

N61414.AR.001826  
NAB LITTLE CREEK  
5090.3a

FACILITY RESPONSE PLAN NAB LITTLE CREEK VA  
2/1/1993  
NAB LITTLE CREEK



**FACILITY RESPONSE PLAN**  
**FOR**  
**NAVAL AMPHIBIOUS BASE**  
**LITTLE CREEK, VIRGINIA**

**FEBRUARY 1993**



## INTRODUCTION AND PLAN CONTENT

The name of the owner/operator of the facility including the address and telephone number is as follows:

Commanding Officer  
Naval Amphibious Base Little Creek  
Norfolk, Virginia 23521-5210  
Phone: (804) 363-7231/7232  
Fax: (804) 464-7300  
24 hr: Port Operations Tower 464-7791

Naval Amphibious Base Little Creek (NAVPHIBASE) is located adjacent to the Chesapeake Bay immediately to the west of the Chesapeake Bay Bridge Tunnel. NAVPHIBASE includes some 2.3 miles of shoreline along the Chesapeake Bay and seven miles of shoreline along Little Creek Harbor and its entrance channel. Two large Lakes (Chubb Lake and Lake Bradford) form the eastern edge of the base.

NAVPHIBASE may be accessed from land via Shore Drive (Route 60), Diamond Springs Road (Route 166) or Independence Boulevard (Route 170) in Norfolk. It is accessible from water via the Little Creek Harbor entrance from the Chesapeake Bay.

Notification of discharges will be made in accordance with Commander, Naval Base Norfolk Virginia Instruction (COMNAVBASENORVAINST) 6280.1C, AREA OIL AND HAZARDOUS SUBSTANCE POLLUTION CONTINGENCY PLAN. A copy of this Plan is provided as Appendix M.

As discussed in COMNAVBASENORVAINST 6280.1C, the Navy On-Scene Commander (NOSCDR) will perform the initial notifications in the case of a discharge. For NAVPHIBASE Little Creek the NOSCDR responsibilities have been delegated by the Commanding Officer to the Public Works Officer. Follow up reports will be provided by the Navy On-Scene Coordinator (NOSC). For NAVPHIBASE Little Creek the NOSC is Commander, Naval Base Norfolk. These reporting responsibilities and the checklist to be used are described in complete detail in COMNAVBASENORVAINST 6280.1C.

The Navy On-Scene Commander (NOSCDR) will implement containment and cleanup actions. For NAVPHIBASE Little Creek the Commanding Officer has designated the Port Services Officer as the NOSCDR. The name and address of the NOSCDR is as follows:

Commanding Officer  
Naval Amphibious Base Little Creek  
Norfolk, Virginia 23521-5210  
Attention: Port Services Officer, Code N3  
Phone: (804) 464-7424  
(804) 464-7791 (24 hours)  
Fax: (804) 464-4130



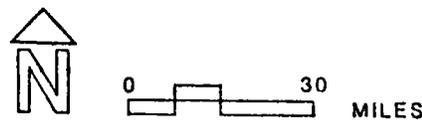
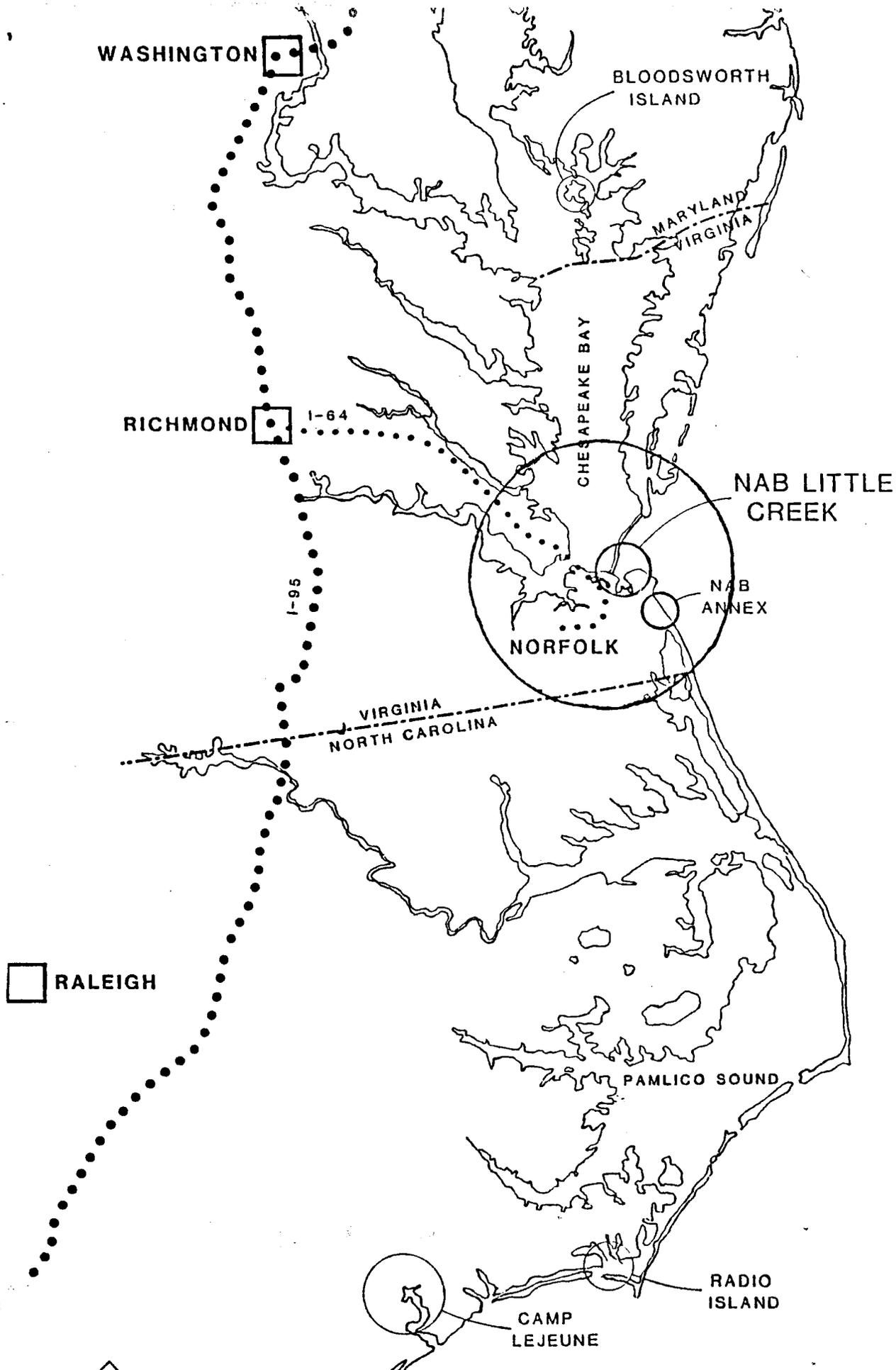
The Navy On-Scene Commander will be responsible for activating and contracting with necessary oil spill removal organizations, acting as liaison with Federal On-Scene Coordinator, obligating any funds required to carry out all necessary or directed oil response activities, as well as the proper disposal of solid and liquid wastes.

The initial containment and cleanup response to discharges will be provided by the Navy On-Scene Operation Team located at NAVPHIBASE, with personnel on duty 24 hours a day. If additional assistance is required the Navy Public Works Oil Spill Recovery Team located at Naval Base Norfolk will be called. They may be reached by telephone at (804) 444-3477, 445-2917 or 445-2919 and can be on-site within two hours of being called.

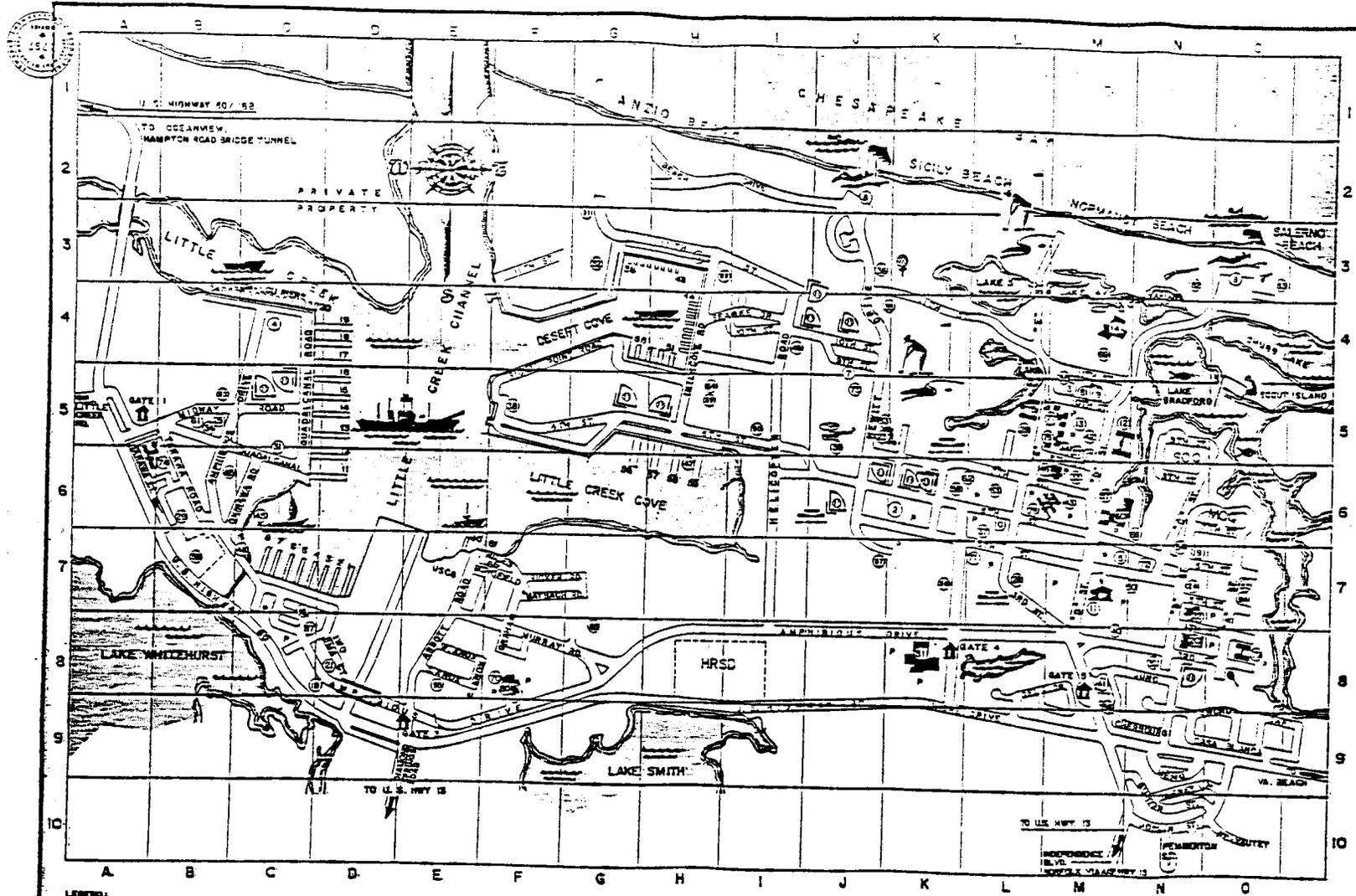
Navy oil spill response assets for the Norfolk area are listed in Appendix C.

Additional contractor support which the Navy may call upon when required is listed in Appendix K.





NAB LITTLE CREEK **REGION** **FIGURE 1.1**



LEGEND:  
P - PAVING

Naval Amphibious Base  
Little Creek, Norfolk, Virginia

FIGURE L2

NAB 1  
NO. NAVY/181



## Table of Contents

	<u>Page</u>
a. INTRODUCTION AND PLAN CONTENT	i
RECORD OF CHANGES	1
b. EMERGENCY RESPONSE ACTION PLAN	2
Notification Procedures	2
Average Most Probable Discharge Calculation	5
Maximum Most Probable Discharge Calculation	5
Worst Case Discharge Description/Calculation	5
Facility Organizational Structure	6
General Spill Mitigation and Response Procedures	7
Specific Spill Mitigation and Response Procedures	10
Sensitive Areas	17
Disposal Plan	20
c. & d. RESERVED	
e. TRAINING AND DRILLS	21
Training Procedures	21
Drill Procedures	21
PLAN REVIEW AND UPDATE PROCEDURES	23
f. APPENDICES	
A. Facility Specific Information	
B. List of Contacts	
C. Equipment Lists and Records	
D. Communications Plan	
E. Site-specific Safety and Health Plan	
F. List of Acronyms and Definitions	
G. Geographic-specific Appendix	
H. References	
I. Notification Procedures	
J. Report Formats	
K. Oil Spill Contractors	
L. COMNAVBASENORVAINST 6280.1C	
M. NAVPHIBASELCREEKINST 6280.1A	
N. Environmental Sensitivity Map Atlas	



RECORD OF CHANGES

<u>DATE</u>	<u>SECTION</u>	<u>PAGE</u>	<u>CHANGE</u>
1/3/94	EMERG.RESP. ACTION PLAN	5	ADD PAGE 5a EPA calculation of Worst Case Discharge



## EMERGENCY RESPONSE ACTION PLAN

### Notification Procedures

The following is the standard notification procedure for oil discharges at Naval Amphibious Base, Little Creek. All personnel, including alternates, are on call 24 hours a day.

<u>Point of Contact</u>	<u>Phone No.</u>
1. NOSCDR NAB Little Creek, Port Services Officer	464-7424 or 464-7683
. . The NOSCDR will notify the following people:	
a. CO NAB Little Creek	464-7231
b. NOSOT, Chief Pringle	464-7819
c. Emergency Coordinator, Willie Barnes (Environmental Quality Division)	464-8566
d. Virginia State Water Control Board (after hours, weekends, holidays)	552-1100 527-5200
e. NOSC Norfolk Naval Base, Steven Gibson	444-2590
The NOSC will contact the State Department of Fish and Game, Industrial Water Users, Port District Operations, Fire Departments, Police Departments, and Threatened Marinas and Beaches in the event of a major spill.	
f. Commander, 5th Coast Guard District	398-6638
2. NAB Little Creek Fire Department	363-4444
3. Command Duty Officer (CDO)	464-7385
4. Officer on Duty (OOD) for ships	
5. Public Works Officer - written notification	
6. Safety Manager, G. Maynard	464-7774



The initial containment and cleanup response to discharges will be provided by the Navy On-Scene Operation Team which reports to the Port Services Officer at NAVPHIBASE, which maintains primary and alternate qualified personnel on duty 24 hours a day. If additional assistance is required the Navy Public Works Oil Spill Recovery Team located at Naval Base Norfolk will be called. They may be reached by telephone at (804) 444-3477, 445-2917 or 445-2919 and can be on-site within two hours of being called.

Navy oil spill response assets for the Norfolk area are listed in Appendix C. These Navy assets located in the Hampton Roads area are sufficient to mitigate the average most probable discharge described above.

Additional contractor support which the Navy may call upon when required is listed in Appendix K.

The Environmental and Natural Resources Program Manual, OPNAVINST 5090.1A, Chapter 11 outlines the requirements for Navy planning and response to oil discharges. It describes the responsibilities of the Navy On-Scene Coordinator (NOSC) and the Navy On-Scene Commander (NOSCDR). The NOSC of this area is the Commander, Naval Base, Norfolk and the NOSCDR of NAB Little Creek is the Base Commanding Officer. The NOSC duties at Norfolk Naval Base are delegated to Mr. Steve Gibson. The duties of the NAVPHIBASE Little Creek NOSCDR are delegated to the Port Services Officer. The Navy response organization outlined in the introduction complements the Federal National Contingency Plan (NCP) response procedures. The USCG Federal On-Scene Coordinator (OSC) will monitor the clean-up efforts and advise the Navy of appropriate actions. If the USCG Federal OSC determines that the Navy response is inadequate or inappropriate the OSC may take operational command of all response and clean-up efforts.

CDR 2011A  
11.13.03C

In the event of an oil discharge into the water at NAB Little Creek, the spill shall be immediately reported to the Port Services Officer at NAB Little Creek at 464-7424 or 464-7683. If the discharge occurs while underway, reports shall be made over harbor common to the nearest Port Service Office (PSO). The PSO will immediately notify the NOSC at Norfolk Naval Base. Any discharge which causes a sheen or film on the water shall be reported. The following information shall be included in the initial report:

1. Location of spill
2. Type of pollutant
3. Quantity of pollutant; class of discharge
4. Name and telephone number of informant
5. Slick description
6. Action taken or to be taken
7. Source and cause (if known)
8. Time occurred/discovered



Initial notification by the reporting party will be followed by an oil spill message to the agencies listed in the message format. The oil spill message describes in detail the following items:

- party responsible for spill
- spill location
- amount of oil spilled
- type of oil spilled
- operation under way when the spill occurred
- cause of the spill
- description of the slick and movement
- areas damaged or threatened
- if telephone contact was made with the National Response Center
- if samples were taken
- containment method planned/used
- spill removal method planned/used
- parties performing spill removal
- if assistance is required
- whom to contact for additional information.

For medium and major discharges, <sup>Skig Gibson</sup> Pollution Reports (POLREP) are required to be submitted by the NOSC when Phases III and IV extend beyond a 12 hour period. The NOSC will make these reports to the U.S. Coast Guard Regional Response Team at 0800 and 2000 local time on each day of the operations. When the Regional Response Team (RRT) has been activated, the NOSC will address POLREPs as requested by the RRT. At the conclusion of Navy response action for oil discharges, the NOSCDR shall submit a report of response operations and action taken to the NOSC.

<sup>CDR RUTLAND</sup> The NOSC and NOSCDR each must maintain a detailed record of all events connected with the spill. This record is a legal document that may be required for subsequent litigation.

Report formats are listed in Appendix J.



### Average Most Probable Discharge Calculation

The Base's Average Most Probable Discharge is the lesser of 1% of the Worst Case Discharge (11,294 gallons) or 2,100 gallons (50 barrels). Therefore, for the purposes of this report, the Average Most Probable Discharge is 2,100 gallons.

### Maximum Most Probable Discharge Calculation

The Base's Maximum Most Probable Discharge is the lesser of 10% of the Worst Case Discharge (112,940 gallons) or 50,400 gallons (1,200 barrels). Therefore, for the purposes of this report, the Maximum Most Probable Discharge is 50,400 gallons.

### Worst Case Discharge Description

Assessment of the worst case discharge including measures to limit the outflow of oil, response strategy and operational plan.

The worst case discharge at the facility would be a total of the following:

. . . the complete release of the contents of five large above ground storage tanks located at the Fuel Farm, as shown in figure b.2. These five tanks have earthen berms without any form of liner, and have a combined capacity of 220,000 gallons. In addition, the base has a total small tank capacity of 4,100 gallons which currently have no form of secondary containment.

plus:

The entire contents (546,000 gallons) of DFM tank 1551 at the West Annex, as shown in figure b.1 with the added release of the contents (9,300 gallons) of the fuel piping system from tank 1551 to the marine manifolds at piers 11 through 19.

plus:

The base also operates one diesel fuel barge with a capacity of 350,000 gallons.

Therefore the total Worst Case Discharge for NAB Little Creek is 1,129,400 gallons.



Order of Importance	Habitat
6	Exposed, compacted tidal flat; oil penetrates deeply.
7	Medium coarse grained sand beaches; oil penetration likely.
8	Flat, fine-grained sand beaches; compaction prohibits oil penetration.
9	Eroding wave-cut platforms; good wave action.
10	Exposed or clefted rock headlands; good wave action.

