continuous protection for the life of the storage tank system.

(f) Overfill Protection.

1. All owners or operators shall ensure that discharges from overfills of the storage tank system do not occur. The owner or operator shall ensure that the volume available in the tank is greater than the volume of product to be transferred to the tank before the transfer is made and shall ensure that the transfer is monitored to prevent overfilling.

2. All tanks shall be equipped with:

a. A gauge or other measuring device which accurately shows the level of pollutant in the tank and is visible to the person who is monitoring the filling. The filling of the tank shall be monitored during filling in accordance with the provisions of API Recommended Practice 2350, if applicable; or

b. A high level warning alarm; or

c. A high level liquid pump cutoff controller or an equivalent device.

3. Manual tank gauging may be used for tanks with a capacity of 5000 gallons or less which are not loaded with high-volume pressurized nozzles. Such tanks, however, which use manual tank gauging shall not be loaded beyond 95% capacity.

4. All product loading areas where tank filling connections are made with vehicles shall be equipped with a spill containment system or other spill containment equipment of sufficient volume to prevent the discharge of the pollutant contained in the transfer hose when it is detached from the tank fill pipe.

(g) All field-erected tanks shall be inspected in accordance with API Standard 653. Any deficiency discovered during the inspection shall be repaired before the storage tank is returned to service.

(4) Piping. All integral piping, bulk product piping and hydrant piping installed after the effective date of this rule which are in contact with the soil shall be constructed with secondary containment. Integral piping containing heavy fuel oils such as American Society for Testing Materials (ASTM) grades 5 and 6 residual oils, intermediate fuel oils with a viscosity of 30 and higher, or Bunker C are exempt from this requirement. All integral piping systems which are not in contact with soil shall be constructed in accordance with accepted engineering practices and NFPA 30, Chapter 3. Integral piping in contact with the soil shall be constructed of one or more of

the following materials and in accordance with the following referenced standards:

(a) Fiberglass reinforced plastic in accordance with UL 971 and UL 567;

(b) Cathodically protected coated steel in accordance with NFPA Standard 30, API RP 1615, API RP 1632, NACE RP-0169-83 and NACE RP-0285-85 or STI R892-89, provided that:

1. The piping is coated with a suitable dielectric material;

2. Any field-installed cathodic protection system is designed by a corrosion professional;

3. Any impressed current system is designed to allow for a determination of operating status; and

4. All cathodic protection systems are operated and maintained in accordance with Rule 62-762.730, F.A.C.; or

(c) Other material, design, construction or corrosion protection as determined by the Department to be sufficient to prevent the release of any stored pollutant in a manner that is no less protective of human health and the environment than the requirements of this section. Such a determination shall be made in accordance with Rule 62-762.850, F.A.C.

(5) Airport and Seaport Hydrant Pits.

Underground hydrant pits shall be installed with a spill catchment basin, secondary containment or other spill prevention equipment to prevent the discharge of pollutants during fueling of aircraft or vessels or at any other time the hydrant system is in use. Any such equipment shall be sealed to and around the hydrant piping with an impervious, compatible material.

(6) Secondary Containment

(a) No person shallconstruct, use or maintain any new aboveground tank without having constructed around and under it a secondary containment system. An impervious secondary containment system shall be designed and installed to direct any release to a monitoring point or points or a treatment system if necessary. Except as provided in Chapter 62-762.500 (6)(a) 2., F.A.C., secondary containment shall conform to the requirements of NFPA 30, Chapter 2-2.3, regardless of whether the tank is in contact with the containment or supported above it. Storage tank systems containing heavy fuel oils such as American Society for Testing Materials (ASTM) grades 5 and 6 residual oils, intermediate fuel oils with a viscosity of 30 and higher, or Bunker C are exempt from the requirements for secondary containment and release detection. The secondary containment system, including the area under the tanks, shall:

1. Be impervious to the types of pollutants stored in the tanks;

2. Contain at least 110 percent of the volume of the tank or of the largest tank within the secondary containment unless the tank is contained in an enclosed concrete vault or is a double wall tank; and

3. If not roofed or otherwise protected from the accumulation of rainfall, be equipped with a manually controlled pump or siphon, or a gravity drain pipe which has a manually controlled valve to remove stormwater that collects within the secondary containment system. All pumps, siphons and valves must be properly maintained and kept in good condition to prevent stormwater leaking from the system. If gravity drain pipes are used, all valves shall be locked in a closed position except when the operator is in the process of draining water from the area. Gravity drain pipes shall be designed and constructed to prevent a release in the event of fire. All piping passing through secondary containment walls shall be sealed around the outside of the piping with an impervious compatible material to prevent the discharge of pollutants. Stormwater or industrial wastewater emanating from the secondary containment system and tank drawdown water shall comply with all applicable state and federal requirements before discharge. Accumulated stormwater shall be drawn off within one week of a rainfall event.

(b) Any synthetic liner used as secondary containment must be puncture resistant, have a permeability rate to the pollutant stored of $1x10^{-7}$ cm/sec. or less, be capable of containing pollutants for at least 30 days, and be of a type approved by the Department pursuant to Rule 62-762.860, F.A.C. Criteria to be reviewed by the Department for approval of a synthetic liner shall include thickness, strength, durability, and compatibility.

(c) Any concrete liner used as secondary containment shall be designed and constructed to be product tight, and of sufficient thickness and strength to prevent a discharge during its operating life.

(d) Secondary containment shall be designed and installed to direct a discharge from the storage tank system to a monitoring point or points.

(e) Secondary containment incorporating clay-based composite products or off-site natural clays shall be approved by the Department in accordance with 62-762.850, F.A.C.

Specific Authority: 376.303, F.S.
Law Implemented: 376.303, F.S.
History: New 3-12-91, Formerly 17-762.500.

62-762.510 Performance Standards for Existing Shop-Fabricated Storage Tank Systems.

(1) Vehicular Fuel Storage Systems. All shop-fabricated storage tanks with capacities greater than 550 gallons that contain vehicular fuel and that were subject to Chapter 62-61, F.A.C., shall have met the requirements of such chapter by January 1, 1990. By December 31, 1999, all vehicular fuel storage systems shall meet the requirements of Rule 62-762.500 (3)(d) through (f) and (4), F.A.C., for cathodic protection, exterior coatings, overfill protection, and integral piping in contact with the soil.

(2) All shop-fabricated storage tanks that contain vehicular fuel which store or use 1,000 gallons or less per month or 10,000 gallons or less per year shall meet the requirements of Rule 62-762.500(3)(d) through (f), and (4), and (6), F.A.C., by December 31, 1999.

(3) All integral piping in contact with the soil which is installed on an existing storage tank system containing pollutants after the effective date of this rule, excluding integral piping installed during a repair, shall meet the requirements of Rule 62-762.500(4) and 62-762.600(4), F.A.C., by December 31, 1999.

(4) All marine fueling facilities, all storage tanks containing other pollutants that are not vehicular fuels, and petroleum storage tank systems other than those containing ammonia, chlorine, pesticides and derivatives thereof, shall meet the requirements of Rule 62-762.500(3)(d) through (f) and (4), and (6), F.A.C., by December 31, 1999.

(5) In place of installing the secondary containment underneath the storage tank, the interior bottom of the storage tank and at least 18 inches up the sides may be coated with an epoxy coating or other suitable material which is impervious to the pollutant to be stored in accordance with API RP 652, by December 31, 1999. Secondary containment must nonetheless be installed around the storage tank as required by Rule 62-762.500(6), F.A.C.

(6) A closure assessment shall be performed in accordance with Section 62-762.800(2)(d), F.A.C., before the completion of the installation of secondary containment.

Specific Authority: 376.303, F.S.
Law Implemented: 376.303, F.S.
History: New 3-12-91, Formerly 17-762.510.