Source: United States Department of the Interior, Fish and Wildlife Service National Wetlands Research Center.

**Appendix F to Part 112—Determination of a Worst Case Discharge**

**Instructions**

Owners and operators are required to complete this worksheet if it is determined from appendix C of this part that the facility could cause substantial harm to the environment by self-selection or RA determination. The calculation of a worst case discharge is used for emergency planning purposes, and is required in § 112.20 for facility owners and 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 should be taken into consideration. Owners and operators would be required to determine the facility's worst case discharge from either part A for onshore storage facilities, or part B for onshore production facilities. The worksheet integrates a facility's use of secondary containment and its proximity to navigable waters.

For onshore storage facilities and production facilities, permanently manifolded 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. In a worst case discharge scenario, a single failure could cause the release 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 volume would be based on the capacity of the largest tank within a common secondary containment area or the largest tank within a single secondary containment area, whichever is greater.

For permanently manifolded tanks that function as one storage unit, the worst case discharge would be based on the combined storage capacity of all manifolded tanks or the capacity of the largest single tank within a secondary containment area, whichever is greater. For purposes of this determination, 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.

For production facilities, the presence of exploratory wells, production wells, and storage tanks must be considered in the calculation. Part B takes these additional factors into consideration and provides steps

for their inclusion in the total worst case 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 volume is calculated within each section of the worksheet, the final worst case amount is dependent on the risk parameter that results in the greatest volume.

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 volume for USCG-related facilities is included in the interim final rule which amends 33 CFR part 154 (58 FR 7330; February 5, 1993). All "complexes" must compare both calculations for worst case discharge derived by EPA and USCG and plan for whichever volume is greater.

**Part A. Worst Case Discharge Calculation for Onshore Storage Facilities**

Part A of this worksheet is to be completed by owners or operators of SPCC-regulated facilities (excluding oil production facilities) if it is determined that the facility could cause substantial harm to the environment by self-selection or RA determination, as presented in Appendix C of this part.

If you are the owner or operator of a production facility, please proceed to Part B.

**A1. Single-Tank Facilities**

For facilities containing only one aboveground storage tank, the worst case volume equals the capacity of the storage tank.

—Final Worst Case Volume: \_\_\_\_\_ Gal.  
—Do not proceed further.

**A2. Secondary Containment—Multiple Tank Facilities**

Are all aboveground storage tanks or groups of aboveground storage tanks at the facility without adequate secondary containment? NO (Y/N)

a. If the answer is yes, the final worst case volume equals the total aboveground oil storage capacity at the facility.

—Final Worst Case Volume: \_\_\_\_\_ Gal.  
—Do not proceed further.

b. If the answer is no, calculate the total aboveground capacity of tanks without adequate secondary containment. If all aboveground storage tanks or groups of aboveground storage tanks at the facility have adequate secondary containment, ENTER "0" (zero). 829,750 Gal.

<sup>1</sup> "Storage facilities" represent all facilities subject to this part, excluding oil production facilities.

<sup>2</sup> Secondary containment is defined in § 112.7(d)(2) of 40 CFR Part 112, revised as of July 1, 1992. Acceptable methods and structures for containment are given in § 112.7(c)(1) of 40 CFR Part 112, revised as of July 1, 1992.

—Proceed to question A3.

**A3. Distance to Navigable Waters**

a. Is the nearest opportunity for discharge (i.e., storage tank, piping, or flowline) adjacent to a navigable water? YES (Y/N)

b. If the answer is yes, calculate 110% of the capacity of the largest single aboveground storage tank within a secondary containment area or 110% of the combined capacity of a group of aboveground storage tanks permanently manifolded together, whichever is greater. PLUS THE VOLUME DETERMINED IN QUESTION A2(b).  
—Final Worst Case Volume: 829,750 Gal. 1.1 x 546,000

—Do not proceed further. +208,750

c. If the answer is no, calculate the capacity of the largest single aboveground storage tank within a secondary containment area or the combined capacity of a group of aboveground storage tanks permanently manifolded together, whichever is greater, PLUS THE VOLUME FROM QUESTION A2(b).

—Final Worst Case Volume: \_\_\_\_\_ Gal.

**Part B. Worst Case Discharge Calculation for Onshore Production Facilities**

Part B of this worksheet is to be completed by owners or operators of SPCC-regulated oil production facilities that are determined by the RA to have the potential to cause substantial harm and are required to prepare and submit a response plan. 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.

**B1. Single-Tank Facility**

For facilities containing only one aboveground storage tank, the worst case

<sup>1</sup> Navigable waters are defined in 40 CFR Part 110.

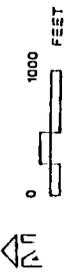
<sup>2</sup> For one or more independent aboveground storage tanks within a secondary containment area, this amount is simply 110% of the capacity of the largest tank. Permanently manifolded tanks are defined as tanks that are designed, installed, and/or operated in such a manner that the multiple tanks function as one storage unit. 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 volume would be based on the capacity of 110% of the largest tank within a common secondary containment area or 110% of the largest tank in a single containment area, whichever is greater. For permanently manifolded tanks that function as one storage unit, the worst case discharge volume would be based on 110% of the combined storage capacity of all manifolded tanks or 110% of the largest single tank within a secondary containment area, whichever is greater. For purposes of this determination, 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.

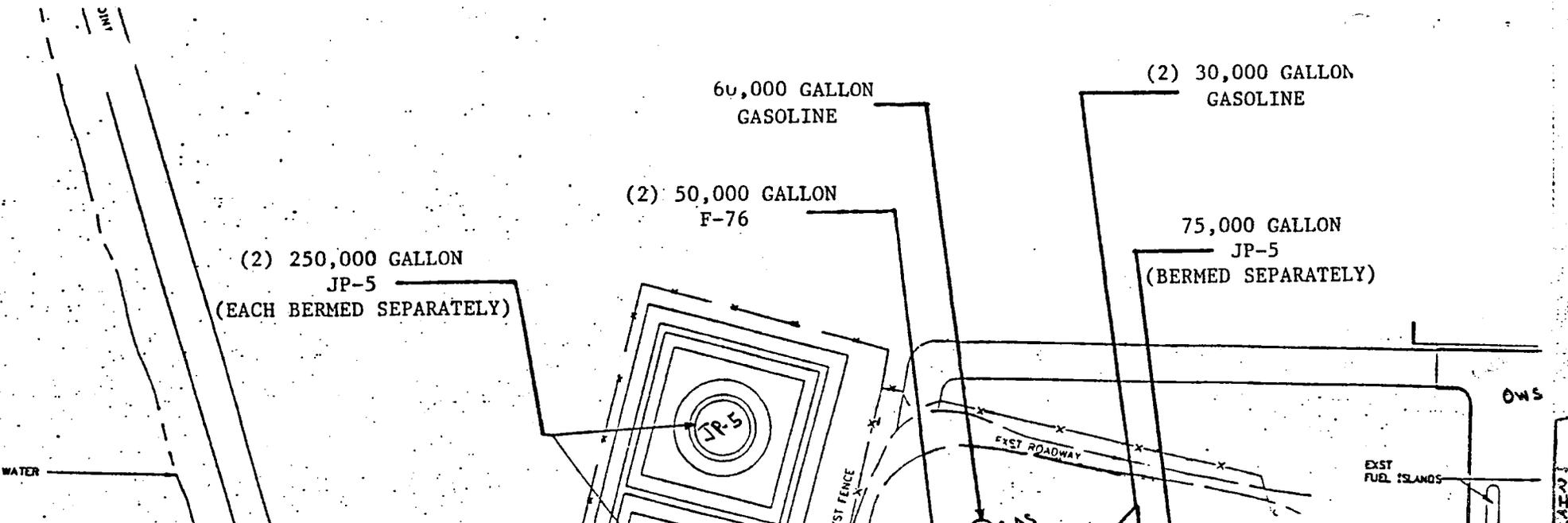
<sup>3</sup> If the volume determined in Question A3(b) is greater than the total aboveground storage capacity of the facility, fill in the lesser of these two volumes in the space provided.

<sup>4</sup> All "complexes" jointly regulated by EPA and USCG must also calculate the worst case discharge for the transportation-related portions of the facility, and plan for whichever volume is greater.



F  
NAB LITTLE CREEK F b.1





(2) 250,000 GALLON  
JP-5  
(EACH BERMED SEPARATELY)

60,000 GALLON  
GASOLINE

(2) 50,000 GALLON  
F-76

(2) 30,000 GALLON  
GASOLINE

75,000 GALLON  
JP-5  
(BERMED SEPARATELY)

WATER

DMC

EXIST FENCE

EXIST ROADWAY

EXIST FUEL ISLANDS

OWS

EXIST

**FACILITY ORGANIZATIONAL STRUCTURE**

**Responsibilities**

**Command and Control:** Port Services Officer as the NOSCDR

**Public Information:** Public Affairs Officer

**Safety:** Occupational Safety and Health Manager

**Liaison with Government Agencies:** Port Services Officer  
and  
Base Civil Engineer

**Spill Operations:** Port Services Officer as the NOSCDR

**Planning:** Port Services Officer as the NOSCDR

**Logistics Support:** Port Services Officer  
and  
Base Civil Engineer

**Finance:** Port Services Officer as the NOSCDR



## General Spill Mitigation and Response Procedures

The method of response to an oil discharge depends on the variables of wind, sea state, current, water temperature, and type of pollutant spilled. These variables will decide which response technique is appropriate for a particular spill. The purpose of choosing the right response technique is to minimize the effects of environmental damage caused by an oil discharge. The following paragraphs summarize the response techniques to use for frequently encountered spill situations. If more information is needed, the publication NAVFAC P-908 by the Naval Facilities Engineering Command describes in detail techniques to contain and cleanup discharged oil.

The actions taken to respond to an oil spill are separated into five distinct phases: Phase I - Discovery and Notification; Phase II - Evaluation and Initiation of Action; Phase III - Containment and Countermeasures; Phase IV - Cleanup, Mitigation, and Disposal; Phase V - Documentation and Cost Recovery. Parts of any one phase may occur concurrently with one or more other phases of an oil spill.

Phase I takes place when an oil spill is discovered by the discharger or a random observer and a report is made by the discoverer. Phase II action is to evaluate the magnitude and severity of the discharge to determine the feasibility of removal and to assess effectiveness of removal actions. Phase III is to contain the spill by booms, barrier, chemicals, or other means. Phase IV actions are to recover the oil from the water and affected shorelines. These actions include the use of sorbents, skimmers, and other collection devices. Phase V includes determining who will pay for the clean-up costs.

The NOSC and the NOSCDR for the spill will be involved in every phase of the spill. The Navy On-Scene Operations Team (NOSOT) will direct and/or conduct containment and clean-up operations as described in Phases II, III, and IV. The actions chosen to respond to an oil discharge depend on the variables already stated.

The spill locations most likely to be encountered are: confined harbor areas, open harbor areas, coastal areas, and beach areas. Response techniques and recommendations are listed below for each spill situation.

1. Confined Harbor areas are around nested ships, adjacent to and under piers and pilings.
  - Deploy booms to prevent oil from spreading to piers and pilings.
  - Locate skimmers downwind of the spill and if possible use artificial currents to move oil to the skimmer.
  - Use water or air jets, or boat propwash to create artificial surface currents.
  - Do not emulsify the oil in the water.
  - Make the slick thicker by moving the booms and making the boomed area smaller. This will allow faster and more efficient skimmer pickup.



2. Open Harbor areas are more difficult to contain and clean-up than confined areas.
  - Estimate the size of the slick and mark its perimeter with sorbents or floats.
  - If the spill is small, encircle it with a containment boom.
  - Use the DIP 3001 to collect the spilled oil.
  - An airborne observer can see the outlines of the oil spill much better than an observer at the waterline. Use the airborne observer whenever possible, to direct the skimmer vessel.
  - If the oil is in one large slick, use a vee configuration.
  - If the oil is broken up due to wave action, the skimmer vessel can work alone without containment booms.
  - Since the thickest portion of the oil slick is on the downwind end, skim this portion first.
  
3. Coastal areas have greater wind and wave action than harbor areas.
  - Use large skimmer system and large boats to tow Class III booms.
  - Primary concern is to keep oil from reaching beaches, shoreline, and harbor jetties.
  - Environmentally sensitive beach areas and industrial water use areas should be protected with booms.
  - Use the booms past the surf zone to prevent the oil from reaching the surf and contaminating the shoreline.
  
4. Beach areas require the most manpower effort and cost to remove oil.
  - If it is likely oil will wash up on the beach, spread sorbents at and above the low water mark.
  - Use sorbents in large flat strips or chunks of sorbents in open mesh nylon bags for easier handling.
  - On sandy beaches, dig a trench parallel to the surfline. The oil will wash into the trench and be left on the surface of the sand. The oil can be scooped up into drums for disposal.

An inventory of facility containment equipment including specification of quantity, type, location, time limits for gaining access to the equipment can be found in Appendix C, Equipment Lists and Records.

The NOSOT consists of two teams, Port Services and the Public Works Center, Little Creek Spill Response Team. One team, Port Services, will respond to discharges which occur on the water. Port Services has the equipment and materials listed in Appendix C available for the containment and cleanup of discharges. These equipment and materials can be accessed within thirty minutes.



The Port Services NOSOT consists of:

- . . 1. Harbor Master
- . . 2. Leading Chief Petty Officer, Oil Spills Division
- . . 3. (3) Assigned personnel

These personnel have received formal and on the job oil discharge containment and cleanup training.

The Public Works Center, Little Creek Oil Spill Response team responds to discharges which occur on land. This team operated Pumper trucks and has backup spill equipment at Naval Base, Norfolk as listed in Appendix C. Pumper trucks and spill personnel can be available within 30 minutes 16 hours per day, and within two hours for the remaining eight hours per day.

These personnel have received formal and on the job oil discharge containment and cleanup training.

Discharges from vessels moored at NAVPHIBASE will be responded to as discussed in NAVPHIBASELCREEKINST 6280.1A which is included as Appendix M.

Fuel can be transferred to or from any vessel moored at NAVPHIBASE. At West Annex Piers 22 through 19 transfers can simultaneously be made to two vessels. Receiving and issuing at the same time is not permissible. At the Desert Cove quay wall adjacent to the Fuel Farm a maximum of six small craft can be simultaneously refueled.

#### Responsibility

In COMNAVBASENORVAINST 6280.1C, the responsibilities of the Navy-On-Scene Commander (NOSCDR) are outlined. The NOSCDR for NAB Little Creek is the Commanding Officer of NAB Little Creek. The area boundaries include Little Creek NAB and adjacent anchorages in the Chesapeake Bay. The NOSCDR is responsible for equipping and training a Navy-On-Scene Operations Team (NOSOT). The NOSCDR reports to the Navy On-Scene Coordinator (NOSC) who is the Commander, Norfolk Naval Base.

The NOSCDR shall notify the Navy On-Scene Operations Team (NOSOT) at NAB Little Creek to respond to the spill. The acting NOSCDR at NAB Little Creek is the Port Services Officer. The acting NOSC at Norfolk Naval Base is the Deputy Director of Operations, Mr. Steven Gibson.

A "reportable quantity" is the amount of discharged oil which causes a sheen or film to appear on the surface of the water. In the event of an oil discharge on water the following commands or departments at NAB Little Creek are notified by the person reporting the spill: the NOSCDR, the Base Fire Department, the CDO, the Officer on Duty for ships, Public Works, and Safety. The NOSCDR must notify the CO NAB Little Creek, the NOSOT NAB Little Creek, Willie Barnes (Hazardous Waste Branch Manager), the Virginia State Water Control Board, the NOSC Norfolk Naval Base, and the Commander, Fifth Coast Guard District. The notification procedure in Appendix I shall be followed.



# FACILITY'S RESPONSE ACTIVITIES

The NOSCDR at NAB Little Creek notifies the State Water Control Board within 24 hours and follows up with a written notification within 5 days. The activities or ship responsible for the spill shall submit the required spill reports in the format shown in Appendix J.

COMNAVBASENORVA Instruction 6280.1C outlines the area boundaries for the NOSCDRs. The NAB Little Creek NOSCDR is responsible for NAB Little Creek and adjacent anchorages in the Chesapeake Bay. The Norfolk Naval Station NOSCDR is responsible for the Naval Station, the lower James River anchorages, and Craney Island. The NOSCDR for areas not defined in Instruction 6280.1C are under the Director of Operations/Plans, COMNAVBASE Norfolk.

## Specific Spill Mitigation and Response Procedures

The following is a description of the major fuel storage facilities at Naval Amphibious Base, Little Creek. A complete description of each is included in Appendix A, Facility Specific Information.

A. The Fuel Farm operations are conducted by private contractor. It is located at the corner of 11th Street and Desert Point Road and has eight vertical above ground storage tanks, with a total storage capacity of 795,000 gallons of class I, non-persistent oil.

In the event that a discharge spills over or through the containment berms at the Fuel Farm, the most likely flow path of the discharge would be toward the quay wall along Desert Cove. Tanks 3845 and 3846 are also served by an aboveground fill pipeline to pier 35 as shown on figure b.1. This pipeline is under construction at the time this report is being written, but upon completion, will not constitute part of the Base's worst case discharge.

The following containment response strategy and priorities will be used to limit the spreading of a spill from this area.

- . 1. Contain the discharge before it reaches the quay wall adjacent to Desert Cove.
- . 2. Contain the discharge within the smallest possible area of Desert Cove.
- . 3. Contain the discharge within Desert Cove. The Navy has sufficient boom to span the entrance to Desert Cove if required.

B. The West Annex DFM System is also operated by the Fuel Farm private contractor and handles diesel fuel marine and serves ships at Piers 11 to 19. At the West Annex, DFM (F-76) is received at Pier 19 from barges or oilers. From Pier 19 the fuel is then pumped by pipeline to one 546,000 gallon tank (Tank 1551). The condition of this line is currently in question, and the line has been taken out of service until its integrity is confirmed. The total volume of this pipeline is included in the Base's worst case



discharge, due to concerns regarding the ability to detect a leak.

Measures employed to prevent discharges:

Piping located under piers is periodically visually inspected for leakage or damage. Repairs are made as needed.

In the event of discharge in the area of the West Annex all necessary efforts will be made to contain the discharge in the area of the piers and not let it spread out into the harbor. In the event of a large discharge the following containment strategy will be used to limit the spreading of the discharge.

- . . 1. Contain the discharge in the smallest area adjacent to the piers.
- . . 2. Keep the discharge from entering the Northwest Branch of Little Creek.
- . . 3. Keep the discharge from spreading to the wetland areas adjacent to Little Creek Cove.
- . . 4. Keep the discharge from spreading out Little Creek Harbor entrance into the Chesapeake Bay.

The following mitigation procedures would be employed by Fuel Farm personnel to prevent discharges during receiving and dispensing operations at either Fuel Farm activity (A or B):

The Fuel Farm Contractor has five qualified fuel distribution operators who are fully trained and can be assigned as "person in charge" of any fuel operation. These are the only personnel used in fuel operations.

IN CASE OF FAILURE OF MANIFOLD AND MECHANICAL LOADING ARM, OTHER TRANSFER EQUIPMENT, OR HOSES, AS APPROPRIATE:

. . "Person in charge" will call the pump house by two-way radio to secure all pumps, and pump man will go to pier to assist in stopping all flow of fuel. Before pump operator leaves the pump house, he will call Base Fire Department (ext. 4444) and Port Services (ext. 7791 or 7683). All other personnel available will respond to assist as needed.

IN CASE OF TANK OVERFILL:

. . Tanks 3863, 3864, and 3866 at Fuel Farm and tank 1551 at the West Annex have automatic shut-off valve on each which shuts off the flow of fuel at 98% capacity to prevent them from overflowing. "Person in charge" will try to contain any overflow fuel in the berms around the tanks, and use waste oil trucks to pump out spilled fuel.



IN CASE OF TANK FAILURE:

. . This situation would be handled in the same way as a tank overflow. If tank has a slow leak, fuel from tank can be pumped to tanker trucks.

IN CASE OF PIPING RUPTURE:

. . This situation would have to be addressed on a case-by-case basis, depending on the location of the rupture. There are low point drains on some of the pipes which would enable personnel to pump fuel from the pipes to tanker trucks.

IN CASE OF PIPING LEAK UNDER PRESSURE:

. . "Person in charge" will call by two-way radio to have pump man cut the pressure. Proceed to next case: Piping Leak Not Under Pressure.

IN CASE OF PIPING LEAK NOT UNDER PRESSURE:

. "Person in charge" or any person detecting leak will call Fire Department, and Port Services if fuel will reach the water. Fuel Farm staff will try to repair pipe, with backup repair capability provided by Public Works Center Pipe Shop.

IN CASE OF EXPLOSION AND/OR FIRE:

. . Personnel will call Fire Department to respond. Halon fire extinguishers are available for use as needed until Fire Department arrives.

IN CASE OF EQUIPMENT FAILURE:

. . Fuel Farm personnel would try to fix the equipment to get it back in service. If immediate repairs are not possible, system would be out of service until repair services can be contracted.

Figures b.3 and b.4 are included as supplemental information. Figure b.3 is the document used when daily readings are taken at the Fuel Pump House. Prior to the taking of readings, The "Fuel Operator" assigned must sign the form acknowledging he/she has read and understands the regulations reflected. Figure b.4 is the check-off form used to assign the "Fuel OIC (Officer-in-Charge) of Pier Operations" each time a customer is fueled. The OIC assigned must sign each line item regulation reflected in the form to again acknowledge that he/she read and understands procedural regulations.

C. The Steam plant has two 500,000 gallon above ground storage tanks. These tanks are used for the storage of an emergency supply of fuel oil to fire the plant. Coal is the primary fuel source at the plant. This facility is currently half full, and is not expected to be fully utilized in the future. If this system is put back into service, this report will be updated. A secondary



FROM: FUEL SUPERVISOR

TO: FUEL OPERATOR \_\_\_\_\_

SUBJ: REF. (a) U. S. COAST GUARD OIL REGULATIONS, SECTION 154.710.

IN ACCORDANCE WITH REFERENCE (a), YOU ARE ASSIGNED AS PERSON IN CHARGE OF TRANSFER OPERATIONS, AT WEST ANNEX FUEL FARM ON THIS DATE \_\_\_\_\_

I HAVE READ AND UNDERSTAND REFERENCE (a) SECTION 154.710. SIGN. \_\_\_\_\_

1. SHIP/BARGE \_\_\_\_\_ PIER NO. \_\_\_\_\_ TIME \_\_\_\_\_

GAUGE START \_\_\_\_\_ GROSS GALS. \_\_\_\_\_ TEMP. \_\_\_\_\_ FACTOR \_\_\_\_\_ NET GALS. \_\_\_\_\_

GAUGE FINISH \_\_\_\_\_ GROSS GALS. \_\_\_\_\_ TEMP. \_\_\_\_\_ FACTOR \_\_\_\_\_ NET GALS. \_\_\_\_\_  
NET GALLONS ISSUED \_\_\_\_\_

2. SHIP/BARGE \_\_\_\_\_ PIER NO. \_\_\_\_\_ TIME \_\_\_\_\_

GAUGE START \_\_\_\_\_ GROSS GALS. \_\_\_\_\_ TEMP. \_\_\_\_\_ FACTOR \_\_\_\_\_ NET GALS. \_\_\_\_\_

GAUGE FINISH \_\_\_\_\_ GROSS GALS. \_\_\_\_\_ TEMP. \_\_\_\_\_ FACTOR \_\_\_\_\_ NET GALS. \_\_\_\_\_  
NET GALLONS ISSUED \_\_\_\_\_

REMARKS:



FIGURE b.3



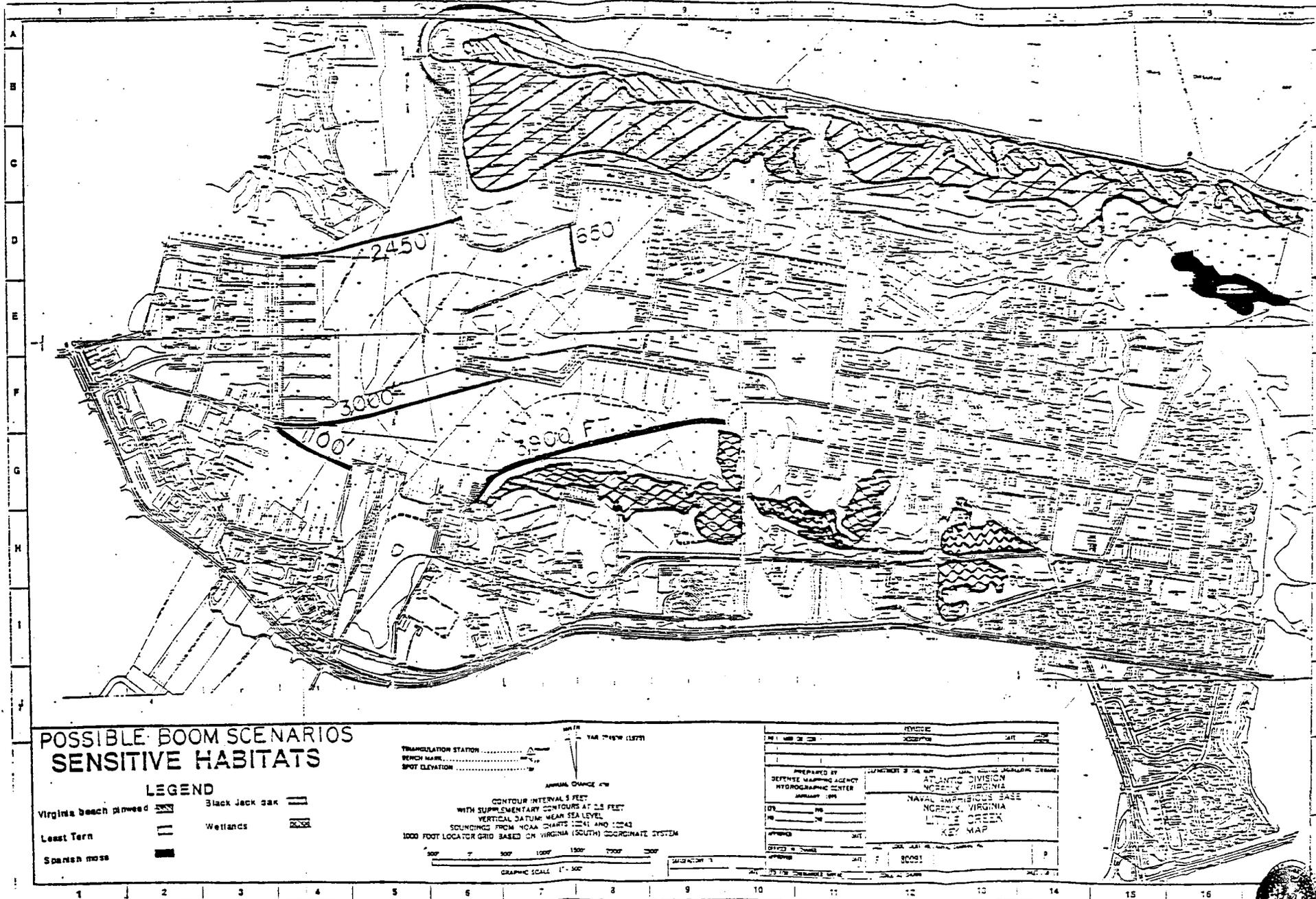
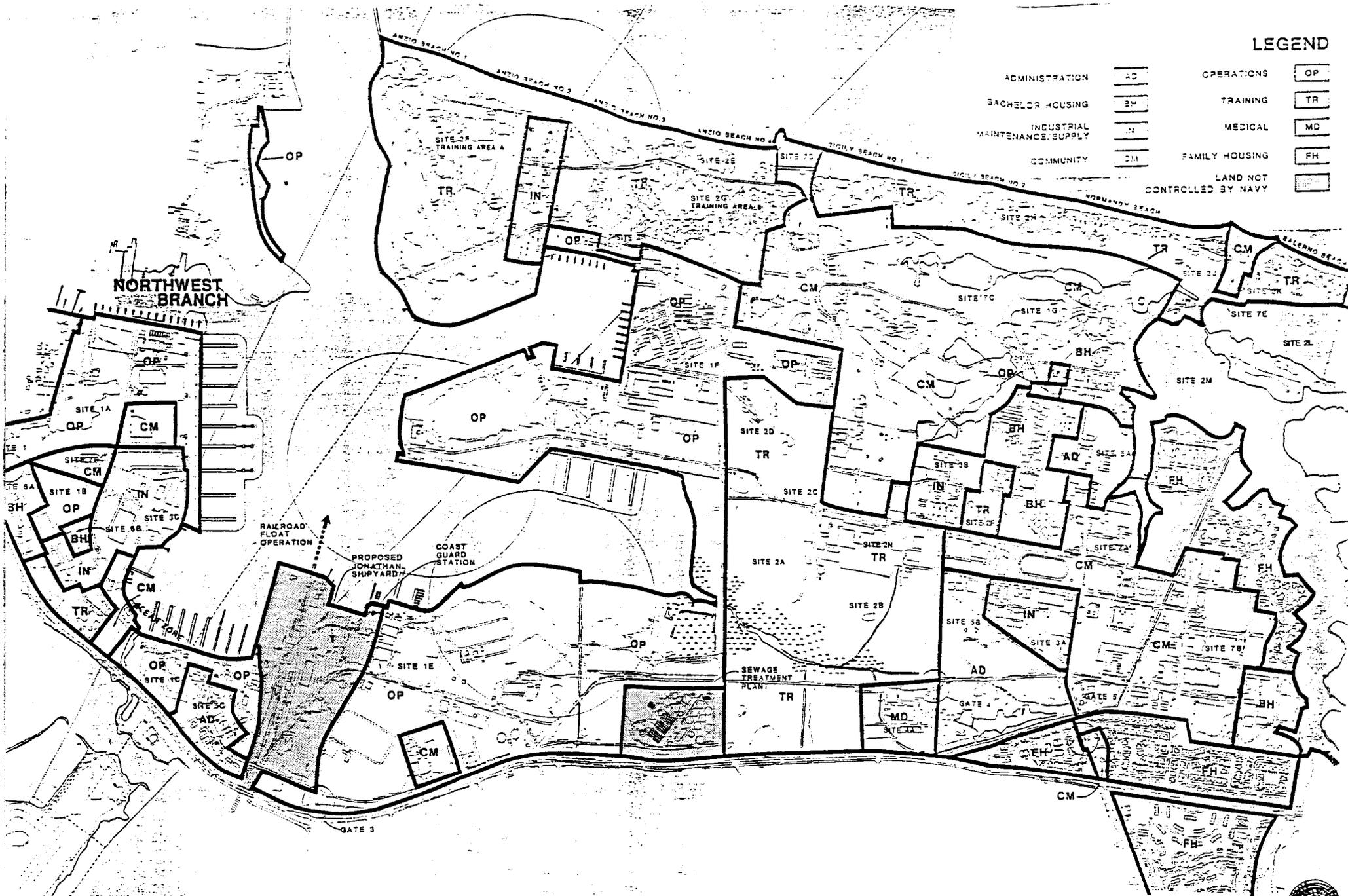


FIGURE 6.5

LEGEND

ADMINISTRATION	AD	OPERATIONS	OP
BACHELOR HOUSING	BH	TRAINING	TR
INDUSTRIAL MAINTENANCE SUPPLY	N	MEDICAL	MD
COMMUNITY	CM	FAMILY HOUSING	FH
		LAND NOT CONTROLLED BY NAVY	[Hatched Box]

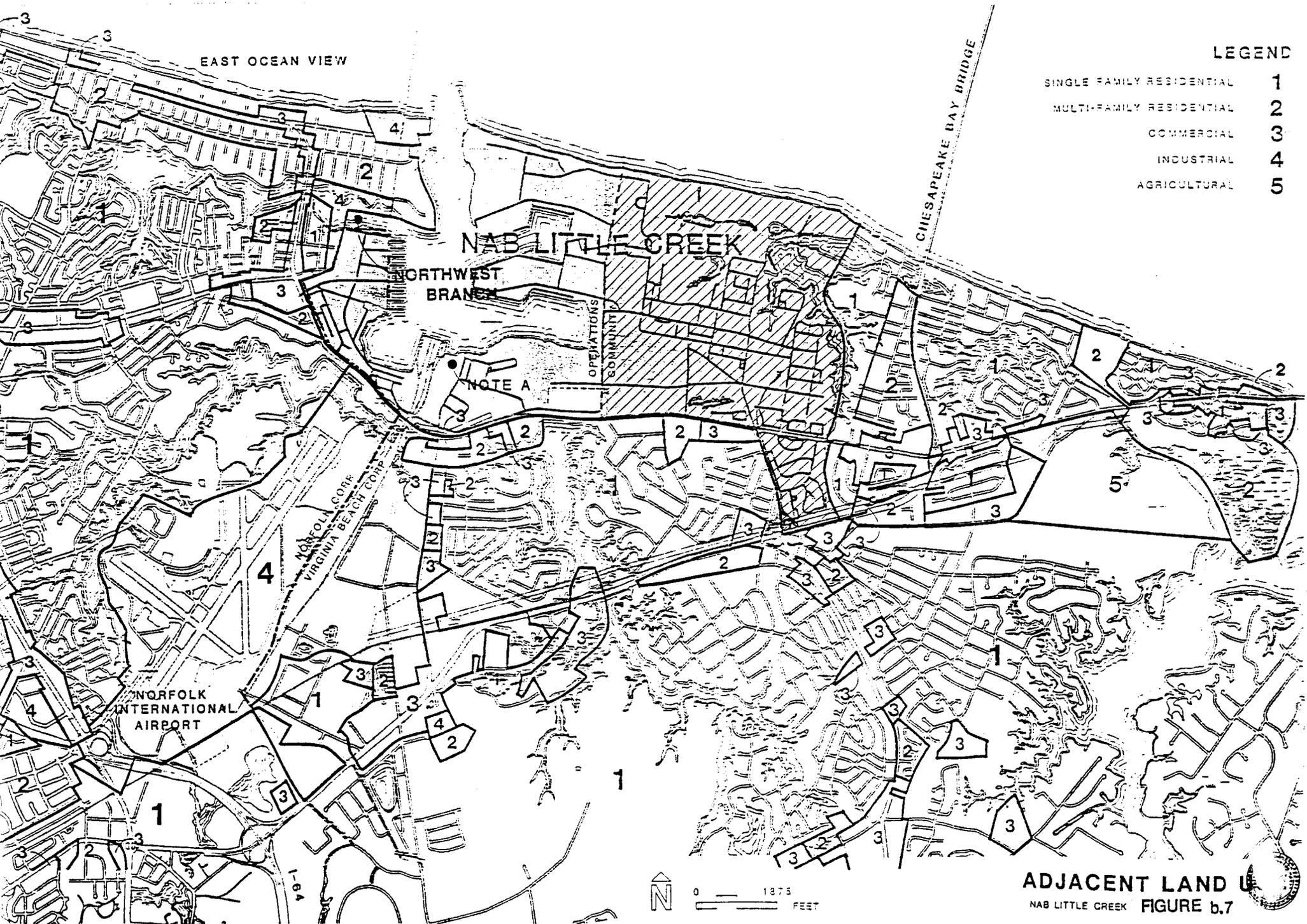


0 1000 FEET

EXISTING LAND

NAB LITTLE CREEK FIGURE b.6





**LEGEND**

- SINGLE FAMILY RESIDENTIAL 1
- MULTI-FAMILY RESIDENTIAL 2
- COMMERCIAL 3
- INDUSTRIAL 4
- AGRICULTURAL 5

**ADJACENT LAND USE**  
 NAB LITTLE CREEK FIGURE b.7

containment berm with a volume of 570,000 gallons are provided for each tank. These berms supply a containment volume greater than twice the volume of the tanks and should be sufficient to contain a spill in the event of a tank failure. If the spill does overtop the berm the most likely flow path of the discharge is towards the storm drainage system in the area which leads directly to Little Creek Cove. The following containment response strategy and priorities will be used to limit the spreading of the spill.

. . 1. Contain the spill before it reaches the 24" storm drain in the vicinity of the storage tanks.

. . 2. Contain the spill before it exits the 24" storm drain and enters the open drainage ditch at its outfall.

. . 3. Contain the spill before it leaves the open drainage ditch and enters Little Creek Cove.

#### WASTE OIL BARGE SYSTEM

##### Spill Prevention Procedures

When a transfer between a ship and barge or a transfer from barge to barge is taking place, the person on the receiving barge is in communication by phone or walkie-talkie with the person on the discharging vessel in case a problem occurs and the transfer must be stopped. The man on the receiving barge visually checks the level of the tank before the transfer begins and monitors the procedure to prevent an overflow. If an overflow occurs, the waste oil is contained by 10" high coamings around the entire deck of the SWOB and YON-260 barges. The YOG-9 has an 8" high coaming around the entire deck. Each tank manhole port is kept locked and the ullage port is kept unlocked. The vessels are visually inspected daily for leaks and an overhaul of each vessel is performed every four years.



## Marine Transfer

The marine transfers from ship to barge or from barge to barge take place in Little Creek Cove. The SWOB and YON-260 barges have 10" high coamings around the decks to contain any waste oil spilled on the barge. The coamings on the barges are in good condition. The amount of spill containment afforded by the coamings is several thousand gallons. The YOG-9 barge has an 8" high coaming around the entire lower deck. The YOG-9 will only contain spilled oil on the lower deck. Any oil spilled on the deck of the SWOBs is drained back into the barge tanks by means of deck drain valves. Any oil spilled on the deck of YON-260 or YOG-9 must be pumped into the tanks on the barges. The YSR-39 barge does not have any spill containment on its deck. The tank levels of the SWOBs, YOG-9, and YSR-39 are visually gauged while being filled. A possible discharge could occur from a transfer hose failure. The oil could enter the water depending on where the hose leak occurs.

YSR-39 is of single-walled construction, so a leak would cause waste oil to enter the water. The SWOBs are of double-walled construction so a tank leak would be contained. A leak into the void between the tanks would be noticed because the SWOB would list when empty. The void space can be entered and visually checked for any waste oil. The void space is inspected when a leak is suspected or before the vessel is taken to the yard to be overhauled.

YSR-39 and the SWOB barges are visually gauged when being filled by the sludge trucks. If YSR-39 is overfilled, the waste oil would enter the water. If the SWOBs are overfilled, the waste oil would be contained by the deck coaming. If the transfer hose from the truck to the barge fails, the waste oil would enter the water unless the leak occurs on the SWOB deck.

Security for a tank vessel containing oil must be provided by keeping unauthorized persons off of the vessel and by maintaining surveillance of the vessel.



## RESPONSE TO SPILL SCENARIOS

### Effective Daily Recovery Capacity of DIP 3001

Recovery Rate = 40 gal/minute x 18 hour operation time/day\*  
= 43,000 gal/day x 0.20 efficiency factor  
= 8,640 gallons per day

\* Operation time adjusted for down time for repair/refueling, as well as pumping off oil tanks.