62-762.520 Performance Standards for Existing Field-Erected Storage Tank Systems.

(1) Tanks

(a) All field-erected storage tanks that contain pollutants shall meet the requirements of Rule 62-762.500 (3) (d) through (g) and (6), and perform a baseline internal inspection in accordance with API Standard 653, by December 31, 1999.

(b) When the bottom of a storage tank is replaced, secondary containment must be installed beneath the tank. In place of installing secondary containment underneath an existing storage tank, the interior bottom of the tank and at least 18 inches up the sides may be coated with an epoxy coating or other suitable material which is impervious to the pollutant to be stored in accordance with API RP 652. Secondary containment must nonetheless be installed around the storage tank as required by Rule 62-762.500(6), F.A.C., by December 31, 1999.

(2) Piping

(a) All integral piping in contact with the soil, except for hydrant piping and bulk product piping shall be upgraded with secondary containment according to the standards of Rule 62-762.500 (4), F.A.C., by December 31, 1999.

(b) Instead of installing secondary containment, existing hydrant piping and bulk product piping shall:

1. Be assessed for structural integrity and tightness in accordance with API RP 1110 or an equivalent method by January 1, 1993. Chapter 62-762.700, F.A.C., procedures shall be followed if repairs are needed as a result of the assessment, and discharge response requirements of Rule 62-762.820, F.A.C., shall be followed if a release is discovered. An annual pressure test shall be performed thereafter until December 31, 1999, when facility owners and operators must comply with Chapter 62-762.600(7), F.A.C.

2. Be equipped with a cathodic protection system installed or approved by a corrosion professional in accordance with Rule 62-762.500(4)(b), F.A.C., by December 31, 1999 for piping in contact with the soil.

(3) Hydrant pits shall meet the requirements of Rule 62-762.500(5), F.A.C., by December 31, 1999.

(4) A closure assessment shall be performed in accordance with Section 62-762.800(2)(d), F.A.C., before the completion of the installation of secondary containment.

Specific Authority: 376.303, F.S.
Law Implemented: 376.303, F.S.
History: New 3-12-91, Formerly 17-762.520.

62-762.600 General Release Detection Standards.

(1) Owners and operators of all storage tank systems shall provide a method, or combination of methods, of release detection that can detect a discharge from the tank

and integral piping. The owner or operator shall retain any performance claims and their manner of determination described in writing by the manufacturer or installer, for the life of the storage tank system.

(2) Owners or operators of all aboveground storage tank systems containing pollutants shall, at least once a month, thoroughly inspect the exterior of each tank and the secondary containment or dikes surrounding the tank for wetting, discoloration, blistering, corrosion, cracks, or other signs of structural damage or leakage.

(3) Any storage tank system which cannot provide release detection in accordance with this section shall be closed in accordance with Rule 62-762.800, F.A.C., by the date upon which release detection is required to be provided.

(4) Release detection for integral piping with secondary containment shall be monitored monthly after installation and shall consist of:

(a) Interstitial monitoring for double walled piping capable of detecting a discharge through the inner wall; or

(b) Interstitial monitoring for integral piping with liners:

1. Capable of detecting a discharge through the inner wall; and

2. Constructed so ground water, rainfall or soil moisture will not render the testing or sampling methods used inoperative so that a discharge could go undetected for more than 30 days.

(5) By December 31, 1993 all existing integral piping in contact with the soil, except as set forth in Section 62-762.600(7), F.A.C., shall be provided with a method, or combination of methods, of release detection that can detect a discharge from integral piping and that is installed, calibrated, operated and maintained in accordance with the manufacturer's instructions. Release detection for existing integral piping shall consist of interstitial monitoring which meets the requirements of subsection (4) of this section or monitoring wells which meet the construction standards contained in Rule 62-761.640(1) or (2), F.A.C. Owners or operators shall monitor the release detection system at least once a month. Release detection for piping which passes under roadways, runways, building foundations or similar obstacles shall be located at the nearest practicable location to the source.

(6) Monitoring wells which do not meet the construction standards contained in Rule 62-761.640(1) or (2), F.A.C., shall be upgraded to those standards by December 31, 1999. Monitoring wells which cannot meet these requirements shall be properly closed in accordance with Rule 62-532.500(4), F.A.C. Facilities using a Spill Prevention Control and

Countermeasure plan as required by 40 CFR Section 112 or a ground water monitoring plan meeting the requirements of Rule 62-28.700, F.A.C., shall upgrade to the monitoring requirements of Rule 62-762.600(4), F.A.C., by December 31, 1999.

(7) Hydrant piping and bulk product piping in contact with the soil shall, by December 31, 1999, be installed with a release detection system or have a pressure test program established that is sampled or performed on a quarterly basis. Aboveground piping shall be pressure tested on an annual basis except where it is above secondary containment. The pressure testing to be performed under this subsection shall be conducted in a manner so as to utilize at least one and one/half times the maximum allowable working pressure for the piping system in accordance with 33 CFR 156.170(c)(4) or API 1110.

(8) All existing storage tanks with monitoring wells installed to comply with Rule 62-61, F.A.C., shall maintain these release detection systems and monitor monthly until secondary containment is installed as required by this chapter.

(9) Existing storage tanks that are upgraded only with internal lining shall install or maintain a release detection system which meets the construction standards contained in Rule 62-761.640 (1) or (2), F.A.C., and which is capable of detecting a release from the tank at the time of upgrading with internal lining. Owners or operators shall monitor the release detection system at least once a month.

Specific Authority: 376.303, F.S.
Law Implemented: 376.303, F.S.
History: New 3-12-91, Formerly 17-762.600.

62-762.700 Repairs to Storage Tank Systems.

(1) In the event any component of a storage tank system is discovered to have discharged or contributed to the discharge of a pollutant, that component shall be isolated from the system, if possible, and not used until the component is repaired or replaced. If the storage tank system or any component of the system cannot be operated in compliance with this Chapter, the storage tank system shall not be operated until the component has been repaired or replaced. If a tank has discharged or contributed to the discharge of a pollutant, that tank shall be taken out of service until the tank has been repaired or replaced. However, the restrictions against storage tank and system operation as contained in this subsection shall not apply if such tank or system contains heating oil or other fuels used

solely for the generation of electricity where the removal of the storage system from service would result in the shut down of electrical generating units serviced by such system.

(2) All repairs to storage tank systems shall be made in a manner which will prevent any discharge from the storage tank system due to structural failure or corrosion for the remaining useful life of the storage tank system.

(3) All repairs to damaged or defective storage tank system components shall be made to restore the structural integrity of the storage tank system.

(4) All pipe sections and fittings from which a pollutant has been discharged or which is otherwise damaged or defective shall be repaired in accordance with manufacturer's specifications or in accordance with Rule 62-762.210, F.A.C., referenced standards.

(5) All integral piping in contact with the soil shall be tightness tested or pressure tested, as applicable, before being placed back in service.

(6) All repaired hydrant piping and bulk product piping shall be pressure tested in accordance with API RP 1110 or an equivalent method before being placed back in service.

(7) Within six months of the repair of any cathodically protected storage tank system, the cathodic protection shall be tested in accordance with Rule 62-762.730, F.A.C., if the repair affects the integrity of the cathodic protection system.

(8) Owners or operators shall maintain records of any repairs, excluding routine maintenance, to a storage tank system for the remaining life of the system. (9) Secondary containment systems shall be repaired as necessary to maintain product tightness and containment volume of the system, including, but not limited to sealing cracks in concrete, repairing punctures, and maintaining containment walls. (10) All field-erected tanks shall be repaired in accordance with API Standard 653.

Specific Authority: 376.303, F.S.
Law Implemented: 376.303, F.S.
History: New 3-12-91, Formerly 17-762.700.

62-762.710 Recordkeeping. All records required to be kept pursuant to this Chapter shall, unless otherwise specified in the text, be maintained in permanent form for two years and shall be available for inspection by the Department at the facility. If records are not kept at the facility, they shall be available at the facility or other location acceptable to the Department upon five working days notice. Records of the following are required as a minimum:

(1) Measurements and reconciliations of inventory;
(2) Results of examinations of monitoring wells and other release detection systems;
(3) Dates of upgrading of existing storage tank systems;
(4) Results of external maintenance examinations of storage tank systems in accordance with Chapter 62-762.600(2), F.A.C., or internal inspection results of field-erected storage tank systems;
(5) Results of all pressure tests;
(6) Results of tightness tests of integral piping;
(7) Descriptions and dates of repairs;
(8) Closure assessment reports, if the location continues as a facility;
(9) Certification of Financial Responsibility on Form 62-761.900(3);
(10) Records of types of fuels stored per tank; and
(11) Release detection system performance claims.
Specific Authority: 376.303, F.S.
Law Implemented: 376.303, F.S.
History: New 3-12-91, Formerly 17-762.710.

62-762.720 Inventory Requirements.
(1) Owners or operators shall maintain inventory records for each tank that contains vehicular fuel. Inventory records shall be reconciled weekly. Storage systems that are elevated above the soil, resting on a concrete pad or other impervious surface, or that meet the performance standards for new storage tank systems are exempt from the requirements of this section. Unless a more frequent recording period is desired, the following information shall be recorded each week:
(a) The type of vehicular fuel;
(b) Physical inventory;
(c) Inputs and outputs of vehicular fuel; and
(d) Amount of water in the tank.
(2) Losses from each recording period shall be averaged. For any average which indicates a significant loss, the owner or operator shall investigate the cause of any discrepancy. The investigation shall not stop until the source of the discrepancy has been found, using the following investigative procedure:
(a) Inventory, input, and output records shall be checked for arithmetical error;
(b) Inventory shall be checked for error in measurement;
(c) If the significant loss is not reconcilable by steps (a) and (b), or cannot be affirmatively demonstrated to be the result of theft, the accessible parts of the storage system shall be checked for damage or leaks;

(d) Monitoring wells and release detection systems shall be checked for signs of a discharge;
(e) Calibration of the inventory measuring system and any dispensers shall be checked;
(f) If the investigation does not reveal the source of the inventory discrepancy and if such discrepancy continues for three consecutive weeks, or if the Department determines it to be necessary, the entire storage tank system, excluding the vent but including joints and remote fill lines, shall be tested or internally inspected to determine if the system is product tight; and
(g) If evidence of a discharge is discovered, and the discharge can not be attributed to unusual operating conditions, the leaking or defective component of storage tank system shall immediately be deactivated, and be repaired, if possible, in accordance with Rule 62-762.700, F.A.C. If the storage tank system cannot be repaired, it shall be closed in accordance with Rule 62-762.800, F.A.C.
Specific Authority: 376.303, F.S.
Law Implemented: 376.303, F.S.
History: New 3-12-91, Formerly 17-762.720.

62-762.730 Operating Requirements for Cathodic Protection.
(1) All cathodic protection systems shall be operated and maintained to provide continuous corrosion protection to the metal components of those portions of the tank and integral piping in contact with the soil.
(2) All storage tanks systems equipped with any type of cathodic protection must be inspected and tested by a corrosion professional or a cathodic protection tester within six months of installation and at least every three years thereafter in accordance with the criteria contained in NACE RP-0285-85.
(3) All storage tank systems equipped with impressed current cathodic protection shall be inspected every two months to ensure the cathodic protection is functioning in accordance with design criteria.
(4) All owners or operators of storage tank systems using any type of cathodic protection must maintain records of the results of the testing from the last two inspections of sacrificial anode systems or from the last three inspections for impressed current systems as required in this Section.
Specific Authority: 376.303, F.S.
Law Implemented: 376.303, F.S.
History: New 3-12-91, Formerly 17-762.730.

62-762.800 Out of Service and Closure Requirements.

(1) Out of Service Storage Tank Systems.

(a) Owners or operators of all storage tank systems which are taken out of service for any period of time shall continue to operate and maintain corrosion protection with Rule 62-762.730, F.A.C., except that impressed current cathodic protection shall be inspected every six months.

(b) Owners or operators of storage tanks systems which are taken out of service shall also:

1. Leave vent lines open and functioning; and

2. Secure or screen manways and secure all other lines, pumps, and ancillary equipment.

(c) Owners or operators returning an out of service storage tank system to service must perform tests to insure the structural integrity of the storage tank system unless the system has been emptied solely for the purpose of changing the type of pollutant stored. Field-erected tanks shall be tested in accordance with API Standard 653. A tightness test which meets the requirements of Rule 62-761.680, F.A.C., shall be performed on any integral piping in contact with the soil. A pressure test shall be performed on all bulk product piping and hydrant piping. If the storage tank is required to be upgraded during the period in which it is out of service, the storage tank system must be upgraded or replaced before it is returned to service.

(2) Closure of Aboveground Storage Tank Systems.

(a) Owners of unmaintained storage tank systems shall permanently close the system within 180 days of the effective date of this rule or of discovery of the existence of the unmaintained storage tank system.

(b) Owners or operators of storage tank systems shall notify the Department at least 30 days prior to closure of a storage tank system.

(c) Storage tank systems shall be closed as follows:

1. All liquid and sludge must be removed from the tank and integral piping. Any waste products removed must be disposed of in accordance with all applicable state and federal requirements;

2. The tank shall be rendered free of pollutant vapors to prevent hazardous explosive conditions. Provisions shall be made for natural breathing of the tank to ensure that the tank remains vapor free;

3. All integral piping shall be disconnected and removed or securely capped, blinded or plugged. Manways must be screened or secured to prevent access;

4. The tank shall be protected from flotation in accordance with good engineering practices; and

5. If applicable, all monitoring wells shall be properly abandoned according to state and local government requirements.

(d) Closure Assessment.

1. Before permanent closure, replacement, installation of secondary containment or change in service from a pollutant to a non-regulated substance is completed, owners or operators shall determine if a release has occurred and sample for the presence of a release where contamination is most likely to be present at the facility. A closure assessment is not required for eligible sites participating in the Early Detection Incentive (EDI) and Reimbursement Programs pursuant to Section 376.3071, F.S., the Florida Petroleum Liability Insurance and Restoration Program (FPLIRP) pursuant to Section 376.3072, F.S., or for storage tank systems initially installed with secondary containment. Also, storage tank systems for which a closure assessment was completed at the time of upgrading with secondary containment shall not be required to conduct a subsequent closure assessment. In selecting sample types, sample locations, and measurement methods, owners or operators must consider the method of closure, the nature of the stored pollutant, the type of backfill, the depth to ground water, and other factors appropriate for identifying the presence of a release. Owners or operators shall ensure that all samples or measurements taken during a closure are accomplished with proper quality assurance and quality control.

2. If water samples are collected during a closure assessment, they shall be analyzed in accordance with EPA Test Method 602 for storage tank systems containing gasoline or equivalent petroleum products, or EPA Test Methods 602 and 610 for storage tank systems containing kerosene, diesel fuel, or other equivalent petroleum products. If vapor samples are collected during a closure assessment, they shall be screened with a flame ionization detector, or a photo ionization detector if a demonstration can be made that the results are equivalent to those obtained from a flame ionization detector.

3. A report of the closure assessment shall be prepared and submitted to the Department or to a locally administered program under contract with the Department by the owner or operator within 60 days after completion of permanent closure, replacement, installation of secondary containment or change in service from a pollutant to a non-regulated substance. The report shall include sample types, sample location and measurement methods, a site map, methods of monitoring quality control and results of all analysis of

samples from the site and shall be submitted on Form 62-761.900(6).