### Average Most Probable Discharge -

Naval Amphibious Base, Little Creek has 5,000 feet of containment boom on site, and is capable of deploying it within one hour of detection of a spill. The Base has one DIP skimmer on site which can be mobilized in under one hour. The effective daily recovery capacity exceeds the average most probable discharge volume by 400%. Oil storage capacity exists on site for all oil recovered from a discharge of this magnitude.

### Maximum Most Probable Discharge -

Naval Amphibious Base, Little Creek has 5,000 feet of containment boom on site, and is capable of deploying it within one hour of detection of a spill. As seen in figure b.5, this is sufficient to protect sensitive areas within Little Creek Harbor. The Base has one DIP skimmer on site which can be mobilized in under one hour, and two DIP skimmers available from PWC Norfolk within two hours of detection of a discharge. They are all capable of working in water less than six feet deep. In addition, SUPSALV Williamsburg, VA has sufficient skimmers available within the required 12 hours to contain and collect the Maximum Most Probable Discharge volume. Sufficient storage capacity exists on site to store this quantity of oil in waste oil barges.

NAB Little Creek has 5,000 feet of boom available within 30 minutes, 22,000 feet available within 2 hours, and an additional 34,000 feet of boom available within 12 hours.

### Worst Case Discharge -

#### Worst Case Planning Volume Calculations:

- . . All Group I oils
- . . Inland/Nearshore
- . . Emulsification Factor=1.0
- . . 80% Natural Dissipation
- . . 20% Recovered Floating Oil (0.20)
- . . 10% Oil on Shore (0.10)

#### Planning volumes for on-shore recovery

Inland) 1,129,400 gal x 0.10 x 1.0 = 112,940 gal  
OR  
Nearshore) 1,129,400 gal x 0.10 x 1.0 = 112,940 gal



Planning volumes for on water recovery

Inland)  $1,129,400 \text{ gal} \times 0.20 \times 1.0 = 225,880 \text{ gal}$

OR

Nearshore)  $1,129,400 \text{ gal} \times 0.20 \times 1.0 = 225,880 \text{ gal}$

NAB Little Creek has a total of five DIP 3001 skimmers available within 12 hours for the required four days of sustained operation. These are all capable of working in water less than six feet deep. This combined capacity of 170,000 gallons over four days, plus the 11 skimmer vessel systems available from SUPSALV Williamsburg are sufficient to contain and collect the Worst Case Planning volume. Sufficient storage capacity exists on site to store twice the daily recovery rate of oil in waste oil barges.

NAB Little Creek has 5,000 feet of boom available within 30 minutes, 22,000 feet available within 2 hours, and an additional 34,000 feet of boom available within 12 hours, as well as 9,900 feet of boom available from SUPSALV Williamsburg. As seen in figure b.5, this is sufficient to protect sensitive areas within Little Creek Harbor, and the beach areas along the Chesapeake Bay.

In addition, the U.S. Navy has substantial assets in the Hampton Roads area to sustain boat, aerial spotting, and booming capability to maintain the response for the time required for cleanup. Substantial sorbent materials, boom anchoring equipment, and other supplies are in stock at all of the locations listed in Appendix C.



## Sensitive Areas

I. Endangered/Threatened Species - (Information documented from An Inventory of Rare, Threatened, and Endangered Species of the Little Creek Amphibious Base. Virginia Department of Conservation and Recreation, Division of Natural Heritage, Sept 1990.)

During a study conducted by the Virginia Department of Natural Heritage, the presence of rare species was found at Little Creek. The following species are rare to very rare in Virginia : *Lechaeo maritima virginica* (Virginia Beach pinweed) and *Tillandsia usneoides* (Spanish moss), and *Quercus incana* (Bluejack oak). *Tillandsia usneoides* or Spanish moss is found in the Chubb Lake area (see figure b.5). The Little Creek population of Spanish moss is one of only a few remaining in Virginia.

Adjacent to the ACU-4 complex along the shoreline is area that has been recommended for special interest due to its use by nesting Least Terns (*Sterna antillarum*). Their use of the nesting sites occurs throughout the months of May through August. (please see attached figure b.5). The Least Terns are threatened nationally and are protected under the Migratory Bird Treaty Act and the Endangered Species Act. A spill within the ACU-4 complex could be detrimental if not fatal to this nesting population if the spill occurred during the nesting season.

Osprey (*Pandion haliaetus*) also can be found nesting at Little Creek. Although this species is not considered endangered at this time, it is protected under the Migratory Bird Treaty Act. Nests of the Osprey cannot be disturbed once nesting begins in May. The birds are protected until August when nesting is complete. A potential spill which could flush into the Bay could prove hazardous to this species.

Due to Little Creek's location within the Atlantic Migratory Flyway, the installation is often home to a variety of rare and migrating species. The base is the last layover point before crossing the Chesapeake Bay to the eastern shore. Many birds can be found searching for food that will enable them to survive the trip. Because of the many migrant species found on base, an oil spill at Little Creek could potentially impact many different rare species depending upon the yearly migration paths of each species. These paths are dynamic due to changing weather conditions and the availability of suitable habitat and food sources.

## II. Wetlands -

Wetlands are an irreplaceable natural resource that are essential to the water quality of rivers, bays, and estuaries and to the survival of many fish and wildlife populations. On NAVPHIBASE Little Creek, areas of vegetated wetlands are found along the

---

<sup>1</sup>Information documented from An Inventory of Rare, Threatened, and Endangered Species of the Little Creek Amphibious Base. Virginia Department of Conservation and Recreation, Division of Natural Heritage, Sept 1990.



shorelines of Little Creek Harbor. Primarily vegetated wetlands communities of smooth cordgrass and tall reed grass dominate the wetlands communities. The wetlands of the most functional and ecological value are the tidal flats and intertidal marshes which are located on the eastern edge of Little Creek Cove. The loss of these wetlands would be the most ecologically significant if an oil spill occurred within its range. These wetland act as a natural flood buffer and provide vital habitat including food and protective cover for fish and wildlife populations. The protection of this area is also crucial to the habitat of many waterfowl and bird species such as the Great Blue Heron. Furthermore, protection of this natural resource is important aspect of this wetland areas is it ability to filter nutrients and sediments out of the water. The wetland acts as a water quality enhancer that directly affects the water quality of the Chesapeake Bay through the flushing action of the two water bodies.

### III. Beach/Dune Communities -

Little Creek, due to its location on the Chesapeake Bay has many vital dune communities. Sand dunes and beaches in their natural state serve as protective barriers from the effects of flooding and erosion caused by storms. These natural resources protect life and property by providing an essential sand for beach replenishment and providing habitat for coastal fauna. In addition, sand dune and beach communities contribute to the overall scenic beauty and recreational attractiveness of the NAVPHIBASE Little Creek.

Protection of these communities is necessary due to the significant biological, chemical, and physiological effects that occur in the environment without the sand dunes and beaches. Wind and water currents are disrupted, increased shoreline erosion leading to loss of property, coastal flooding, facility damage, loss of public and private open space, loss of essential wildlife habitat, and increased expenditure of public funds are all consequences of altering and damaging the beach and dune communities at Little Creek.

The dunes are located on the eastern end of the base and extend for approximately three miles. Most of the beachfront property is used for training and recreational beaches. At the southernmost end of the primary dune line, a live oak community exists that is one of the last remaining on the east coast. Protection of this community is a high priority due to it rarity and the habitat it provides for birds and wildlife.

### IV. Economic Importance -

Waterfront land within Little Creek Harbor which is not owned by the Navy is zoned Industrial, as shown in figures b.6 and b.7. These are primarily small marinas. In case of a large spill, the Northwest Branch of Little Creek Harbor could be boomed to prevent significant quantities of oil from reaching these areas.

### V. Down Current Sensitive Areas -

Lynnhaven River and Bay are at the far reach of the five mile point



down current which this Plan encompasses. As shown in Appendix N, Environmental Sensitivity Atlas, this area contains significant wetland areas and clam habitats which must be protected in a significant spill situation. Outside of Lynnhaven River, and Little Creek Harbor, in the Chesapeake Bay, another clam and crab habitat is to be protected.

#### VI. Protection strategy -

Due to the size and shape of Little Creek Harbor, protection strategies would be to boom off as large an area of the Harbor as possible, and to encompass all of the wetland area at the south side of the Harbor. This can be accomplished by either booming along the edge of the wetland area or by booming off the entrance to Little Creek Cove, if that is determined to contain the spill. Several specific booming scenarios are shown in figure b.5. Sufficient class I and class II boom is on hand at NAB Little Creek for any of these scenarios within Little Creek Harbor. In a spill situation on the Chesapeake Bay, additional resources would be deployed from other Hampton Roads bases to protect sensitive beach areas. Approximately 13,000 to 14,000 feet of boom would be required to accomplish this. As shown in Appendix C, PWC Norfolk has sufficient stock to accomplish this. Response time would be between 2 hours to 12 hours from notification.

In a situation where it is determined that the oil will approach Lynnhaven River, NOSC will be notified and equipment and personnel will be dispatched as needed to boom the entrance to the river to the extent practicable and necessary.

Sufficient Navy personnel, both civilian and military, and light and heavy equipment are on site in the Hampton Roads area to effect any cleanup of shoreline areas, and to sustain long term response activity.



## Disposal Plan

The Navy On-Scene Commander will be responsible for the proper disposal of solid and liquid wastes.

## Equipment

Little Creek NAB uses five barges to collect and transport waste oil and bilge waste. The barges are usually moored at Pier 7. See Figure i.2. The five barges include SWOB-16, SWOB-35, YSR-39, YON-260, and YOG-9, with a total storage capacity of 948,000 gallons. These barges are in continuous use on the Base. Therefore, for estimating purposes for this report, calculations will be made on the assumption that 50% of this capacity (474,000 gallons) is available at any time. All the barges are not self-propelled and require a tug for movement. The waste oil is transported by barge to Naval Supply Center Norfolk, Craney Island Fuel Depot for treatment and disposal.

In addition, Public Works Center, Little Creek operates one 1,300 gallon and three 2,000 gallon oily waste/waste oil pumper trucks, and Port Operations owns one 2,000 gallon pumper truck. All of these facilities are available for cleanup containment.

The sorbent pads would be collected in a drum or other appropriate container and disposed of by the Public Works Center at NAB Little Creek.



## TRAINING AND DRILLS

Port Services Spill Response Personnel will conduct training and drills on-site. In addition to this, the NOSC will coordinate training and drills throughout its area of responsibility. COMNAVBASENORVAINST 6280.1C (Appendix L) page 2-13 describes regional training and drill plans.

### Training Procedures

Port Services personnel involved in Oil Spill response are routinely trained bi-monthly. Oil spill training procedures included in this training are as follows:

#### . . SKIMMER OPERATORS

##### COXSWAINS

##### DIP (Skimmer Operations)

- Shall review operation of the skimmer
- shall review system panel operation on skimmer

##### ENGINEERS

##### DIP (Skimmer Operations)

- Shall review engine operation of the skimmer
- Shall review hydraulic system operation of the skimmer.

#### . . BOSTON WHALER OPERATORS

##### COXSWAINS AND ENGINEERS

- review usage if Boston Whaler operation

#### . . ALL HANDS

- review procedures for safety, clean-up, and disposal

All safety and health training is conducted in accordance with the Navy Occupational Safety and Health (NAVOSH) program as defined in OPNAVINST 5100.23C. Records of this training will be kept on file by Port Services for three years.

### Drill Procedures

Due to the frequency of discharge reports at NAB Little Creek, notification drills are not a part of the Base Drill Plan. Base equipment deployment drills will be conducted semi-annually as follows:

#### OIL SPILL DRILL SCENARIO

##### I. Pass the word of a spill drill

##### A. Give the following information

- 1.) Location \_\_\_\_\_
- 2.) Type of oil \_\_\_\_\_
- 3.) Quantity of oil spilled \_\_\_\_\_



II. Grade the following action:

- A. Response to investigating the spill
- B. Response to containment, noting what equipment is needed
- C. Deploy 200 feet of boom. Document elapsed time of containment.

III. Prepare the following equipment for test operation:

- A. DIP Skimmer
  - 1.) Start and operate for 5 minute test
  - 2.) Connect lifting straps
  - 3.) Simulate placing in the water
- B. Boston Whaler
  - 1.) Start and operate (two boats minimum)

IV. Display the following:

- A. Cleaning materials
  - 1.) Absorbent pads
- B. Safety gear
  - 1.) Goggles, gloves, etc.

V. Identification

- A. Individual job description
- B. Equipment operation

NOSC will coordinate annual unannounced drills and tabletop drills as defined in COMNAVBASENORVAINST 6280.1C. As required by NVIC 7-92, all response resources identified in this plan will participate in annual deployment drills. In addition, NAB Little Creek will participate in any announced drill conducted by the COTP unless prior notice has been given that we have participated in an unannounced drill within the last 24 months. NAB Little Creek or NOSC will conduct a drill that exercises the entire plan at least once every three years, and will maintain all drill records for three years.



**PLAN REVIEW AND UPDATE PROCEDURES**

This Facility Response plan will be fully reviewed tri-annually. In addition, updates will be made as required by substantial changes in fuel tank or piping in service which would necessitate a review of Average Most Probable Discharge, Maximum Most Probable Discharge, or Worst Case Discharge. If required by future changes to Facility Response Plan requirements, review and update schedule will be amended accordingly.



## APPENDIX A FACILITY SPECIFIC INFORMATION

Locations of spill and safety equipment, as well as major fuel storage and transfer areas, are shown in figure b.1.

The following is a description of the major fuel storage facilities at Naval Amphibious Base, Little Creek:

A. The Fuel Farm, located at the corner of 11th Street and Desert Point Road, has eight vertical above ground storage tanks, with a total storage capacity of 795,000 gallons of class I, non-persistent oil.

Tank 3825	JP5	75,000 Gallons
Tank 3862	Gasoline	30,000 Gallons
Tank 3865	Gasoline	30,000 Gallons
Tank 3866	Gasoline	60,000 Gallons
Tank 3863	Diesel	50,000 Gallons
Tank 3864	Diesel	50,000 Gallons
Tank 3845	JP5	250,000 Gallons
Tank 3846	JP5	250,000 Gallons

Tanks 3845, 3846, and 3825 at the Fuel Farm are each bermed separately. The remaining tanks are protected only by the earthen berm described earlier. In the event that the discharge spills over or through the containment berms at the Fuel Farm, the most likely flow path of the discharge would be towards the quay wall along Desert Cove. Tanks 3845 and 3846 are also served by an aboveground fill pipeline to pier 35 as shown on figure b.1. This pipeline is under construction at the time this report is being written, but upon completion, will not constitute part of the Base's worst case discharge.

B. The Steam plant has two 500,000 gallon above ground storage tanks. These tanks are used for the storage of an emergency supply of fuel oil to fire the plant. Coal is the primary fuel source at the plant. This facility is currently half full, and is not expected to be fully utilized in the future. If this system is put back into service, this report will be updated. A secondary containment berm with a volume of 570,000 gallons are provided for each tank. These berms supply a containment volume greater than twice the volume of the tanks and should be sufficient to contain a spill in the event of a tank failure. If the spill does overtop the berm the most likely flow path of the discharge is toward the storm drainage system in the area which leads directly to Little Creek Cove.

C. The West Annex DFM System handles diesel fuel marine and serves ships at Piers 11 to 19. At the West Annex, DFM (F-76) is received at Pier 19 from barges or oilers. From Pier 19 the fuel is then pumped to one 546,000 gallon tank (Tank 1551).



The West Annex fuel distribution system consists of an eight inch issue line which leads from the storage tank to a eight inch header line which runs parallel to the shoreline. Each of the nine piers have one 8 inch issue line with six 4 inch fueling risers. Each pier also has one 3 inch return line leading to one of two 10,000 underground waste oil tanks in concrete pits. The fuel supply and distribution piping was replaced in 1971. The condition of this line is currently in question, and the line has been taken out of service until its integrity is confirmed. The total volume of this pipeline is included in the Base's worst case discharge, due to concerns regarding the ability to detect a leak. The four fuel pumps for dispensing consist of three pumps with 600 gpm capacity and one pump with 300 gpm capacity. Two 10,000 gallon underground tanks near the pier bulkhead are used for drain down of fuel handling hoses.

Fuel can be transferred to or from any vessel moored at NAVPHIBASE. At West Annex Piers 22 through 19 transfers can simultaneously be made to two vessels. Vessels at these piers do not exceed 700 feet LOA. Receiving and issuing at the same time is not permissible. At the Desert Cove quay wall adjacent to the Fuel Farm a maximum of six small craft can be simultaneously refueled.

#### SIZES AND TYPES OF VESSELS TRANSFERRING

<u>TYPE</u>	<u>LOA</u>	<u>DESCRIPTION</u>
YON	165 ft	Fuel Barge
LSD 41 Class	690 ft	Naval Vessel
LSD 36 Class	561 ft	"
LST	522 ft	"
ATS	282 ft	"
ARS 50 Class	255 ft	"
ARS 38 Class	213 ft	"

#### FIRST VALVES

First valve for the Western Annex system (tank 1551) is located in valve pit #1, as shown in figure A.1.

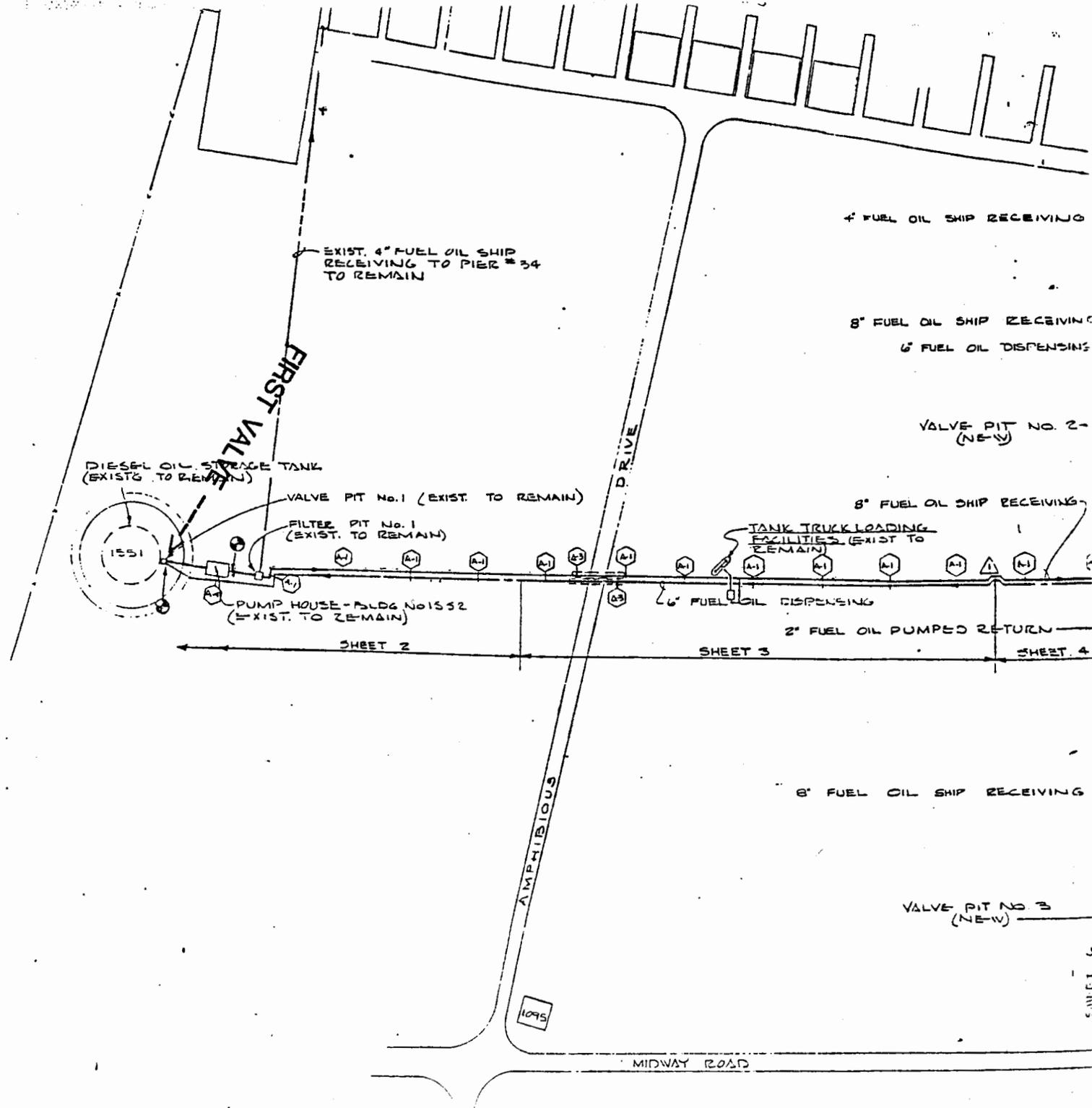
First valves for the Fuel Farm tanks are located as shown in figures A.2 and A.3. First valves for tanks 3845 and 3846 are mounted on the sides of the tanks. Other first valves are located on the fuel line piping.