4. An owner or operator installing secondary containment for a tank with a capacity less than 1100 gallons, and which is elevated from the ground such that the ground surface or soils beneath the tank are clearly visible, shall determine whether a release has occurred by a visual inspection of the tank and the soil under the tank. If the visual inspection results in a determination that there has been no release, the owner or operator shall be exempt from any further closure assessment requirements of Rule 62-762.800(2)(d), F.A.C. In such event, the owner or operator shall certify to the Department or appropriate local program that they have determined that there has been no release.

5. If contaminated soils, contaminated ground water, free product, or vapor levels in excess of those listed in Rule 62-762.460(3), F.A.C., for storage tank systems containing pollutants are discovered, owners or operators shall immediately undertake to contain, remove, and abate the discharge in accordance with Chapter 376 and 403, F.S. If the contamination present is subject to the provisions of Chapter 62-770, F.A.C., corrective action shall be conducted in accordance with that cleanup criteria rule.

Specific Authority: 376.303, F.S.
Law Implemented: 376.303, F.S.
History: New 3-12-91, Formerly 17-762.800.

62-762.820 Discharge Response.

(1) When evidence of a discharge from a storage tank system is discovered and reported in accordance with Rule 62-762.460, F.A.C., the owner or operator shall remove as much of the pollutant from the system as is necessary to prevent further release to the environment. Fire, explosion, and vapor hazards shall be identified and mitigated. The storage tank system shall be repaired, if possible, in accordance with Rule 62-762.700, F.A.C. If the storage tank system cannot be repaired, it shall be closed in accordance with Rule 17-762.800(2), F.A.C.

(2) Any owner or operator of a facility discharging a pollutant shall immediately undertake to contain, remove, and abate the discharge in accordance with Chapters 376 and 403, F.S. If the contamination present is subject to the provisions of Chapter 62-770, F.A.C., corrective action shall be conducted in accordance with that clean-up criteria rule.

(3) Owners or operators shall follow the procedures specified in this Section when significant loss investigations confirm a discharge.

Specific Authority: 376.303, F.S.

Law Implemented: 376.303, F.S.
History: New 3-12-91, Formerly 17-762.820.

62-762.840 Locally Administered Programs.

(1) Pursuant to Section 376.3073, F.S., the Department may contract with local governments for the administration of certain departmental responsibilities under this rule. A list of participating locally administered programs may be obtained from the Department.

(2) Final agency action related to the functions which may be carried out by a locally administered program shall be taken by the Department.

(3) This section does not apply to local governments with approved local programs authorized pursuant to Section 376.317, F.S., except to the extent that those local governments have contracted with the Department for specific duties. Those local programs may have independent authority to take final action related to their ordinances. Final agency action resulting from a contracted function will continue to be taken by the Department.

Specific Authority: 376.303, F.S.
Law Implemented: 376.303, F.S.
History: New 3-12-91, Formerly 17-762.840.

62-762.850 Approval of Alternate Procedures.

(1) The owner or operator of a facility subject to the provisions of this Chapter may request in writing a determination from the Department that any requirement of this Chapter should not apply to such facility, and shall request approval of alternate procedures.

(2) The request shall set forth at a minimum the following information:

(a) The facility for which an exception is sought;

(b) The specific provision of Rule 62-762, F.A.C., from which an exception is sought;

(c) The basis for the exception;

(d) The alternate procedure or requirement for which approval is sought and a demonstration that the alternate procedure or requirement provides a substantially equivalent degree of protection for the lands, surface waters, or ground waters of the state as the established requirement; and

(e) A demonstration that the alternate procedure or requirement is at least as effective as the established procedures or requirement.

(3) The Secretary or his designee shall approve or deny each alternate procedure using the criteria in Subsection (2) and shall provide written notice of such action.
Specific Authority: 376.303, F.S.
Law Implemented: 376.303, F.S.
History: New 3-12-91, Formerly 17-762.850.

62-762.860 Approval of Storage Tank Systems and Release Detection Equipment. Storage tank systems, including the tank, integral piping, and release detection components (equipment), shall be constructed in accordance with the applicable referenced standards of Rule 62-762.210, F.A.C. An owner or operator of a facility may seek Department approval of equipment different than such standards before installation or use. Any provisions of this chapter which reference this section are subject to the approval procedures set forth herein. Information related to the request for approval shall be submitted to the Department with a demonstration that the equipment will provide equivalent protection or meet the appropriate performance standards contained in this Chapter. Equipment approval requests may include, but not be limited to, storage tanks, liners, piping, overfill protection, release detection and reuse or remanufacturing of tanks. Within thirty days of request, the Department may request additional information if necessary. The Department shall approve or deny completed requests within 90 days of receipt.
Specific Authority: 376.303, F.S.
Law Implemented: 376.303, F.S.
History: New 3-12-91, Formerly 17-762.860.

62-762.900 Forms. The following forms used by the Department in the Underground Storage Tank Systems rule in Rule 62-761.900, F.A.C., are adopted and incorporated by reference in this Section. The forms are listed by rule number, and the corresponding Rule 62-761.900, F.A.C. form number and with the subject title and effective date. Copies of forms may be obtained by writing to the Administrator, Storage Tank Regulation Section, Department of Environmental Protection, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400.

(1) 62-761.900(1) Discharge Reporting Form, December 10, 1990.

(2) 62-761.900(2) Storage Tank Registration Form, December 10, 1990.

(3) 62-761.900(3) Financial Responsibility Form, December 10, 1990.

(4) 62-761.900(4) Alternate Procedure Form, December 10, 1990.

(5) 62-761.900(6) Closure Assessment Form, December 10, 1990.
Specific Authority: 376.303, F.S.
Law Implemented: 376.303, F.S.
History: New 3-12-91, Formerly 17-762.900.

APPENDIX C

FDEP AND NAVY UNDERGROUND STORAGE TANK CONSENT AGREEMENT

DEPARTMENT OF THE NAVY
COMMANDER NAVAL AVIATION ACTIVITIES JACKSONVILLE
BOX 102, NAVAL AIR STATION
JACKSONVILLE, FLORIDA 32212-0102

000082

5090
Ser N3/ 0497
10 JUN 1993

From: Commander, Naval Aviation Activities, Jacksonville

Subj: NAVY-FLORIDA UNDERGROUND STORAGE TANK (UST) CONSENT AGREEMENT (ALTERNATE PROCEDURES AGREEMENT (APA))

Encl: (1) State of Florida Department of Environmental Regulation (FDER) and the United States Navy Consent Agreement, FL. OGC Case No. 91-0980

1. Subject Agreement has been signed by both parties, and a copy is provided as enclosure (1).

2. While this Agreement insulates commanding officers from prosecution for certain structural deficiencies (i.e., corrective actions requiring construction) through the year 2000, it requires compliance with all other provisions (i.e., leak detection monitoring, inventory reconciliation and record keeping, reporting and notifications, etc.). Commanding officers and environmental coordinators should strive aggressively to ensure total compliance as soon as possible.

3. As the State Environmental Coordinator (SEC), we will consolidate the activity Tank Inventory Management System (TIMS) and annual reports for submission to FDER and will conduct the progress review meetings with FDER on behalf of the activities. All issues will be fully coordinated with activities both before and after any submissions or meetings with FDER. All information to be submitted to FDER and any commitments will be only those specified by the activities.