First valves for the Steam Plant tanks are located as shown in figure A.4. All valves in the circled area will be considered first valves, and will be shut in case of emergency.



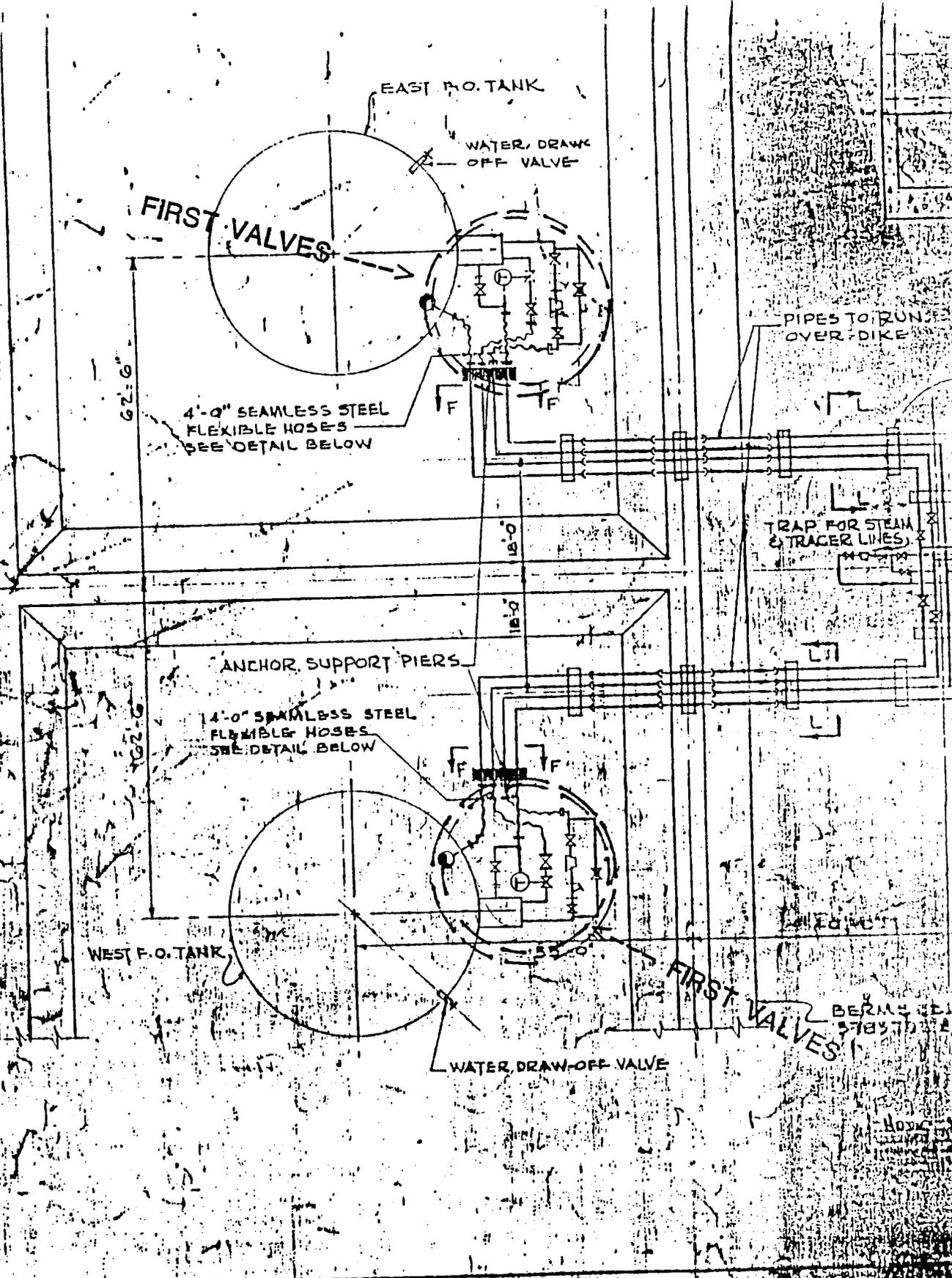
WEST ANNEX TANK (1551)

FIGURE 1









STEAM PLANT TANKS

FIGURE A



MSDS's FOR FUELS USED AT  
NAVAL AMPHIBIOUS BASE, LITTLE CREEK



## HAZARDS INVOLVED IN HANDLING OILS

All Navy personnel are routinely and extensively trained in the hazards of handling oils. Training is conducted in accordance with the Navy Occupational Safety and Health (NAVOSH) program as defined in OPNAVINST 5100.23C.

## FIREFIGHTING PROCEDURES/EXTINGUISHING AGENTS

All Navy ships in port have extensive firefighting capabilities. In addition the NAB Little Creek Fire Department has 2 Engines capable of fighting an oil fire with AFFF. Fire personnel train once a week. Also, Port Services maintains two tugboats capable of fighting oil fires with AFFF.



**MATERIAL SAFETY DATA SHEET**

**F76**

MSDS NUMBER ▶ 52,306

PAGE 1 OF 1



**F76**

87002 REV 1-821

SECTION I		NAME		24 HOUR EMERGENCY ASSISTANCE							
PRODUCT	▶	Shell Marine Diesel Fuel		SHELL	713-473-9461						
CHEMICAL/ SYNONYMS	▶	Diesel Fuel		CHEMTREC	800-424-9300						
CHEMICAL FAMILY	▶	Hydrocarbon		HAZARD RATING							
SHELL CODE	▶	53502	C.A.S. NUMBER	▶	Mixture						
				LEAST 0      SLIGHT 1 MODERATE 2      HIGH 3      EXTREME 4							
				<table border="1"> <tr> <td>HEALTH</td> <td>2</td> </tr> <tr> <td>FIRE</td> <td>2</td> </tr> <tr> <td>REACTIVITY</td> <td>0</td> </tr> </table>		HEALTH	2	FIRE	2	REACTIVITY	0
HEALTH	2										
FIRE	2										
REACTIVITY	0										

SECTION II		INGREDIENTS		TOXICITY DATA	
COMPOSITION	%				
Shell Marine Diesel Fuel - a complex combination of C <sub>11</sub> to C <sub>18</sub> hydrocarbons.	100	Not Determined			

**SECTION III HEALTH INFORMATION**

The acute toxicity of this product has not been tested. However, test results from a similar product show that it may be irritating to the skin. Prolonged or repeated skin contact may produce severe irritation.

**Inhalation:** High vapor concentrations may produce giddiness, vertigo, headache, and anesthetic stupor.

**Skin Contact:** Prolonged and repeated liquid contact can cause defatting and drying of the skin which may result in skin irritation and dermatitis.

**Eye Contact:** Short-term liquid or vapor contact may result in slight eye irritation. Prolonged and repeated contact may be more irritating.

**Ingestion:** Liquid ingestion may result in vomiting; aspiration (breathing) of vomitus into the lungs must be avoided as even small quantities in the lungs may result in chemical pneumonitis and pulmonary edema/hemorrhage.

Studies in animals on similar materials suggest that products of this type might be weak carcinogens following prolonged and repeated exposure to the skin.

SECTION IV	OCCUPATIONAL EXPOSURE LIMITS
None established.	



**SECTION V EMERGENCY AND FIRST AID PROCEDURES**

**ACTION:** Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Get medical attention.

**SKIN CONTACT:** Flush with water while removing contaminated clothing and shoes. Follow by washing with soap and water. Do not reuse clothing or shoes until cleaned. If irritation persists, get medical attention.

**EYE CONTACT:** Flush with water for 15 minutes while holding eyelids open. Get medical attention.

**INGESTION:** Do not induce vomiting. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Get medical attention.

**NOTE TO THE PHYSICIAN:** If more than 2.0 ml per kg has been ingested and vomiting has not occurred, emesis should be induced with supervision. Keep victim's head below hips to prevent aspiration. If symptoms such as loss of gag reflex, convulsions or unconsciousness occur before emesis, gastric lavage using a cuffed endotracheal tube should be considered.

**SECTION VI PHYSICAL DATA**

BOILING POINT (°F)	375-675	MELTING POINT (°F)	N.A.	VAPOR PRESSURE (mmHg)	N.A.
SPECIFIC GRAVITY (AIR=1)	0.86 (MINIMUM)	% VOLATILE BY VOLUME	N.A.	VAPOR DENSITY (AIR=1)	N.A.
SOLUBILITY IN WATER	Negligible	EVAPORATION RATE (BUTYL ACETATE=1)	N.A.	N.A. = Not Available	

**APPEARANCE AND ODOR**  
Clear to light straw colored liquid.

**SECTION VII FIRE AND EXPLOSION HAZARDS**

EXTINGUISHING MEDIA	FLAMMABLE LIMITS: % VOLUME IN AIR	LOWER	UPPER
Water fog, foam, dry chemical or CO <sub>2</sub>		N.A.	N.A.

Product will float and can be reignited on surface of water.

Do not enter confined fire space without proper protective equipment including a NIOSH approved self-contained breathing apparatus. Cool fire-exposed containers, surrounding equipment and structures with water.

**SECTION VIII FIRE AND EXPLOSION HAZARDS**

Classified as a combustible liquid.



Shell

97004 (10-79)

<b>SECTION VIII</b>	<b>REACTIVITY</b>
STABILITY ▶ <input type="checkbox"/> UNSTABLE <input checked="" type="checkbox"/> STABLE	HAZARDOUS POLYMERIZATION ▶ <input type="checkbox"/> MAY OCCUR <input checked="" type="checkbox"/> WILL NOT OCCUR

**CONDITIONS AND MATERIALS TO AVOID**

Avoid heat, open flames and oxidizing materials

**HAZARDOUS DECOMPOSITION PRODUCTS**

Carbon monoxide and unidentified organic compounds may be formed during combustion.

**SECTION IX EMPLOYEE PROTECTION**

**RESPIRATORY PROTECTION**

Use a NIOSH-approved respirator as required to prevent overexposure. In accord with 29 CFR 1910.134, use either an atmosphere-supplying respirator or an air-purifying respirator for organic vapors.

**PROTECTIVE CLOTHING**

Wear gloves and other protective clothing as required to minimize skin contact. Wear safety glasses or goggles to prevent eye contact.

**ADDITIONAL PROTECTIVE MEASURES**

Use explosion-proof ventilation as required to control vapor concentrations.

**SECTION X ENVIRONMENTAL PROTECTION**

**SPILL OR LEAK PROCEDURES**

**Caution. Combustible.**

**Large spills:** Eliminate potential sources of ignition. Wear appropriate respirator and other protective clothing. Shut off source of leak only if safe to do so. Dike and contain. Remove with vacuum trucks or pump to storage/salvage vessels. Soak up residue with a noncombustible absorbent such as clay or vermiculite; place in drums for proper disposal. Flush area with water to remove trace residue; dispose of flush solutions in drums.

**Small spills:** Soak up with a noncombustible absorbent and place in drums for disposal. Flush area with water to remove trace residue; collect flush solutions for disposal.

**WASTE DISPOSAL**

Place in an appropriate disposal facility in compliance with local regulations.

**ENVIRONMENTAL HAZARDS**

This product is considered an oil under the Clean Water Act. KEEP OUT OF SURFACE WATERS AND ANY WATERCOURSES OR SEWERS ENTERING OR LEADING TO SURFACE WATERS. See Section VIII.



CM 97093 (REV. 11-81)

**SPECIAL PRECAUTIONS**

**SECTION XI**

Classification: Combustible.  
Keep away from oxidizing materials in a cool, dry place with adequate ventilation. Keep away from heat and open flames. Keep containers tightly closed.

Wash up with soap and water before eating, drinking, smoking or using toilet facilities. Launder contaminated clothing before reuse.

Do NOT weld, heat or drill on or near container; even emptied containers may contain explosive vapors.

**SECTION XII**

**TRANSPORTATION REQUIREMENTS**

DEPARTMENT OF TRANSPORTATION CLASSIFICATION	<input type="checkbox"/> FLAMMABLE LIQUID	<input checked="" type="checkbox"/> COMBUSTIBLE LIQUID	<input type="checkbox"/> OXIDIZING MATERIAL	<input type="checkbox"/> NON-FLAMMABLE GAS
	<input type="checkbox"/> FLAMMABLE SOLID	<input type="checkbox"/> POISON, CLASS A	<input type="checkbox"/> CORROSIVE MATERIAL	<input type="checkbox"/> NOT HAZARDOUS BY D.O.T. REGULATIONS
	<input type="checkbox"/> FLAMMABLE GAS	<input type="checkbox"/> POISON, CLASS B	<input type="checkbox"/> IRRITATING MATERIAL	<input type="checkbox"/> OTHER - Specify below

PROPER SHIPPING NAME

HAZARD CLASSIFICATION REQUIREMENTS

U.S. DOT ID. No. = NA 1993; Guide Sheet No. 26.  
Containers of 110 gallons or less are exempt from D.O.T. regulations.

**SECTION XIII**

**SUPPLEMENTARY HEALTH/REGULATORY INFORMATION**

Clean Water Act (CWA)  
This product contains hydrocarbons classified as an oil under Section 307 of the CWA. Spills entering (a) surface waters or (b) any watercourses or sewers entering or leading to surface waters that cause a discharge of oil **MUST** be reported immediately to the National Response Center, 1-800-424-6802.

Information contained herein is based on data considered reliable. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from their use.

Supplier assumes no responsibility for injury to vendee or third parties proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet. Supplier assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Vendee assumes the risk in his use of the material.



*John P. Lepore*  
Manager

SHELL OIL COMPANY  
PRODUCT SAFETY AND COMPLIANCE  
P.O. BOX 4320  
HOUSTON, TEXAS 77210  
(713) 241-4619

DATE PREPARED  
December 17, 1982



BLACK  
CAN

3042-01-0



MATERIAL SAFETY  
DATA SHEET

~~AMOCO REGULAR LEAD FREE GASOLINE~~

MSDS NO: 02003992

911

MANUFACTURER/SUPPLIER:  
Amoco Oil Company  
200 East Randolph Drive  
Chicago, Illinois 60601

EMERGENCY HEALTH INFORMATION: (800) 447-8735  
EMERGENCY SPILL INFORMATION: (800) 424-9300  
CHEMTREC, U.S.A.  
OTHER PRODUCT SAFETY INFORMATION: (312) 855-3907

IMPORTANT COMPONENTS: Gasoline (CAS 8006-61-9) ACGIH TLV 300 ppm, STEL 500 ppm;  
OSHA PEL 300 ppm, STEL 500 ppm.  
Benzene (CAS 71-43-2) ACGIH TLV 10 ppm; OSHA PEL 1 ppm  
(8-hr. TWA), STEL 5 ppm (15 min.).  
\*See Supplemental Information Section.

WARNING STATEMENT: Danger! Extremely flammable. High vapor concentrations can cause headaches, dizziness, drowsiness and nausea. Harmful if swallowed and/or aspirated into lungs. Can produce skin irritation on prolonged or repeated contact. Use as motor fuel only. Long-term exposure to vapors has caused cancer in laboratory animals.

HMIS/NFPA CODES:(HEALTH:1)(FLAMMABILITY:3)(REACTIVITY:0), Chronic health hazard

APPEARANCE AND ODOR: Clear, bright liquid. Characteristic odor.

HEALTH HAZARD INFORMATION

EYE

EFFECT: High concentrations of vapor/mist may cause eye discomfort.  
FIRST AID: Flush eyes with plenty of water. Get medical attention if irritation persists.  
PROTECTION: None required; however, use of eye protection is good industrial practice.

SKIN

EFFECT: Prolonged or repeated contact can defat the skin and lead to irritation and/or dermatitis.  
FIRST AID: Wash exposed skin with soap and water. Remove contaminated clothing, including shoes, and thoroughly clean and dry before reuse. Get medical attention if irritation develops.  
PROTECTION: Avoid prolonged or repeated skin contact. Wear protective clothing and gloves if prolonged or repeated contact is likely.

INHALATION

EFFECT: Vapor harmful. High vapor concentrations can cause headaches, dizziness, drowsiness and nausea. See Toxicology Section.  
FIRST AID: If adverse effects occur, remove to uncontaminated area. Give artificial respiration if not breathing. Get medical attention.  
PROTECTION: Use with adequate ventilation. Avoid breathing vapor and/or mist. If ventilation is inadequate, use appropriate respirator which will



AMOCO REGULAR LEAD-FREE GASOLINE  
MSDS NO: 02003992

PAGE 02 OF 05

---

**HEALTH HAZARD INFORMATION - CONTINUED**

---

**INGESTION**

**EFFECT:** Low viscosity product. Harmful or fatal if aspirated into lungs.  
**FIRST AID:** If swallowed, do NOT induce vomiting. Get immediate medical attention.

---

**FIRE AND EXPLOSION INFORMATION**

---

**FLASHPOINT:** -45°F  
**FLAMMABLE LIMITS:** UPPER: 7.6% LOWER: 1.3%  
**AUTOIGNITION TEMPERATURE:** 495°F  
**EXTINGUISHING MEDIA:** Agents approved for Class B hazards (e.g., dry chemical, carbon dioxide, halogenated agents, foam, steam) or water fog.  
**UNUSUAL FIRE AND EXPLOSION HAZARDS:** Extremely flammable vapor/air mixtures form. Extinguishment of fire before source of vapor is shut off can create an explosive mixture in air.  
**PRECAUTIONS:** Keep away from ignition sources (e.g., heat, sparks and open flames). Keep container closed. Use with adequate ventilation.

---

**REACTIVITY INFORMATION**

---

**DANGEROUS REACTIONS:** Avoid chlorine, fluorine and other strong oxidizers.  
**HAZARDOUS DECOMPOSITION:** Burning can produce carbon monoxide and/or carbon dioxide and other harmful products.  
**STABILITY:** Burning can be started easily.

---

**CHEMICAL AND PHYSICAL PROPERTIES**

---

**BOILING POINT:** 80°F TO 430°F, Range  
**SOLUBILITY IN WATER:** Negligible, below 0.1%  
**SPECIFIC GRAVITY (WATER = 1):** 0.75  
**VAPOR PRESSURE:** 7-15 lb RVP (ASTM D-323)  
**VAPOR DENSITY (AIR = 1):** 3 TO 4



~~AMOCO REGULAR LEAD-FREE GASOLINE~~  
MSDS NO: 02003992

PAGE 03 OF 05

### STORAGE AND ENVIRONMENTAL PROTECTION

**STORAGE REQUIREMENTS:** Store in flammable liquids storage area. Keep container closed. Store away from heat, ignition sources, and open flame in accordance with applicable federal, state, or local regulations.

**SPILLS AND LEAKS:** Remove or shut off all sources of ignition. Use water spray to disperse vapors. Increase ventilation, if possible. Contain on an absorbent material (e.g., sand, sawdust, dirt, clay). Keep out of sewers and waterways.

**WASTE DISPOSAL:** Residues and spilled material are hazardous waste due to ignitability. Disposal must be in accordance with applicable federal, state, or local regulations. Enclosed-controlled incineration is recommended unless directed otherwise by applicable ordinances.

**SPECIAL PRECAUTIONS:** Keep out of sewers and waterways. Avoid strong oxidizers. Report spills to appropriate authorities. USE AS MOTOR FUEL ONLY.

### TOXICOLOGICAL INFORMATION

**EYE:** Primary eye irritation score 0.0/110.0 (rabbits).

**SKIN:** Primary dermal irritation score 1.1/8.0 (rabbits). Acute dermal LD50 greater than 5ml/kg (rabbits). Practically nontoxic for acute exposures by this route.

**INHALATION:** Acute LC50 20.7mg/l (rats).

**INGESTION:** Acute oral LD50 18.8ml/kg (rats). Practically nontoxic for acute exposures by this route.

Excessive exposure to vapors may produce headaches, dizziness, nausea, drowsiness, irritation of eyes, nose and throat and central nervous system depression.

In a long-term inhalation study of whole unleaded gasoline vapors, exposure-related kidney damage and kidney tumors were observed in male rats. Similar kidney effects were not seen in female rats or in mice. At the highest exposure level (2056 ppm), female mice had an increased incidence of liver tumors. Results from subsequent scientific studies suggest that the kidney damage and probably the kidney tumor response are unique to the male rat. The significance of the mouse liver tumor response in terms of human health is questionable.

Inhalation of whole unleaded gasoline vapors did not produce birth defects in laboratory animals.

Gasoline is a complex mixture of hydrocarbons and contains benzene (up to 4 volume %), toluene and xylene. Chronic exposure to high levels of benzene has been shown to cause cancer (leukemia) in humans and other adverse blood effects (anemia). Benzene is considered a human carcinogen by IARC, NTP and OSHA. Overexposure to xylene and toluene can cause irritation to the upper respiratory tract, headache and narcosis. Some liver damage and lung inflammation were seen in chronic studies on xylene in guinea pigs but not in rats.

Aspiration of this product into the lungs can cause chemical pneumonia and can be fatal. Aspiration into the lungs can occur while vomiting after ingestion of this product.



AMOCO REGULAR LEAD-FREE GASOLINE  
 MSDS NO: 02003992

PAGE 04 OF 05

REGULATORY INFORMATION

**CERCLA REPORTABLE QUANTITY:**

This product is exempt from the CERCLA reporting requirements under 40 CFR Part 302.4. However, if spilled into waters of the United States, it may be reportable under 40 CFR Part 153 if it produces a sheen.

**DOT PROPER SHIPPING NAME:** Gasoline, Flammable Liquid, UN1203.

**OSHA HAZARD COMMUNICATION STANDARD:** Flammable liquid. Irritant. Contains components listed by ACGIH. Contains components listed by OSHA. Contains a carcinogenic component.

**RCRA STATUS:**

This product is subject to the 40 CFR Part 268.30 land ban on the disposal of certain hazardous wastes because it contains the following substance(s):

COMPONENT/CAS NUMBER

- Ethylbenzene (100-41-4)
- Toluene (108-88-3)
- Xylene (1330-20-7)

**SARA STATUS:**

This product is regulated under the following section(s) of SARA Title III, 42 USC 9601. Spills or releases of the product may be reportable as determined by the information given below:

**SECTIONS 311 AND 312 OF SARA AND 40 CFR PART 370:**

This product is defined as hazardous by OSHA under 29 CFR Part 1910.1200(d).

**SECTION 313 OF SARA AND 40 CFR PART 372:**

This product contains the following substances, which are on the Toxic Chemicals List in 40 CFR Part 372:

COMPONENT/CAS NUMBER	WEIGHT PERCENT
Benzene (71-43-2)	4
Ethylbenzene (100-41-4)	2
Toluene (108-88-3)	22
Cyclohexane (110-82-7)	5
Xylene (1330-20-7)	10
MTBE (1634-04-4)	7

**TSCA STATUS:** All of the components of this product are listed on the TSCA Inventory.

SUPPLEMENTAL INFORMATION

Gasoline is a complex mixture of hydrocarbons. Those major components having occupational exposure limits are:

Butane (CAS 106-97-8) ACGIH TLV 800 ppm; OSHA PEL 800 ppm.

Cyclohexane (CAS 110-82-7) ACGIH TLV 300 ppm; OSHA PEL 300 ppm.

Ethylbenzene (CAS 100-41-4) ACGIH TLV 100 ppm, STEL 125 ppm;  
 OSHA PEL 100 ppm, STEL 125 ppm.



FEB 25 '91 9:25 FROM NEC NORVA CODE 700

PAGE.003  
PAGE.003

FEB 25 '91 9:20 FROM NSC NORVA CODE 702 TO CODE-700

~~AMOCO REGULAR LEAD-FREE GASOLINES~~  
MSDS NO: 02003992

PAGE 05 OF 05

SUPPLEMENTAL INFORMATION - CONTINUED

n-Heptane (CAS 142-32-5) ACGIH TLV 400 ppm, STEL 500 ppm;  
OSHA PEL 400 ppm, STEL 500 ppm.

n-Hexane (CAS 110-54-3) ACGIH TLV 50 ppm; OSHA PEL 50 ppm.

Pentane (CAS 109-66-0) ACGIH TLV 600 ppm, STEL 750 ppm;  
OSHA PEL 600 ppm, STEL 750 ppm.

Toluene (CAS 108-88-3) ACGIH TLV 100 ppm, STEL 150 ppm;  
OSHA PEL 100 ppm, STEL 150 ppm.

Triethyl benzene (CAS 25551-13-7) ACGIH TLV 25 ppm; OSHA PEL 25 ppm.

Xylene (CAS 1330-20-7) ACGIH TLV 100 ppm, STEL 150 ppm;  
OSHA PEL 100 ppm, STEL 150 ppm.

ISSUE INFORMATION

BY:



Gerald J. Bresnick  
Director, Product Safety

ISSUED: June 09, 1989  
SUPERSEDES: March 18, 1988

This material safety data sheet and the information it contains is offered to you in good faith as accurate. We have reviewed any information contained in this data sheet which we received from sources outside our company. We believe that information to be correct but cannot guarantee its accuracy or completeness. Health and safety precautions in this data sheet may not be adequate for all individuals and/or situations. It is the user's obligation to evaluate and use this product safely and to comply with all applicable laws and regulations. No statement made in this data sheet shall be construed as a permission or recommendation for the use of any product in a manner that might infringe existing patents. No warranty is made, either express or implied.



DOD Hazardous Materials Information System  
DoD 6050.5-LR  
AS OF November 1992  
For U.S. Government Use Only

FSC: 9130  
NIIN: 002732379  
Manufacturer's CAGE: 29700  
Part No. Indicator: C  
Part Number/Trade Name: JET FUEL JP5

=====  
General Information  
=====

Item Name: TURBINE FUEL, AVIATION, JP-5 F44  
Manufacturer's Name: EXXON CO. USA  
Manufacturer's Street: 800 BELL ST  
Manufacturer's P. O. Box: 2180  
Manufacturer's City: HOUSTON  
Manufacturer's State: TX  
Manufacturer's Country: US  
Manufacturer's Zip Code: 77252-2180  
Manufacturer's Emerg Ph #: 713-870-6000  
Manufacturer's Info Ph #:  
Distributor/Vendor # 1:  
Distributor/Vendor # 1 Cage:  
Distributor/Vendor # 2:  
Distributor/Vendor # 2 Cage:  
Distributor/Vendor # 3:  
Distributor/Vendor # 3 Cage:  
Distributor/Vendor # 4:  
Distributor/Vendor # 4 Cage:  
Safety Data Action Code:  
Safety Focal Point: D  
Record No. For Safety Entry: 005  
Tot Safety Entries This Stk#: 017  
Status: SE  
Date MSDS Prepared: 21OCT88  
Safety Data Review Date: 10JUL89  
Supply Item Manager: KY  
MSDS Preparer's Name:  
Preparer's Company:  
Preparer's St Or P. O. Box:  
Preparer's City:  
Preparer's State:  
Preparer's Zip Code:  
Other MSDS Number:  
MSDS Serial Number: BHGDP  
Specification Number: MIL-T-5624  
Spec Type, Grade, Class: GRADE JP-5  
Hazard Characteristic Code: F4  
Unit Of Issue: GL  
Unit Of Issue Container Qty:  
Type Of Container: BULK  
Net Unit Weight:  
State License Number: N/R  
Net Explosive Weight:  
Net Propellant Weight-Ammo: N/R  
Coast Guard Ammunition Code:



=====  
Ingredients/Identity Information  
=====

Proprietary: NO  
Ingredient: JP-5 JET FUEL (NAVY) (RTECS NO BY HMIS; CAS NO BY MFR)  
Ingredient Sequence Number: 01  
Percent: 100  
Ingredient Action Code:  
Ingredient Focal Point: D  
NIOSH (RTECS) Number: NY9350000  
CAS Number: 64742-47-8  
OSHA PEL: NOT ESTABLISHED  
ACGIH TLV: NOT ESTABLISHED  
Other Recommended Limit: HMIS:100 PPM/5MG/M3  
-----

Proprietary: NO  
Ingredient: 2-METHOXYETHANOL (EGME) (SARA III)  
Ingredient Sequence Number: 02  
Percent: .15.20  
Ingredient Action Code:  
Ingredient Focal Point: D  
NIOSH (RTECS) Number: KL5775000  
CAS Number: 109-86-4  
OSHA PEL: S, 25 PPM  
ACGIH TLV: S, 5 PPM; 9192  
Other Recommended Limit:  
-----

Proprietary: NO  
Ingredient: ADDATIVES - ANTIOXIDANT & METAL DEACTIVATOR  
Ingredient Sequence Number: 03  
Percent: <100PPM  
Ingredient Action Code:  
Ingredient Focal Point: D  
NIOSH (RTECS) Number: 1000144AD  
CAS Number:  
OSHA PEL: N/K  
ACGIH TLV: N/K  
Other Recommended Limit:  
-----

=====  
Physical/Chemical Characteristics  
=====

Appearance And Odor: CLEAR, COLORLESS TO AMBER LIQUID, KEROSENE ODOR.  
Boiling Point: 170-290C  
Melting Point: -46C/-51F  
Vapor Pressure (MM Hg/70 F): <5 MM  
Vapor Density (Air=1): >5  
Specific Gravity: 0.788-0.845  
Decomposition Temperature: N/K  
Evaporation Rate And Ref: <0.05 BUAC  
Solubility In Water: NEGLIGIBLE  
Percent Volatiles By Volume: 100  
Viscosity:  
pH: NEUT  
Radioactivity:  
Radioactive Matl):  
Magnetism (Milligauss):  
Corrosion Rate (IPY):



Autoignition Temperature: 475F

=====  
Fire and Explosion Hazard Data  
=====

Flash Point: 140F/60C  
Flash Point Method: D-93  
Lower Explosive Limit: N/K  
Upper Explosive Limit: N/K  
Extinguishing Media: FOAM, CARBON DIOXIDE, DRY CHEMICAL, WATER FOG. WATER MAY BE INEFFECTIVE AND MAY SPREAD FIRE IF IMPROPERLY USED.  
Special Fire Fighting Proc: USE SELF CONTAINED BREATHING APPARATUS, ESPECIALLY IN ENCLOSED AREAS. WATER SPRAY MAY BE USED TO COOL FIRE EXPOSED CONTAINERS AND EQUIPMENT.  
Unusual Fire And Expl Hazrds: WHEN HEATED SUFFICIENTLY, VAPORS MAY FORM EXPLOSIVE MIXTURES WITH AIR. SATURATED NEWSPAPERS, RAGS, ETC. MAY UNDERGO SPONTANEOUS COMBUSTION.

=====  
Reactivity Data  
=====

Stability: YES  
Cond To Avoid (Stability): HEAT, IGNITION SOURCES  
Materials To Avoid: STRONG OXIDIZERS.  
Hazardous Decomp Products: CARBON DIOXIDE, CARBON MONOXIDE  
Hazardous Poly Occur: NO  
Conditions To Avoid (Poly): N/R

=====  
Health Hazard Data  
=====

LC50 Mixture: N/K  
Route Of Entry - Inhalation: YES  
Route Of Entry - Skin: NO  
Route Of Entry - Ingestion: YES  
Health Haz Acute And Chronic: PRODUCT IS A MILD IRRITANT. MOST HAZARDOUS EXPOSURE; EXPOSURE IS TO AIRBORN MIST OR OTHER ASPIRATION OF LIQUID INTO LUNGS. PROLONGED/REPEATED OVEREXPOSURE MAY CAUSE LIVER OR KIDNEY DAMAGE.  
Carcinogenicity - NTP: NO  
Carcinogenicity - IARC: NO  
Carcinogenicity - OSHA: NO  
Explanation Carcinogenicity: API HAS DONE STUDIES INDICATING THAT REPEATED OVER EXPOSURE MAY CAUSE CANCER IN MICE.  
Signs/Symptoms Of Overexp: EYE: MILD IRRITATION. SKIN: DRYING, DEFATTING WITH PROLONGED/REPEATED CONTACT. INHALED: HEADACHE, NAUSEA, CONFUSION, DROWSINESS. ASPIRATION OF LIQUID MAY CAUSE CHEMICAL PNEUMONITIS. INGESTED: G/I IRRITATION, NAUSEA, POSSIBLE VOMITING.  
Med Cond Aggravated By Exp: NONE REPORTED  
Emergency/First Aid Proc: EYE: FLUSH WITH WATER 15 MIN. SKIN: REMOVE CONTAMINATED CLOTHING (LAUNDER BEFORE REUSE) AND THOROUGHLY AREA OF CONTACT WITH SOAP AND WATER. INHALED: REMOVE FROM EXPOSURE. RESUSCITATE OR GIVE OXYGEN IF NEEDED THEN GET MEDICAL ATTENTION. INGESTED: DO NOT INDUCE VOMITING. GET MEDICAL ATTENTION. IF ANY IRRITATION. GET MEDICAL ATTENTION. IF ANY IRRITATION PERSISTS OR IS SEVERE, GET MEDICAL CARE.

=====  
Precautions for Safe Handling and Use  
=====

If Matl Released/Spill: ELIMATE IGNITION SOURCES. USE APPROPRIATE PROTECTIVE EQUIPMENT. CONTAIN LEAK. PREVENT LEAK FROM ENTERING SEWER, WATER WAY, ETC. RECOVER AS LIQUID. REPORT SPILL IF APPROPRIATE.



Neutralizing Agent: NONE

Waste Disposal Method: DISPOSE I/A/W FEDERAL, STATE, LOCAL REGULATIONS.  
NEUTRALIZATION IS RECOMMENDED FOR DISPOSAL.

Precautions-Handling/Storing: STORE IN COOL AREA AWAY FROM OXIDIZERS AND  
IGNITION SOURCES. DETACHED STORAGE PREFERRED. GROUND CONTAINERS DURING  
TRANSFER.

Other Precautions: "EMPTY" CONTAINERS MAY CONTAIN RESIDUE AND/OR FUMES  
WHICH ARE EXPLOSIVE. DO NOT CUT, WELD, ETC.

=====  
Control Measures  
=====

Respiratory Protection: NOT EXPECTED TO BE NECESSARY. USE NIOSH/MSHA  
RESPIRATOR IF PRODUCT IS MISTED OR IF TLV/PEL IS EXCEEDED.

Ventilation: USE LOCAL EXHAUST TO MAINTAIN EXPOSURE BELOW TVL/PEL IF  
NORMAL ROOM VENTILATION IS INSUFFICIENT.

Protective Gloves: RUBBER, PLASTIC, OR OTHER IMPERVIOUS

Eye Protection: SAFETY GLASSES OR SPLASH GOGGLES.

Other Protective Equipment: USE IMPERVIOUS CLOTHING AS NEEDED TO PREVENT  
PROLONGED/REPEATED CONTACT.

Work Hygienic Practices: USE GOOD INDUSTRIAL HYGIENE PRACTICE. AVOID  
UNNECESSARY CONTACT.

Suppl. Safety & Health Data: PRODUCT CODE 125000-00075.



**APPENDIX B LIST OF CONTACTS**

**NAVPHIBASE RECALL BILL FOR INCIDENT RESPONSES & FUNCTIONS**

Command Department	POC	Telephone # H=Home W=Work	Function
1. Fire Dept	Duty Crew	363-4444W	Assess or respond
2. CDO	Duty Officer	464-7385W	Notification
3. Port Services	Duty Crew	464-7791W	OSOT, W Coordinator*
4. OOD (ships)	Duty Crew		OSOT, W Coordinator*
5. Base Civil	Willie Barnes	464-8566W 625-3224H	OSOT, L Coordinator*
6. Base Civil	Maureen Connors	464-7063W 1-723-2637H	Oil Spills Program Mgr.
7. Base Civil	Janice Streeter	464-8564W 496-6460H	Environmental Quality Div. Director
8. Base Civil	Bill Niven	464-7287W	Advisor
9. Base Civil	D.S. Branigan CDR, CEC USN	464-7285W 471-1262H	Base Civil Engineer
10. Safety	G. Maynard	464-7774W 363-4444H	Advisor

W/L - responsibility for clean-up of spills in water/on land

Virginia State Water Control Board 552-1100  
(after hours, weekends, holidays) 527-5200

Commander, 5th Coast Guard District 398-6638

Coast Guard National Response Center 1-800-424-8802

NOSC Norfolk Naval Base 444-2590



PWC RECALL BILL FOR ASHORE RESPONSES (Home and Beeper)

<u>NAME</u>	<u>PHONE</u>
Alonzo Bailey	625-6131H 626-7833B
Richard Gove	428-8483H 677-5662B
Tommy Napier	No Home Phone 677-5659B
Gary Boudreau	460-0330H 626-7761B
Jesse Thornton	583-2532H 626-7951B



## APPENDIX C    EQUIPMENT LISTS AND RECORDS

The following two pages list the Oil Spill Cleanup Equipment available within the Navy in the Hampton Roads area. The equipment located at PWC Norfolk can respond within two hours of notification. The remaining equipment in the Hampton Roads area can respond within 12 hours of notification.

The oil spill clean-up equipment and materials at NAB Little Creek, including sorbents, booms and utility boats, are stored near Building 3896 near the quay wall, and can respond within 30 minutes of notification. The 3001 skimmer is stored out of the water near Building 3896 until needed. Some sorbents are also stored near Pier 1. The other NOSOT personnel are instructed in the proper use of the equipment and receive on-the-job training. The skimmer is a DIP 3001 model with a rotating, non-porous belt. It recovers 40 gpm of a 2 millimeter thick slick at a speed of 1 knot and stores 1500 gallons of recovered oil on-board. The skimmer now on site was overhauled in 1992. The DIP 3001 is emptied of oil by a waste oil truck.