4. My point of contact is Mr. Joseph Wallmeyer, Environmental Coordinator, Code N3 at (904) 772-5216 or DSN 942-5216.

F. M. DIRREN, JR.

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Subj: NAVY-FLORIDA UNDERGROUND STORAGE TANK (UST) CONSENT AGREEMENT (ALTERNATE PROCEDURES AGREEMENT (APA))

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FISC Pensacola
PWC Pensacola
NADEP Pensacola
NTTC Corry Field
NETPMSA Saufley Field
NAS Whiting Field
PWC Jacksonville
Florida Department of Environmental Regulation
Attn: Mr. David Thulman, AGC
Attn: Mr. Marshall Mott-Smith

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION

and

THE UNITED STATES DEPARTMENT OF THE NAVY

IN THE MATTER OF:	)	
	)	
The U.S. Department of the Navy	)	FL. OGC Case No. 91-0980
	)	
	)	
	)	

CONSENT AGREEMENT

Based upon the information available to the Parties on the effective date of this AGREEMENT ("Agreement"), and without trial or adjudication of any of issues of fact or law, the Parties agree as follows:

I. JURISDICTION

Each Party is entering into this Agreement pursuant to the following authorities:

A. The State of Florida Department of Environmental Regulation ("FDER") enters into this Agreement pursuant to Chapters 376 and 403, F.S., and §120.57(3) F.S., and Florida Administrative Code (FAC) Rule 17-103.110.

B. The Navy enters into this Agreement pursuant to the Underground Storage Tank Amendments to the Solid Waste Disposal Act, 42 U.S.C. Section 6991, et. seq.; The Clean Water Act, 33 U.S.C. Section 1251, et. seq.; and Executive Order 12088.

II. PARTIES

The Parties to this Agreement are the FDER and the Navy. The terms of this Agreement shall apply to and be binding upon FDER and the Navy, their agents, employees and successors in interest. This Section shall not be construed as an agreement to indemnify any person. Each undersigned representative of a Party certifies that he or she is fully authorized to enter into the terms and conditions of this Agreement and to bind legally such Party to this Agreement.

III. DEFINITIONS

Except as noted below or otherwise explicitly stated, the terms herein shall have their ordinary meaning unless otherwise defined in Chapter 376.30, F.S., et seq., or FAC 17-761.200.

In addition:

A. "Agreement" shall mean this document and shall include all Attachments to this document referred to herein. All such Attachments shall be appended to and made an integral and enforceable part of this document.

B. "AST" means any storage tank which has less than ten percent of the volume of its contents below ground.

C. "Days" means calendar days unless otherwise specified in this Agreement.

D. "FAC" means Florida Administrative Code.

E. "Installation" is one of the Naval Commands identified in Attachment A.

F. "FDER" means State of Florida Department of Environmental Regulation, acting for the State of Florida.

G. "FS" means Florida Statutes.

H. "Navy" means the U.S. Department of the Navy as represented by the Naval Installations and activity Commanders/Commanding Officers where there exists regulated USTs addressed by this agreement; and the office of the Assistant Secretary of the Navy (Installations and Environment) as the signatory of this Agreement.

I. "Newly discovered tanks" means tanks regulated by FAC 17-761 and 17-762 and their attendant piping which are not included on the TIMS database on the effective date of this Agreement because the Navy did not know of their existence.

J. "Parties" means the FDER and the Navy.

K. "SEC" means the Navy's State Environmental Coordinator, Commander, Naval Aviation Activities, Jacksonville.

L. "Tank," unless otherwise specified, means underground storage tanks and the attendant integral piping.

M. "TIMS" means the Tank Inventory Management System database.

N. "Field Erected Storage Tanks" mean a storage tank which

is constructed by assembling it on-site at the facility.

O. "UST" means an underground storage tank as defined by 42 U.S.C. §6991(1).

IV. FINDINGS OF FACT

A. For the purposes of this Agreement, the following constitutes a summary of the findings upon which this Agreement is based. None of the facts related herein shall be considered admissions by any party. This paragraph contains findings of fact determined solely by the Parties and shall not be used by any person related or unrelated to this Agreement for purposes other than determining the basis of this Agreement.

B. In May, 1984, FAC Chapter 17-61 was implemented requiring certain actions be taken to ensure environmentally sound management of transportation related storage tanks. In December, 1990, FAC Chapter 17-61 was amended by the passage of FAC Chapter 17-761. In March, 1991, aboveground tanks were regulated with the passage of FAC Chapter 17-762. In May, 1992, FAC Chapter 17-761 was amended to require that all new and replacement tanks have secondary containment.

C. The Navy is the owner and operator of the Naval installations listed in Attachment A, at which are located approximately 550 tank systems. These tanks systems are managed by the Navy for compliance with environmental regulation, with support provided by the SEC and Southern Division, Naval Facilities Engineering Command (SOUTHDIV).

D. In response to implementation of FAC Chapter 17-61 the Navy began a program to comply with the upgrading schedule set forth therein and informed FDER of its intentions and actions. During 1987, the Navy found that the procurement and funding restrictions imposed upon it as a federal agency by federal law made it impossible to meet FDER's storage system retrofitting schedule for some of its systems.

E. Commencing in September, 1987, and continuing until February, 1988, the Navy and FDER negotiated over the best means to resolve the Navy's scheduling problems. The parties agreed that the Navy should submit an Alternate Procedure Request to FDER as

outlined in FAC Chapter 17-61 which the Navy did in February, 1988. In summary, the Navy proposed that it would:

(1) As a first priority address contaminated sites, and, secondly, address the remaining tank systems in the order of their age;

(2) Present FDER with updates of the Tank Inventory Management System (TIMS) Database, the system developed to track the Navy's execution of the requirements of FAC Chapter 17-61;

(3) Present FDER with information on any new technology being used by the Navy in its UST program;

(4) Notify and discuss with FDER proposed changes to the TIMS Database;

(5) Ensure that all new USTs will meet the requirements of FAC Chapter 17-61;

(6) Install USTs under the supervision of a certified tank installer; and

(7) Develop a guide specification for the installation of USTs that will provide for the use of spill prevention devices, double wall tanks, high level alarms, and automatic shut-off valves and that will reference industry standards.

F. In December, 1989, FDER sent an Approval of Alternative Procedures to the Navy. The Navy raised some questions concerning the wording of this document, particularly the deadline for compliance, the lack of reference to use of the TIMS Database to prioritize the Navy's compliance, and language concerning precision tightness testing of all tanks. Negotiations between the parties led to an agreement that a Consent Order should be entered into by the parties reflecting an achievable compliance schedule.

V. PURPOSE

A. The purpose of this Agreement is to:

1. Ensure that all USTs at Naval installations in the State of Florida are in compliance with all the requirements of FAC Chapters 17-761 and 17-762, as applicable, by the promulgated compliance dates or as allowed by this agreement.

2. Establish a priority for upgrading, replacing or closing tanks through the preparation and implementation of a Tank

Management Plan (TMP) which considers the age of the tank and the limitations of the Navy's ability to properly fund these actions.

3. Allow for changes to the Tank Management Plan to include changes in previously adopted schedules for good cause and to include newly discovered tanks between the date this agreement is signed and the date it expires.

4. Ensure that all USTs on Naval installations in Florida are in compliance with FAC Chapter 17-761 and, if applicable, Chapter 17-762 by December 31, 2000.

VI. SCOPE OF THE AGREEMENT

This Agreement shall apply to all the upgrading, replacement or closure of all regulated USTs located at any Naval installation in the State of Florida. This Agreement does not address the operation of USTs and ASTs. Petroleum product contamination at sites where USTs or ASTs are located will be addressed as provided in the Agreement Between the Florida Department of Environmental Regulation and the United States Department of the Navy Concerning Petroleum Contamination at Department of the Navy Installations in the State of Florida dated October 23, 1990.

The parties acknowledge that the RCRA definition of UST differs in some significant respects from the FDER definition of UST and that some tanks defined as AST's by FDER are included in the RCRA definition of UST. Notwithstanding the differences in definitions, the parties agree that all tanks defined as USTs under 42 USC 6991(1) are included in this agreement regardless of their definition under state law.