Chemical agents are available commercially to control an oil spill. The use of any chemical agents must be approved by COMNAVBASE Norfolk, the State Water Control Board, and the EPA or USCG.



**SUPSALV OIL SPILL RESPONSE EQUIPMENT INVENTORY**  
as of Septer: 1, 1992

Equipment Description	Quantities/Location				
	Williamsburg, VA	Stockton, CA	Pearl Harbor, HI	Bahrain	Japan
<b>Spilled Oil Recovery</b>					
SKIMMER VESSEL SYSTEM (36' ALMINUM HULL)	11	11	2		
SIMMER SYSTEM (SORBENT BEL VOSS*)	1	1	0		
SKIMMING SYSTEM (SCREW PUMP VOSS*)	2	2	0		
SKIMMER, SORBENT ROPE MOP (36")	2	1	0		
BOOM VANS (42" X 1980' BOOM)	5	6	1	1	
BOOM MOORING SYSTEM	37	34	4		
BOOM HANDLING BOAT (24' 260 HP DIESEL)	12	6	2		
BOOM TENDING BOATS (19' & 23' INFLATABLE)	2	2	1		
BOOM TENDING BOATS (18' RIGID HULL)	4	4	1		
136K OIL STORAGE BLADDER	7	4	0		
26K OIL STORAGE BLADDER	3	3	2		
<b>Casualty Offloading</b>					
PUMP SYSTEM, POL 6" SUBMERSIBLE	8	6	4	2	1
FLOATING HOSE (6" X 100')	65	0	0		
HOT TAP SYSTEM	2	2	1		
BOARDING KIT	1	1	1		
FENDER SYSTEM (8' X 12' FOAM)	7	4	0		
FENDER SYSTEM (14' X 60' LP AIR)	8	0	0		
FENDER SYSTEM (10' X 50' LP AIR)	24	0	0		
<b>Ancillary Equipment</b>					
COMMAND TRAILER (40' COMNS & CMD CTR)	1	1	0		
COMMAND VAN (20' COMNS & COMMAND CTR)	2	2	1		
SHOP VANS	1	2	1	1	
RIGGING VANS	2	2	1		
PERSONNEL BUNK VANS	2	0	0		
BEACH TRANSFER SYSTEM (4WD VEHICLES)	1	0	0		
COMMUNICATION SYSTEM (SAT PHONE, LAND)	2	0	0		
COMMUNICATION SYSTEM (SAT PHONE, SHIP)	1	0	0		
OIL/WATER SEPARATOR (PARALLEL PLATE 100GPM)	2	1	0		
CLEANING SYSTEM	1	1	1		

**TABLE 3  
NAVY ACTIVITY OIL POLLUTION RESPONSE EQUIPMENT MATRIX**

DATE CONNAVBASENORVAINST 6230.1C

PHYSICAL RESOURCES  EQUIPMENT  ACTIVITY	SKIMMERS			BOOM				BOATS		SWOBS DONUTS			PREFERRED STAGING AREAS	
	SMALL	MED (DIP 1002)	LARGE (DIP 3001)	CLASS I (500 FT)	CLASS II (500 FT)	CLASS III (500 FT)	MOORING SYSTEM (DEPLOYABLE)	UTILITY W/ENGINE	WORK PLATFORM W/ENGINE	DONUTS	BARGE (SWOB) (OIL 75,000 GAL)	DONUT SERVICING SUBSYSTEM		WATER BARGE
NAVSTA NORFOLK, VA										26	5		1	TO BE DETERMINED
NAVPHIBASE LITTLE CREEK, VA			1	5	5		2	3	1		2			"
NAVSHIPYD PORTSMOUTH, VA			1	4			2	1	1	7	1	1		"
WPNSTA YORKTOWN, VA			1		50		2	1	1					"
NAVSWC DAHLGREN, VA	1	1			3									"
NAS OCEANA, VA					1									"
PWC* NORFOLK, VA **			2		32	12	3	2	1					
NSC - CRANEY ISLAND * PORTSMOUTH, VA	1				5		6	4	1					
NSC - YORKTOWN * YORKTOWN, VA				2	7		2	2						
NSC - NORFOLK * NORFOLK, VA				3	7		2	1						
* NOTE: THESE COMMANDS ARE NOT DESIGNATED AS NOSCDRs. THEY DO MAINTAIN EQUIPMENT THAT IS AVAILABLE TO THE NOSC IF NEEDED														
** NOTE: ONLY A PARTIAL LISTING OF EQUIPMENT AT PWC NORFOLK														



**APPENDIX D COMMUNICATIONS PLAN**

The Naval Amphibious Base, Little Creek Port Control Tower serves as dispatcher for the Oil Spill Team. The Tower monitors the channels that the Oil Spill Team communicates on, as well as the Base security channel, which the Command Duty Officer uses. Therefore, the Tower can receive transmissions from NAB Little Creek personnel and relay them by telephone to any other agencies responding.



**APPENDIX E SITE SPECIFIC SAFETY AND HEALTH PLAN**

All safety and health training is conducted in accordance with the Navy Occupational Safety and Health (NAVOSH) program as defined in OPNAVINST 5100.23C.



## APPENDIX F ACRONYMS AND DEFINITIONS

### Abbreviations/Acronyms

ANSI .....American National Standards Institute  
CDO .....Command Duty Officer  
CERCLA ..Comprehensive Environmental Response, Compensation and  
Liability Act  
CFR .....Code of Federal Regulations  
EPA .....Environmental Protection Agency  
EPCRA ...Emergency Planning and Community Right to Know Act  
HW .....Hazardous Waste  
NAB .....Naval Amphibious Base  
NOSC ....Navy On-Scene Coordinator  
NOSCDR ..Navy On-Scene Commander  
NOSOT ...Navy On-Scene Operations Team  
OOD .....Officer On Duty  
POL .....Petroleum, Oil, Lubricants; petroleum products  
POLREP ..Pollution Report  
PSO .....Port Services Office(r)  
RRC .....U.S. Coast Guard or EPA Regional Response Center  
RRT .....U.S. Coast Guard or EPA Regional Response Team  
SWOB ....Ship's Waste Offload Barge  
UIC .....Unit Identification Code  
USCG ....U.S. Coast Guard



## Definitions

Coastal Waters: Generally are those United States marine waters navigable by deep draft vessels, including the contiguous zone, the high seas, and other areas where tide ebbs and flows.

Contiguous Zone: The entire zone established by the United States under Article 24 of the Convention on the Territorial Sea and the Contiguous Zone. This is the zone contiguous to the territorial sea, assumed to extend 12 miles seaward from the baseline where the territorial sea begins.

Discharge: Any spilling, leaking, pumping, pouring, emitting, emptying, or dumping of oil.

Hazardous Material: Any material which, because of its quantity, concentration, or physical, chemical, or infectious characteristics, may pose a substantial hazard to human health or to the environment.

Hazardous Substance: Hazardous materials or hazardous waste designated as hazardous under section 101(14) or CERCLA.

Hazardous Waste: Any solid, liquid, semisolid, or contained gaseous material designated as waste for disposal and listed in the Identification and Listing of Hazardous Waste of 40 CFR 261.

Inland Waters: All navigable waters within the land territory, such as rivers, streams, and lakes, as well as all bodies of water inland of the baseline from which the territorial sea is measured.

Oil: Oil of any kind or in any form, including, but not limited to, crude oil, petroleum, fuel oil, lubricants, sludge, oil refuse, and oil mixed with waste water other than dredged oil.



**APPENDIX G      GEOGRAPHIC-SPECIFIC APPENDIX**

Please refer to Naval Supply Center, Craney Island for applicable Facility Response Plan for fuel barge while it is underway for fueling.



**APPENDIX H      REFERENCES**

COMNAVBASE NORVA Instruction 6280.1C

NAVFAC P-908 Oil Spill Control for Inland Waters and Harbors,  
January 1977

NAVPHIBASELCREEK Instruction 6280.1

Oil Spill Response Guide, Robert J. Meyers & Associates and  
Research Planning Institute, Inc., Noyes Data Corporation Park  
Ridge, New Jersey, 1989.

Virginia State Water Control Law Article 11, 62.144.34





## Appendix J

### Report Formats

#### OIL SPILL MESSAGE FORMAT

**Precedence:** Oil Spill messages will normally be by routine precedence provided prior telephone report has been made; if not, use priority precedence.

**Classification:** Spill reports are unclassified, unless necessary to prevent disclosure of classified information.

Message Addressee and Info Blocks for oil spills to waters of the United States and its contiguous zone:

**FROM:** Navy Activity/Ship (Spiller)  
**TO:** SOPA ADMIN LITTLE CREEK SUBAREA VA  
EPA REGION THREE PHILADELPHIA PA  
COMNAVSURFLANT NORFOLK VA  
SOPA ADMIN HAMPTON ROADS AREA VA  
CCGDFIVE PORTSMOUTH VA  
SOPA LITTLE CREEK SUBAREA VA  
INFO CNO WASHINGTON DC  
CINCLANTFLT NORFOLK VA  
COMNAVSEASYS COM WASHINGTON DC  
COMNAVFACENGCOM ALEXANDRIA VA  
COGARD MSO HAMPTON ROADS VA  
NEESA PORT HUENEME VA  
LANTNAVFACENGCOM NORFOLK VA  
COMNAVBASE NORFOLK VA  
NAVPHIBASE LITTLE CREEK

**SUBJ:** Oil Spill Report (Report Symbol OPNAV 5090-2) (MIN: CONSIDERED)

1. CNO FOR Op-45 and CHINFO
2. GMT DTG spill occurred/discovered
  - (a) For ships: list name, hull no., and UIC
  - (b) For shore activities: list name UIC
  - (c) For non-Navy spills discovered by Navy activity, list



name of responsible party (if from commercial firm under contract to Navy, list names of firm and contracting activity)

- (d) For spills from unknown source, indicate whether spill is thought to have originated from Navy operations

3. Spill location

- (a) For spills at sea, list latitude, longitude, and distance to nearest land
- (b) For spills in port, list port name and specific location (pier or mooring designation, etc.)
- (c) For spills ashore, list specific location within activity (building or area designation, etc.)

4. Amount spilled in gallons (best estimate; if oil/water mixture, indicate percentage oil)

5. Type of oil spilled (choose one)

- (a) Diesel Fuel Marine (DFM)
- (b) Naval Distillate
- (c) Navy Special Fuel Oil (NSFO)
- (d) Jet fuels (JP-4, JP-5)
- (e) Aviation/automotive gasoline
- (f) Automotive diesel
- (g) Heating fuels (Grades 1 and 2, Kerosene)
- (h) Residual burner fuel (Grades 4, 5 and 6/Bunker C)
- (i) Lube/hydraulic oils
- (j) Oil/oil mixture (including slop and waste oils)
- (k) Oil/water mixture (including bilge waste)
- (l) Other (specify)
- (m) Unknown (provide best estimate if possible)

6. Operation underway when spill occurred (choose one)

- (a) Fueling/defueling
- (b) Internal transfer of fuel (includes transport of fuel from one storage area to another)
- (c) Bilge dewatering (including donut operations)



- (d) Salvage
  - (e) Other (specify)
  - (f) Unknown
7. Spill cause (provide narrative description of specific spill cause; indicate if one of the following was a principal cause)
- (a) Structural failure (specify)
  - (b) Hose failure or leak
  - (c) Other type equipment failure (specify)
  - (d) Collision/grounding/sinking
  - (e) Valve misalignment
  - (f) Monitoring error
  - (g) Other procedural/communications error (specify)
  - (h) Other (specify)
  - (i) Unknown
8. Slick description and movement
- (a) Size: length and width
  - (b) Color (choose one): barely visible, silvery, faint color, bright color bands, dull brown, or dark brown.
  - (c) On-scene wind (direction, speed)
  - (d) Sea state
  - (e) Slick movement (direction, speed)
9. Areas damaged or threatened
- (a) Name of body of water affected
  - (b) Nature and extent of damage to property, wildlife, or other resources (if any)
  - (c) Areas or resources threatened
10. Telephonic report to National Response Center was/was not made.
11. Samples were/were not taken
12. Containment method planned/used (if none, state reason;



indicate which of the following equipment utilized)

- (a) Boom
- (b) Ship's hull
- (c) Hull
- (d) Water spray
- (e) Chemical agent (specify)
- (f) Other (specify)

13. Spill removal method planned/used (if none, state reason; indicate which of the following equipment utilized)

- (a) DIP 1002 Skimmer
- (b) DIP 3001 Skimmer
- (c) SLURP Skimmer
- (d) Sorbents (oil absorbing pads, chips, or other materials)
- (e) Dispersants
- (f) Vacuum trucks/pumps
- (g) Other (specify)

14. Parties performing spill removal (indicate one or more of the following)

- (a) Navy (specify lead organization in charge)
- (b) Commercial firm under contract to Navy
- (c) Coast Guard
- (d) Environmental Protection Agency
- (e) State or local agency
- (f) Other (specify)

15. Assistance required/additional comments

16. Activity contact for additional information (Name, Code, Autovon, Commercial)

Note: If information on items 12, 13, and 14 cannot be provided in initial spill notification message, forward after-action report to NAVENENVSA Port Hueneme, CA, within 72 hours of spill.



POLLUTION REPORT (POLREP) FORMAT

1. POLREP's. For all medium and major discharges, further reports will be submitted in a timely manner as developments occur, and at 0800 and 2000 local time on each day of the operations. NOSCDRs shall ensure that the NOSC is provided the information required to prepare the POLREP. NOSC's will address POLREP's as requested by the RRT, when activated and assembled, or to RRT member agencies when RRT has not been activated. POLREP's are to be sent in serialized manner; i.e., POLREP 001, POLREP 002, etc. This format consists of five basic sections, as follows:

- Situation: Should contain full details of the spill, including what happened, type and quantity of material, who is involved, extent of coverage, times, area threatened, success of control efforts and prognosis.
- Action: Should include a summary of all action taken by the responsible party, state and local forces, the Federal Government or any others. Should include press releases made.
- Plans: Should include all planned action by the responsible party, state and local forces, Federal government and others.
- Recommendations: Recommendations of the OSC and/or RRT, as applicable, should be included here. Initially, the classification of severity (minor, medium, major) should be included.
- Status: Should indicate Federal participation or Federal participation terminated, as appropriate.



AFTER-ACTION REPORT FORMAT

1. Minor, Medium and Major Discharges. The following report is required to be made by the NOSCDR taking response action. It provides data for analysis of response actions to improve prevention and control procedures and justification for funding requirements.

ROUTINE

FROM: NOSCDR  
TO: NOSC//00/01/N3/N34//  
INFO: (Appropriate USCG Marine Safety Office)  
LANTNAVFACENCOM NORFOLK VA

UNCLAS //NO6280//

SUBJ: After Action Report

- A. (DTG of Consolidated Oil/HPS Report)
  1. TRC: (Total resources committed; i.e., number of personnel, trucks, skimmers, boats, feet of boom, Lbs sheets of sorbent, etc. Military resources will be assumed unless otherwise indicated).
  2. RT: (Time elapsed between notification and arrival on scene).
  3. CT: (Time elapsed between arrival and final departure from scene).
  4. CM: (Containment measures employed; i.e., boom, herder, water stream, boat wash, ship hull, etc.).
  5. MH: (Total manhours involved in response action).
  6. RE: (Removal measures employed; i.e., type skimmer, sorbent, dispersal with fire hose, etc.).
  7. AR: (Amount recovered. State "EST" if not actually measured).
  8. CL: (Total labor costs (See Note 1). Military assumed unless otherwise indicated).
  9. CM: (Total costs of expended material. Military assumed unless otherwise indicated).
  10. CE: (Total equipment costs (See Note 1). Military assumed unless otherwise indicated).



11. AD: (Assessment of damage to wildlife, marine life, property, etc., and action taken to mitigate or correct such damage).
12. OA: (Other agencies on scene; i.e. USCG, EPA Dept. of Fish and Game, Regional Water Quality Control Board, etc.).
13. ADD: (Additions or corrections to previous reports such as OPREP-3 Navy Blue, Commander's situation report, consolidated reports, etc.).
14. R/LL: (Recommendations, lessons learned and remarks).  
An evaluation of contractor performance, if contractor used, can be included here.

NOTE 1: Data should be based on current NAVCOMPNOTE 7041 or NAVCOMPNOTE 7420 for military rates and general service rates, respectively. Amortized equipment cost should be determined by available schedules or best estimate. Repairs to damage sustained should also be included.



**APPENDIX K OIL SPILL CONTRACTORS**

Industrial Marine Service  
Norfolk, VA  
Telephone: (804) 543-5718

- Manpower, booms, sprayers,  
vacuum pump, mobile  
cleaning unit.

J & L Industries, Inc.  
Norfolk, VA  
Telephone: (800) 638-9116

- Mobile Vac trucks, chemical  
spills also.

Parker Systems, Inc.  
Norfolk, VA  
Telephone: (804) 485-2952

- Recovery equipment and  
materials.



APPENDIX L

COMNABASENORVAINST 6280.1C

AREA OIL AND HAZARDOUS SUBSTANCE POLLUTION CONTINGENCY PLAN



PLEASE REFER TO NAVAL BASE, NORFOLK FACILITY RESPONSE PLAN  
FOR DRAFT DOCUMENT



**APPENDIX M  
NAVPHIBASELCREEKINST 6280.1A**

**HAZARDOUS MATERIAL/HAZARDOUS WASTE (HM/HW) MANAGEMENT,  
DISPOSAL AND SPILL PROCEDURES**





## DEPARTMENT OF THE NAVY

NAVAL AMPHIBIOUS BASE, LITTLE CREEK  
NORFOLK, VIRGINIA 23521-5000

NAVPHIBASELCREEKINST 6280.1A  
N49

30 SEP 1991

### NAVPHIBASELCREEK INSTRUCTION 6280.1A

**Subj:** HAZARDOUS MATERIAL/HAZARDOUS WASTE (HM/HW) MANAGEMENT,  
DISPOSAL AND SPILL PROCEDURES

**Ref:** (a) OPNAVINST 5090.1A  
(b) NAVPHIBASELCREEKINST 5100.1 (series)  
(c) COMNAVBASENORVAINST 6280.1B

**Encl:** (1) Hazardous Waste Satellite Accumulation Guidance  
(2) Hazardous Waste Facility Inspection Schedule  
(3) Hazardous Waste Satellite Areas Inspection Schedule  
(4) DD Form 1348-1 Instructions  
(5) Hazardous Waste Material(s) Pick-up Preparation Procedures  
(6) Oil Spill Report  
(7) Hazardous Substance Release Report  
(8) Recall Bill for Incident Responses and Functions

1. Purpose. To establish procedures and delineate responsibility for hazardous material/hazardous waste (HM/HW) management, disposal and emergency procedures for HM/HW spills. NAVPHIBASE LCREEK HM/HW Spill Contingency Plan contains detailed instructions for spill response personnel in emergency HM/HW spills, which includes the details concerning emergency equipment available, locations of typical HW storage/accumulation areas and typical HW stored.