The parties also acknowledge that at this time the United States has not waived its sovereign immunity from state regulation of storage tanks (other than as defined in 42 USC 6991(1)). Nevertheless, the Navy agrees in Section XIV (Construction Standards) of this agreement to use its best efforts to comply with the state's requirements for tanks not defined as USTs.

VII. REPORTING

A. No Later than November 30 of each year this Agreement is in effect, the Navy shall submit to FDER a written progress report as part of the amendment to the Tank Management Plan which

identifies and briefly describes the actions which the Navy has taken during the previous twelve months to implement the requirements of this Agreement. The progress report shall also identify and briefly describe the activities scheduled to be taken during the upcoming calendar year. To the extent possible, a specific funding source (or sources) shall be identified for each action scheduled for the upcoming year. Should the funds available in those identified funding sources prove to be insufficient to pay for the designated activity during that year, this shall be a force majeure pursuant to Section XVI of this Agreement. The progress report shall include a statement of the manner and the extent to which the requirements and time schedules set out in this Agreement at each site are being met. In addition, the progress report shall identify any anticipated delays in meeting time schedules, the reason(s) for the delay and the actions taken to prevent or mitigate the delay. The parties agree to a mid-year progress review to be held as agreed upon by the parties.

B. TIMS shall be revised by the Navy to include tanks which are newly discovered as provided in Section XIII (Deadlines). All newly discovered tanks shall be reported to FDER within 60 days of their discovery. A TIMS update including the newly discovered tank shall be submitted to FDER no later than 120 days after discovery.

VIII. NOTIFICATION

A. Unless otherwise specified in this Agreement, the following shall be sent by a certified registered/return-receipt mail, facsimile machine or hand delivery to the Parties' representatives:

1. Any notice of newly discovered UST or AST.

2. Any notice of dispute and response thereto submitted under Section XVII (Resolution of Disputes) of this Agreement.

3. Any request and response thereto for extensions under Section XV (Extensions) of this Agreement.

4. Any notice of force majeure under Section XV (Force Majeure) of this Agreement.

5. Any notification of any upgrade or removal of a tank

as required in FAC Rules 17-761.450 or 17-762.450, as applicable.

B. The items listed in Paragraph A above shall be transmitted as shown below:

1. Mail:

FDER: State of Florida Department of Environmental Regulation
Bureau of Waste Cleanup
2600 Blair Stone Road
Tallahassee, Florida 32399-2400 (A copy notice will be sent by the Navy to the responsible FDER Di: Office and to the county regulator designated by FDER).

Fahrid
488-3935
922-4939
FAX

Navy: Commander, Naval Aviation Activities, Jacksonville
Code N-3, Box 102
Naval Air Station
Jacksonville, FL 32212-0102

IX. SITE ACCESS

A. FDER authorized representatives shall have authority to enter and move about any Naval facility at any reasonable times for any purpose consistent with this Agreement including, among other things:

1. Inspecting records, operating logs, contracts and other documents relevant to implementation of this Agreement;

2. Reviewing the progress of the Navy, its contractors or lessees in implementing this Agreement.

The Navy shall honor all reasonable requests for such access by FDER or its representatives conditioned only upon presentation of proper credentials. However, such access shall be by giving reasonable notice to the Navy and obtained in conformance with Navy security regulations and in a manner minimizing interference with any military operations. The parties recognize that Naval facilities are National Security installations thereby requiring that FDER refrain from using cameras or recording devices at a site without prior permission of the Navy. Such permission shall not be unreasonably withheld. The Navy shall provide an escort for purposes consistent with the provisions of this Agreement. FDER shall provide reasonable notice to the Navy representative to request any necessary escorts.

X. CONFIDENTIAL INFORMATION

A. If no claim of confidentiality accompanies Navy information when it is submitted to FDER, the information may be made available to the public without further notice to the Navy. Notwithstanding the foregoing, all information contained in the TIMS database shall not be claimed as confidential by the Navy except as may be required by law.

B. The Parties recognize that documents submitted to FDER, whether in draft or final form, are subject to the provision of Chapter 119, FS.

XI. OTHER CLAIMS

A. Nothing in this Agreement shall constitute or be construed as a bar or release by any of the Parties from any claim, cause of action or demand in law or equity by or against any person, firm, partnership or corporation not a signatory to this Agreement for any liability it may have arising out of or relating in any way to the operation or ownership of any UST or AST at any Naval installation.

B. The State shall not be held as a party to any contract entered into by the Navy to implement the requirements of this Agreement.

XII. THE STATE'S RESERVATION OF RIGHTS

By entering into this Agreement, the State does not waive any right or authority it may have under Florida law, but expressly reserves all of the rights and authority it may have thereunder, including the right to order abatement of an imminent hazard to the public health or the environment. The State expressly agrees to exhaust any applicable remedies provided in Section XVII (Resolution of Disputes) of this Agreement before pursuing any remedies it may have under the statutes which provide the jurisdictional basis for this Agreement.

XIII. DEADLINES

A. The Navy shall submit the Tank Management Plan (TMP) within 60 days of the Effective Date of this Agreement. The TMP shall include:

1. A complete printout of TIMS.
2. A projected date and rationale for the proposed action

at each UST.

3. Proposed activities and schedules for work planned for the current fiscal year.

4. Work projections for subsequent fiscal years (these projections will not constitute enforceable deadlines or schedules).

B. No later than November 30 of each year thereafter, the Navy shall submit an amendment to the TMP which shall propose schedule deadlines and work priorities for completion of each of the activities scheduled for the following calendar year.

C. Within 30 days of receipt, FDER shall review and provide comments to the Navy regarding the proposed amendment to the TMP. Within 30 days following receipt of the comments the Navy shall, as appropriate, make revisions and reissue the proposed amendment. The Parties shall meet as necessary to discuss and finalize the proposed schedule actions and deadlines. If the Parties agree on proposed schedule deadlines, these shall be incorporated into the appropriate Work Plans. If the Parties fail to agree within 30 days on the Navy's revised amendment to the TMP, the matter shall be submitted for dispute resolution pursuant to Section XVII (Resolution of Disputes) of this Agreement.

D. The deadlines set forth in this Section, or to be established as set forth in this Section, may be extended pursuant to Section XV (Extensions) of this Agreement.

E. The Navy shall comply with the deadlines in the TMP once the Plan is approved either through agreement or as a result of dispute resolution.

F. Notwithstanding the foregoing, the Navy shall be in complete compliance with the requirements of 17-761 and 17-762, as applicable, for all USTs listed on TIMS by no later than December 31, 2000. In order to meet this deadline, the Navy must schedule all projects with sufficient lead-time so that they will be completed by that date.

G. Since there are no standards for maintaining, upgrading or determining the integrity of field erected tanks, the Navy shall propose for FDER review and approval methods to accomplish these

tasks for such tanks. The method for determining the integrity of the tanks must be similar to the internal inspection requirements of API 653, and the structural integrity of the tanks must be determined for the tank bottoms and tank walls. This proposal must be submitted to FDER for its review within 120 days of the entry of the Agreement. Decisions by the Navy to maintain and upgrade field erected tanks shall be based upon the criteria contained in FAC 17-762 with a compliance deadline of December 31, 2000. Upon approval by FDER of a method for determining maintenance and upgrade requirements, the Navy shall use that method, if appropriate, for all field erected tanks at its installations.

XIV. CONSTRUCTION STANDARDS

A. The parties agree that presently there is no waiver of sovereign immunity by the United States for the regulation by the state of tanks not included in the definition of USTs under 42 USC 6991(1). Nevertheless, the Navy agrees that for all new construction for such tanks, it shall use its best efforts to meet the standards of FAC Chapters 17-762, or Naval Facilities Engineering Command Guide Specification, NFGS 13216, whichever is more stringent. This provision does not create any enforcement rights for FDER other than that already existing in law. Nothing herein should be construed to prevent FDER from promulgating standards for construction, closure, replacement or other requirements for tanks not covered by this agreement if there is a waiver of sovereign immunity in the future.

B. Effective July 1, 1992, §376.303(1)(c), F.S. requires that all owners or operators of Aboveground Hazardous Substance Tanks, as defined in §376.301(1), F.S., and Compression Vessels, as defined in §376.301(4), F.S., must register these regulated tanks or vessels with FDER by December 31, 1992. The Navy will use its best efforts to update TIMS to include these tanks and vessels by the December 31, 1992, deadline.

XV. EXTENSIONS

A. A compliance date shall be extended upon receipt of a timely request for extension and when good cause exists for the requested extension. Any request for extension by the Navy shall

be submitted in writing and shall specify:

1. The compliance date which is sought to be extended;

2. The length of the extension sought;

3. The good cause(s) for the extension; and

4. Any related compliance date that would be affected if the extension were granted.

B. Good cause exists for an extension when sought in regard to:

1. An event of force majeure as described in Section XVI (Force Majeure) of this Agreement;

2. A delay caused by another's, including FDER's, failure to meet any requirement of this Agreement;

3. A delay caused by the good faith invocation of dispute resolution or the initiation of judicial action;

4. A delay caused, or which is likely to be caused, by the grant of an extension in regard to another compliance date; and

5. Any other event or series of events mutually agreed to by the Parties as constituting good cause, including but not limited to the following:

(a) fire;

(b) unanticipated breakage or accident to machinery, equipment or lines of pipe despite reasonably diligent maintenance;

(c) unusual delay in transportation; and

(d) delays caused by compliance or regulations governing contracting, procurement or acquisition procedures, despite the exercise of reasonable diligence.

C. Absent agreement of the Parties with respect to the existence of good cause, the Parties may seek and obtain a determination through the dispute resolution process whether good cause exists.

D. Within 30 days of receipt of a request for an extension of a timetable and deadline or a schedule, the receiving party shall advise the requestor in writing of its position. If the receiving party does not concur in the requested extension, it shall include in its statement of non-concurrence an explanation

of the basis for its position. Any failure by FDER to respond in writing within 30 days shall be deemed a non-concurrence with the request for an extension.

E. If there is consensus among the Parties that the requested extension is warranted, the affected timetable and deadline or schedule shall be adjusted accordingly. If there is no consensus among the Parties as to whether all or part of the requested extension is warranted, the timetable and deadline or schedule shall not be extended except in accordance with determination resulting from the dispute resolution process.

F. Within 10 days of non-concurrence with the requested extension, any Party may invoke dispute resolution in accordance with Section XVII (Resolution of Dispute) of this Agreement.

G. A timely and good faith request for an extension shall toll any application for judicial enforcement of the affected compliance date until a decision is reached on whether the requested extension will be approved.

XVI. FORCE MAJEURE

A Force Majeure shall mean any event arising from causes beyond the control of a Party that causes a delay in or prevents the performance of any obligation under this Agreement, including, but not limited to, acts of God; war; insurrection; civil disturbance; explosion; unusually severe weather conditions that could not be reasonably anticipated; restraint by court order or order of public authority; inability to obtain, at reasonable cost and after exercise of reasonable diligence, any necessary authorizations, approvals, permits or licenses due to action or inaction of any governmental agency or authority other than the Navy; and insufficient availability of appropriated funds, if the Navy shall have made timely request for such funds as part of the budgetary process as set forth in Part XIX (Funding) of this Agreement. A Force Majeure shall also include any strike or other labor dispute against a Navy contractor. Force Majeure shall not include increased costs whether or not anticipated at the time such compliance actions were initiated unless sufficient additional appropriated funds are not available.

XVII. RESOLUTION OF DISPUTES

A. Except as specifically set forth elsewhere in this Agreement, if a dispute arises under this Agreement, the procedures of this Section shall apply.

B. Informal Resolution: All parties to this Agreement shall make reasonable efforts to informally resolve disputes at the Project Manager or their immediate supervisor level. During this informal dispute resolution process the Parties shall meet as many times as the Parties deem necessary to discuss and attempt resolution of the dispute. If resolution cannot be achieved informally, the formal procedures of Paragraph C of this Section shall be implemented to resolve a dispute.

C. Formal Resolution:

1. Unless otherwise provided herein within 30 days after any action which leads to or generates a dispute, the disputing Party shall submit to the other Party a written statement of dispute setting forth the nature of the dispute, the work affected by the dispute, and basis upon which the disputing party invokes this provision.

2. The Dispute Resolution Committee (DRC) will serve as a forum for resolution of disputes for which agreement has not been reached through informal dispute resolution. The Parties shall each designate one individual and an alternate to serve on the DRC. The individuals designated to serve on the DRC shall be employed at the policy level or be delegated the authority to participate on the DRC for the purposes of dispute resolution under this Agreement. Written notice of any delegation of authority from a Party's designated representative on the DRC shall be provided to the other Party pursuant to the procedures of Section VIII (Notification) of this Agreement. The membership of the DRC includes:

(a) State:

Principal: Director
Division of Waste Management
Florida Department of
Environmental Regulation

Alternate: Deputy Director
Division of Waste Management

Florida Department of
Environmental Regulation

(b) Navy:

Principal: Commander, Naval Aviation Activities, Jacksonville
Code N-3, Box 102
Naval Air Station
Jacksonville, FL 32212-0102

Alternate: Commander, Naval Aviation Activities, Jacksonville
Code N-31, Box 102
Naval Air Station
Jacksonville, FL 32212-0102

3. Following elevation of a dispute to the DRC, the DRC shall have 21 days to resolve the dispute and issue a written decision signed by both Parties. If the DRC is unable to resolve the dispute within this 21 day period, the written statement of dispute shall be forwarded to the Senior Executive Committee for resolution.

4. The Senior Executive Committee will serve as the forum for resolution of disputes for which agreement has not been reached by the DRC. The Senior Executive Committee members shall, as appropriate, confer, meet and exert their best efforts to resolve the dispute and issue a written decision signed by all parties. If resolution of the dispute is not reached within 21 days, FDER's Assistant Secretary shall issue a written position on the dispute. The Navy may, within 21 days of the Assistant Secretary's issuance of FDER's position, issue a written notice elevating the dispute to the Secretary of FDER for resolution in accordance with all applicable laws and procedures. In the event that a Party elects not to elevate the dispute to the Secretary within the designated 21 days escalation period, the Party shall be deemed to have agreed with the Assistant Secretary's written position with respect to the dispute. The membership of the Senior Executive Committee includes:

(a) State: Assistant Secretary
Florida Department of Environmental Regulation

(b) Navy: Commander, Naval Aviation Activities, Jacksonville
Code N-00
Naval Air Station
Jacksonville, FL 32212-0102

5. Upon escalation of a dispute to the Secretary of FDER pursuant to Subparagraph 4 above, the Secretary will review and resolve the dispute within 21 days. Upon request, and prior to resolving the dispute, the FDER Secretary shall meet and confer with the Assistant Secretary of the Navy (Installations and Environment) to discuss the issue(s) under dispute. Upon resolution, the Secretary shall provide the Navy with a written final decision setting forth resolution of the dispute. The duties of the Secretary set forth in this Section shall not be delegated.

D. The pendency of any dispute under this Section shall not affect the Navy's responsibility for timely performance of the work required by this Agreement, except that the time period for completion of work affected by such dispute shall be extended for a period of time usually not to exceed the actual time taken to resolve any good faith dispute in accordance with Paragraph C of this Section. All elements of the work required by this Agreement which are not affected by the dispute shall continue and be completed in accordance with the applicable schedule.

E. Within 45 calendar days of resolution of a dispute pursuant to the procedures specified in this Section, the Navy shall incorporate the resolution and final determination into the appropriate plan, schedule or procedures and proceed to implement this Agreement according to the amended plan, schedule or procedures.

F. Resolution of a dispute pursuant to this Section of the Agreement constitutes a final resolution of any dispute arising under this agreement. All Parties shall abide by all terms and conditions of any final resolution of dispute obtained pursuant to this Section of the Agreement except to the extent that portion of such final resolution are submitted by a party to a court of competent jurisdiction for judicial review.

XVIII. ENFORCEABILITY

A. The parties reserve all rights to judicial review that they may have including the right to seek review of a final resolution of a dispute pursuant to Section XVII of this Agreement. Nothing in this Agreement shall be construed as a restriction or waiver of any rights the State may have under state law.

B. The Parties agree to exhaust their rights under Section XVII (Resolution of Disputes) prior to exercising any rights to judicial review that they may have.

C. The Parties agree that all Parties shall have the right to enforce the terms of this Agreement.

XIX. FUNDING

A. It is the expectation of the Parties to this Agreement that all obligations of the Navy arising under this Agreement will be fully funded. The Navy agrees to seek sufficient funding through the normal budgetary process to fulfill its obligations under this agreement.

B. Any requirement for the payment or obligation of funds by the Navy established by the terms of this Agreement shall be subject to the availability of appropriated funds, and no provision herein shall be interpreted to require obligation or payment of funds in violation of the Anti-Deficiency Act, 31 U.S.C. Section 1341. In cases where payment or obligation of funds would constitute a violation of the Anti-Deficiency Act, the dates established requiring the payment or obligation of such funds shall be appropriately adjusted.

C. If appropriated funds are not available to fulfill the Navy's obligations under this Agreement, FDER reserves the right to initiate an action against the Navy or any other person, or to take any response/corrective action, which would be appropriate absent this Agreement. Nothing in this Agreement shall be construed to create a basis for personal liability of any Navy employee or service member which would not otherwise exist.

XX. PENALTIES

FDER reserves the right to seek civil penalties for unexcused violations of this Agreement.

XXI. EFFECTIVE DATE

A. This Agreement is effective upon its execution by both Parties.

B. This agreement is final agency action of the State pursuant to Section 120.69, Florida Statutes and Florida Administrative Code Rule 17-103.110(3), and it is final and effective on the date filed with the Clerk of the Department of Environmental Regulation unless a Petition for Administrative Hearing is filed in accordance with Chapter 120, Florida Statutes. Upon the timely filing of a petition, this Agreement will not be effective as to the State until further order of the Department of Environmental Regulation.

XXII. PUBLIC COMMENT

Within 14 days of the execution of this Agreement by all Parties, the Navy shall publish one time only a notice of Proposed Agency Action in a newspaper of general circulation in each county in Florida in which a Naval installation is located and which includes regulated USTs covered by this agreement. When multiple installations exist in a county or metropolitan area, a single notice can satisfy this requirement. The notice shall be in a form similar to the form attached to this Agreement as Attachment B.

XXIII. TOTAL INTEGRATION

There are no promises, verbal understandings or other agreements of any kind pertaining to this Agreement or its appendices herein other than specified herein. This Agreement shall constitute the entire integrated agreement of the Parties.

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF CONSENT ORDER

The Department of Environmental Regulation gives notice of agency action of entering into a Consent Agreement with the United States Navy pursuant to Rule 17-103.110(3), Florida Administrative Code. The Consent Agreement addresses the schedule for bringing underground storage tanks at the naval installations in the State of Florida into compliance with the applicable provisions of Chapters 17-761 and 17-762, Florida Administrative Code. The Consent Agreement is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at the Department of Environmental Regulation, [insert address of the local Department district office]_____ ,
_____
_____

Persons whose substantial interests are affected by this Consent Agreement have a right to petition for an administrative hearing on the Consent Agreement. The Petition must contain the information set forth below and must be filed (received) in the Department's Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within 21 days of receipt of this notice. A copy of the Petition must also be mailed at the time of filing to the District Office named above at the address indicated. Failure to file a petition within the 21 days constitutes a waiver of any right such person has to an administrative hearing pursuant to Section 120.57, F.S.

The petition shall contain the following information: (a) The name, address, and telephone number of each petitioner; the Department's identification number for the Consent Agreement and the county in which the subject matter or activity is located; (b) A statement of how and when each petitioner received notice of the Consent Agreement; (c) A statement of how each petitioner's substantial interests are affected by the Consent Agreement; (d) A statement of the material facts disputed by petitioner, if any; (e) A statement of facts which petitioner contends warrant reversal or modification of the Consent Agreement; (f) A statement of which rules or statutes petitioner contends require reversal or modification of the Consent Agreement; (g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Consent Agreement.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the subject Consent Agreement have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 21

ATTACHMENT A

TANK MANAGING INSTALLATION OR ACTIVITY

NAVSTA MAYPORT

NSC JACKSONVILLE

NAS JACKSONVILLE

NADEP JACKSONVILLE

NAS CECIL FIELD

NAS CECIL FIELD DET ASTOR

NTC ORLANDO

NSWC DET FT LAUDERDALE

NSGA HOMESTEAD

NAS KEY WEST

NRMC TALLAHASSEE

NCSC PANAMA CITY

NAS PENSACOLA

NSC PENSACOLA

PWC PENSACOLA

NADEP PENSACOLA

NTTC CORRY FIELD

NETPMSA SAUFLEY FIELD

NAS WHITING FIELD

PWC JACKSONVILLE

STATE OF FLORIDA DEPARTMENT OF ENVIRONMENTAL REGULATION
NOTICE OF CONSENT ORDER

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_____
_____

Persons whose substantial interests are affected by this Consent Agreement have a right to petition for an administrative hearing on the Consent Agreement. The Petition must contain the information set forth below and must be filed (received) in the Department's Office of General Counsel, 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within 21 days of receipt of this notice. A copy of the Petition must also be mailed at the time of filing to the District Office named above at the address indicated. Failure to file a petition within the 21 days constitutes a waiver of any right such person has to an administrative hearing pursuant to Section 120.57, F.S.

The petition shall contain the following information: (a) The name, address, and telephone number of each petitioner; the Department's identification number for the Consent Agreement and the county in which the subject matter or activity is located; (b) A statement of how and when each petitioner received notice of the Consent Agreement; (c) A statement of how each petitioner's substantial interests are affected by the Consent Agreement; (d) A statement of the material facts disputed by petitioner, if any; (e) A statement of facts which petitioner contends warrant reversal or modification of the Consent Agreement; (f) A statement of which rules or statutes petitioner contends require reversal or modification of the Consent Agreement; (g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Consent Agreement.

If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the subject Consent Agreement have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 21

days of receipt of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28-5.207, F.A.C..

APPENDIX D

FDEP TELEPHONE COMMUNICATION

RUST **Rust Environment & Infrastructure** *Fax Transmittal*

2694 Lake Park Drive
North Charleston, SC 29406

Phone (803) 572-5600
Fax (803) 572-5661

Date: 09/25/96

Time: 8:45 a.m.

To: Dav Grabka

Company FDEP

City/State: Marathon, FL

Fax Number: 305-289-2314

From: David Hunt

Job/Project No: 37147

Total Pages Including This Page: 1

Comments:

Dav,

As per our conversation of Tuesday Sept. 24, it is my understanding that oil/water separators are considered process tanks and are therefore exempt from Florida UST and AST regulation.

If an oil/water separator discharges segregated oils into a holding tank the holding tank is subject to regulation as an AST or UST.

Please contact me at 803-572-5600 if the above information is incorrect.

Thanks,

David Hunt