2. Cancellation. NAVPHIBASELCREEKINST 6280.1

3. Background. Reference (a) states that an integral part of the Navy's mission is to prevent pollution, protect the environment and conserve natural resources. All Navy personnel must develop and exhibit an environmental protection ethic to meet Navy goals. Mishandling HM/HW can cause personal injury, health and environmental problems, and can result in personal liability. As a federal facility we must comply with all federal, state and local regulations to protect the environment. The Resource Conservation and Recovery Act (RCRA) regulates the management of HW. The Hazardous and Solid Waste Amendments (HSWA) to RCRA of 1984 expand the scope of coverage and detailed requirements of RCRA. RCRA imposes requirements on HW



30 SEP 1991

generators, transporters, and facility operators which treat, store or dispose of HW. RCRA provides cradle to grave tracking of HW through a record keeping system that requires the manifesting of HW shipments from point of generation to disposal. HW treatment, storage, and disposal facilities are regulated through the issuance of operating permits. HM is governed by several sets of regulations including the Hazardous Material Transportation Act, OSHA, the Clean Water Act, the Clean Air Act, RCRA, HSWA, the Toxic Substance Control Act, the Federal Insecticide, Fungicide, and Rodenticide Act, and the Emergency Planning and Community Right-To-Know Act.

4. Scope. This instruction applies to all commands and all personnel, military and civilian, assigned to or located on the NAVPHIBASELCREEK complex.

5. Definitions

a. Hazard Communication (HAZCOM). A phrase and acronym derived from 29.CFR 1910.1200, the OSHA Hazard Communication Standard, that, when used as a noun or an adjective, means a requirement or requirements related to the standard. The performance elements of the standard involve the following: a list of hazardous chemicals, Material Safety Data Sheets (MSDSs), labels and forms of warning, personnel training, requirements for non-routine tasks, requirements for contractor employers and employees, personnel accessibility to the list of chemicals and MSDSs, and a HAZCOM program plan. Reference (b) contains the NAVPHIBASELCREEK HAZCOM program plan.

b. Hazardous Material (HM). Any material, which because of its quantity, concentration or physical, chemical or infectious characteristics may pose a substantial hazard to human health or the environment when released or spilled.

c. Hazardous Substance. Hazardous material or hazardous waste.

d. Hazardous Waste (HW). Any discarded material-liquid, solid or gaseous, which meets the definition of a HM and/or is designated HW by the Environmental Protection Agency (EPA) or the Virginia Department of Waste Management.

e. Hazardous Waste Generator. Any facilities by site, whose act or process produces HW or whose act first causes a HW to become subject to regulation.

30 SEP 1991

f. Hazardous Waste Manifest. A shipping document which must originate with and be signed by the HW generator having an EPA Identification Number before the HW may be transported or offered for transportation off the installation. The generator must provide specific information on the manifest (40 CFR 262) and designate one permitted Treatment, Storage, and Disposal (TSD) facility to handle the waste. The EPA document is EPA form 8700-22A. Where states have prescribed the use of specific forms, such forms must be used.

g. Hazardous Waste Minimization (HAZMIN). Consists of three parts:

(1) Decreasing HW generation by minimizing and controlling HM acquisition and use, and by applying best management practices, engineering controls, and equipment design to Navy processes and procedures.

(2) Recycling HW to return it to a ready-for-use state.

(3) Technological strategies to reduce HW volume or to reduce it to a non-hazardous state.

h. Material Safety Data Sheet (MSDS). A Material Safety Data Sheet, OSHA Form 174 or an equivalent form containing the identical data elements, must be used by manufacturers of chemical products to communicate to users the chemical, physical, and hazardous properties of their product to comply with the OSHA hazard communication standard, 29 CFR 1910.1200. The completed form identifies key information on the product: name, address, and emergency contact for the manufacturer; the identity of hazardous ingredients; physical/chemical characteristics; fire and explosion hazard data; reactivity data; health hazard data; precautions for safe handling and use; and control measures.

i. Oil. Any petroleum based fluid including crude oil, kerosene, diesel, fuel oils, lubrication and oily waste (see enclosure (1) for list of products not acceptable as oily waste).

6. Policy. It is the policy of this command that all commands and all personnel, military and civilian, involved in any aspect of HM/HW use, handling, storage, or disposal shall comply with this instruction, and exhibit personal leadership in developing methods to reduce HM/HW and prevent HM/HW spills.

30 SEP 1991

7. HM/HW Management

a. Activities/ships using or handling HM/HW shall:

(1) Designate a Hazardous Waste Coordinator (HWC) to manage HM/HW at the activity/ship and submit their name in writing to the Commanding Officer, Naval Amphibious Base, Little Creek, Public Works Department, Code N49. The HWC shall be at least a CPO or PO1. If no HWC is on file the Activity/Ship Commanding Officer will be considered the HWC.

(2) Comply with enclosure (1) procedures on HW satellite accumulation procedures. Additional training in HW handling procedures is available by contacting the Environmental Branch at 464-8564/8566.

(3) Contact the Safety Office at 464-7774 for assistance in the establishment of a HAZCOM program plan as required by reference (b) and OPNAVINST 4110.2 for shore activities, or OPNAVINST 5100.19B for ships, as appropriate.

(4) Develop HAZMIN policies and procedures that result in achieving reduction in the disposal of HM/HW. Procedures shall include, as a minimum, the following management practices:

(a) Ordering only the amount of HM required.

(b) Seeking non-hazardous or less hazardous material substitutes for HM used.

(c) Keeping HM/HW segregated from non-hazardous material/waste.

(d) Performing the following inventory control functions: accepting raw material only after inspection for useable, good condition, not beyond expired shelf life, etc.; monitoring the inventory of HM so that no unused HM is turned in for disposal because of expired shelf life or improper storage that renders the material useless for its purpose; proper labeling of all containers; storing containers in such a way as to allow for visual inspection for corrosion or leaks; storing containers to minimize the chance of tipping, puncturing or breaking; and keeping aisles clear of obstruction.

(e) Turning over unused HM to Naval Supply Center, Naval Base, Norfolk, VA, in a timely manner so it can be reissued. Contact the Naval Supply Center, code 308.25, Material Availability, at 444-5627, for all questions concerning unused HM.

8 0 SEP 1991

(f) Training all personnel for: HAZCOM program plan requirement; the safe and proper operation of equipment (minimize waste due to operator or procedural errors in the use/application of HM); procedures for detecting releases of HM/HW; procedures for HM/HW control and disposal; procedures for submitting ideas for job process improvements that eliminate or reduce HW generation; and procedures for reporting/containing a HM/HW spill. Training shall be documented and made available for inspection upon request.

(g) Developing procedures to reuse HM in a process whenever possible to decrease demand for HM and decrease volume of HW generated.

(h) Assuring compliance with preventive maintenance programs to help prevent waste releases due to equipment failure.

(i) Maintain a HW drum log. The HWC shall appoint a primary and alternate point of contact (POC) to maintain HW drum logs at each HW disposal drum in their areas. The log shall be recorded in a green log book. The log book shall have in the inside cover the names of the primary and alternate POCs. The log shall contain as a minimum for each entry: printed name of individual disposing material, nomenclature of material, quantity of material, date and time of disposal in drum, initial signature of primary or alternate POC. The HWC shall ensure the drum log POCs are properly trained in HW disposal and shall ensure that the log books are correctly completed.

(j) Maintain adequate spill control/containment material on-hand to contain and/or clean up a spill.

(k) Each HW generator is required to identify the composition and characteristics of their particular HW. If the composition or characteristics of the particular HW are not known, the generator will contact the Environmental Branch at 464-8564/8566 to arrange testing of the material to identify it. The HWC shall report immediately to the Environmental Branch at 464-8564/8566 if any new waste streams, either changes in types or quantities of HW generated, are produced.

(l) The HWC shall be responsible for conducting an annual self Environmental Compliance Evaluation audit of their HW handling procedures. Checklists and reporting requirements for the audit will be provided by the HW program manager.

30 SEP 1991

b. Public Works Department (Code N492, Environmental Branch) shall:

(1) Inspect the HW storage facility in accordance with enclosure (2).

(2) Inspect the satellite accumulation areas in accordance with enclosure (3) and notify the Activity/Ship HWC of any deficiencies.

(3) Provide training and technical guidance for the management and disposal of HW.

(4) Coordinate and distribute annual self Environmental Compliance Evaluation audit checklists and reporting requirements to ships and activities.

(5) Ensure compliance with base transportation and security requirements for the transportation of HW.

c. The Safety Manager shall:

(1) Provide guidance to commands in the establishment of a HAZCOM program plan.

(2) Provide guidance on appropriate personal protective equipment.

(3) Inspect HM facilities as required by OPNAVINST 5100.23B and Federal Occupational Safety and Health (OSH) regulations, note discrepancies and recommend corrective actions.

#### 8. HM/HW Disposal

a. Activities/ships turning in HM/HW for disposal shall:

(1) Complete a DD Form 1348-1 in accordance with enclosure (4), documenting the type and quantity of material. This information must be complete and accurate. The DD Form 1348-1 must be completed and available at the time of the HW pickup. The HW program manager reserves the right to refuse any HW if the DD 1348-1 is not correct, or completed.

(2) Be prepared to submit a copy of a MSDS to the HW program manager when a new HM is turned in for disposal as HW, or upon request of the HW program manager.

9 0 SEP 1981

(3) Properly dispose of HM/HW by contacting the appropriate personnel listed below at least 24 hours in advance to schedule a pick-up or for further information:

(a) HM/HW: 464-7358 or 464-7363, HW Facility.

(b) Reusable HM: 444-5627, Naval Supply Center, code 308.25, Material Availability.

(c) Waste oil/bilge water: 464-7295 or 363-4007, Engine/pump operator foreman.

(d) Naval Supply Center (NSC) compressed gas cylinders: complete a DD Form 1348-1 and turn in to the Naval Supply Center Cylinder Shop at Naval Base, Norfolk, VA. Call 444-3914, Naval Supply Center Cylinder Shop, for further guidance.

(4) Properly prepare HM/HW for pick-up in accordance with enclosure (5). The HWC shall ensure that HM/HW is never abandoned or allowed to be released into storm drains or sanitary sewers. No HM/HW is to be placed on piers without scheduling and preparing HM/HW for pickup as required.

(5) All ships shall make every effort to off-load as much HW as possible at NAVPHIBASE LCREEK prior to going to an off-base location for repairs. This action will minimize the need to transport/dispose of HW from the repair location, which is an added expense in time and money. Additionally, prior to disposing of HW from a private repair yard, the ship must contact PWC Norfolk at 445-2917 and submit a funding document to the comptroller at Naval Base Norfolk to pay the handling and disposal costs.

(6) Notify the HW Facility at 464-7358 or 464-7363 prior to transporting any HW to the HW Facility, building 106. Under no circumstances are personnel permitted to transport HW outside the NAVPHIBASE LCREEK complex. This prohibition includes transporting HW on Shore Drive.

b. Public Works Department (Code N492, Environmental Branch) shall:

(1) Schedule HM/HW pick-ups (when necessary) for NAVPHIBASE LCREEK activities/ships.

(2) Ensure that a DD Form 1348-1 is filled out completely and accurately prior to accepting the HM/HW.

30 SEP 1991

- (3) Properly mark, repackage, handle and store HM/HW.
- (4) Sample and analyze HW for proper identification and disposal.
- (5) Notify Director, Defense Reutilization and Marketing Office (DRMO) to receive and pick up HW in a timely manner.
- (6) Properly prepare documentation such as manifests, profiles, reports, surveys, DD Form 1348-1s, inspection checklists and computer printouts to comply with all federal, state and Navy regulations to ensure the proper management of HW.

9. Hazardous Substance and Oil Spill Response

a. Activities/ships involved in a hazardous substance or oil spill shall:

(1) Immediately report hazardous substance and oil spills on land or in the water to the NAVPHIBASE LCREEK Command Duty Officer (CDO) via the NAVPHIBASE LCREEK Security Department at 363-4444 with the following information:

- (a) Location of spill
- (b) Type of pollutant
- (c) Quantity of pollutant
- (d) Name and telephone number of informant
- (e) Time spill occurred/discovered

(2) Be responsible for the spill and shall conduct all voice reports and OPREP/SITREP message requirements outlined in reference (c) and submit the required spill reports in the format of enclosures (6) and (7). If the responsible party is unknown, Port Services shall complete OPREP/SITREP requirements and spill reports. PWD Environmental Branch will notify the State Water Control Board in writing within a five day period of the spill.

b. The CDO shall ensure that the appropriate personnel in enclosure (8) respond to the spill.

c. Port Services is responsible for clean-up of spills in water. For spills in the water which require action for clean-up, Port Services shall immediately notify the following:

30 SEP 1991

- (1) Environmental Branch at 464-8564 or 464-8566.
- (2) HW Facility at 464-7358 or 464-7363.
- (3) Commander, Naval Base Area Coordinator at 444-2590.
- (4) COMNAVBASE Norfolk Base duty officer at 444-7097/98.
- (5) National Response Center at 1-800-424-8802.
- (6) State Water Control Board at 552-1840. (within a 24 hour period)

d. PWD HW personnel are responsible for clean-up of spills on land and shall comply with the following:

- (1) For reportable quantity spills on land, PWD personnel will immediately notify the following:
  - (a) Commander, Naval Base Area coordinator at 444-3009.
  - (b) COMNAVBASE Norfolk Base duty officer at 444-7097/98.
  - (c) National Response Center at 1-800-424-8802.
  - (d) State HW Emergency Response Team at (804) 674-2400.
  - (e) The Virginia Department of Waste Management orally within a 24 hour period and in writing within a five day period.

e. The Fire Department shall act as the initial response team for clean up of spills on land, shall evaluate the severity of the spill and take initial corrective action to control the spill if necessary.

f. The NAVPHIBASE LCREEK HM/HW spill contingency plan contains detailed instructions for spill response personnel.

NAVPHIBASELCREEKINST 6280.1A

30 SEP 1991

10. Form. DD Form 1348-1, DOD Single Line Item Release/Receipt Document, S/N 0102-LF-013-1040, is available in the Navy Supply System and may be requisitioned in accordance with NAVSUP P-2002.



J. COOK

Distribution:

NAVPHIBASELCREEKINST 5216.2K

List I - Case A

List III

List IV - Case A, B, C

Stocked by:

Commanding Officer

Naval Amphibious Base, Little Creek

Norfolk, Virginia 23521-5000

8 0 SEP 1991

HAZARDOUS WASTE SATELLITE ACCUMULATION GUIDANCE

1. Satellite accumulation areas will collect and containerize HWs, as they are generated, into DOT-approved containers.
2. Each generator will ensure that appropriate containers are used for hazardous waste or oily waste. Oily waste consists of petroleum products including lubricating oils; diesel fuels (uncontaminated); jet fuels; other petroleum-based products. The following products are unacceptable for processing at Craney Island Oily Waste Treatment Plant and shall not be mixed with or disposed with oily waste:

<u>Product</u>	<u>Source</u>	<u>Reason</u>
JP-4	Fuel	Low Flash Point
AVGAS	Fuel	Low Flash Point
MOGAS	Fuel	Low Flash Point
Ketone Thinners	Paint thinner	Low Flash Point
Trichloroethane	Dry Cleaning solvent	Hazardous Waste
Alcohol	Industrial solvent	Low Flash Point
Insecticides, Rodenticide	Insect, Rodent control activity	Toxic, Hazardous Waste
Tank Cleanings containing biodegradable Chemical Dispersants	Tank cleaning operation	Emulsified Non-oil/water cannot be separated during processing
Other Low Flash Products (i.e., Napthas, Paint thinners)	Paint thinner	Low Flash Point
Grease Trap Cleanings	Galley equipment	Emulsified oil/water cannot be separated during processing

Enclosure (1)

30 SEP 1991

<u>Product</u>	<u>Source</u>	<u>Reason</u>
Oily Wastes from Sanitary Systems and Plants	CHT tank waste	Personnel Sewer Health Hazard
Sludges	Tank bottoms	Not treatable due to high concentration of solids
Hazardous Used Oils (Synthetic Oils)	Transformer lubricating oil	Illegal to blend into reclaimed fuel
Other Halogenated Hydrocarbon Compounds (i.e., solvents with chlorine and fluorine)	Solvents	Hazardous Waste
Phenols	Toilet, floor drain cleaner, industrial strength cleaner	Toxic
Hydraulic Fluid	Hydraulic systems	Toxic
AFFF	Fire Fighting	Emulsifier-cannot be separated during processing

Note: DO NOT CROSS CONTAMINATE WASTE STREAMS! Uncontaminated petroleum products are not hazardous waste, but they become regulated if mixed with hazardous wastes. Petroleum-based products contaminated with HWs must be labeled as HW. Waste oil tanks must not receive hazardous materials/wastes.

3. All containers used for HW collection must be:
  - a. Authorized by DOT for transportation of the specific waste material as shown in 49 CFR 172;
  - b. Always closed except when necessary to add or remove waste;

9 JAN 1971

- c. In good condition having no dents or corrosion, and closure rings or bungs must be tightly fitted;
  - d. Made of or lined with a material which will not react with and is otherwise compatible with the HW it will be used for; and
  - e. Opened, closed, and handled in a manner to prevent rupture or leakage of the containers.
4. New containers are not necessary for hazardous waste collection. Containers may be reused one time for hazardous waste disposal under the following conditions:
- a. A plastic liner must be used for wastes which are corrosive;
  - b. Do not fill drums with liquid to the brim, 5 percent of container capacity must be left as outage;
  - c. Transportation is restricted to highways only;
  - d. The drum, once closed, must be held for at least 24 hours and inspected for leakage immediately prior to transportation; and
  - e. The original contents of the drum are compatible with the HW to be disposed of.
5. Container marking is required and the words "Hazardous Waste" must be visible on the container. If there are any questions contact the HW facility at 464-7363 or 7358.

§ 13EP 1991

HAZARDOUS WASTE FACILITY INSPECTION SCHEDULE

DAILY INSPECTIONS

HAZARDOUS WASTE STORAGE FACILITY - Inspect visually for spills, leaks, and open containers. Inspect eyewash/safety showers for proper operation. Inspect sump and drain to ensure no clogs or backups have occurred, and that unit is operating properly. Inspect housekeeping to make sure area is free of debris and trash.

WEEKLY INSPECTIONS

DRUMS AND CONTAINERS HOLDING HAZARDOUS WASTE - Inspect visually for drums in good condition: not leaking, corroded, or deteriorated/damaged. Inspect for accumulation date, hazardous waste markings, drums properly closed, specific waste name on drums. Inspect for non regulated and hazardous waste stored separately. Inspect drums holding ignitable and reactive waste located at least 50 feet from property line. Inspect fire extinguishers, spill control equipment, alarm system, and radio/telephone. Inspect housekeeping (area should be free of trash and well organized).

MONTHLY INSPECTIONS

PERSONAL PROTECTIVE EQUIPMENT - Self Contained Breathing Apparatus (SCBA) equipment inspected to ensure proper operation: straps, facepieces, and hoses inspected for signs of wear, cylinder locks checked for secure and proper closure, cylinders and spare cylinders checked for dents, damage and proper hydrostatic testing. Additional personal protective equipment, such as splash - resistant and impervious boots, gloves, suits, coveralls, and chestwaders, hard hats, face shields, visors and ear protection.

30 SEP 1991

Hazardous Waste Satellite Areas Inspection Schedule

<u>Inspection Criteria</u>	<u>Typical Problems to Look for</u>	<u>Frequency</u>
Segregation of Materials/Waste	Inspect for incompatibles stored together--hazardous waste stored with hazardous materials	Weekly
Container Markings	Inspect 55-gallon drums for proper markings and labels--old markings blotted out	Weekly
Structural Integrity of Containers	Inspect containers for leaks, deterioration of containers, and other problems associated with container's condition	Weekly
Housekeeping	Inspect areas for general housekeeping to include containers open to atmosphere, debris, spills and incompatibles	Weekly
Security	Inspect areas for site security, fencing, secure compound, etc.	Weekly
HW Log	Inspect the log for proper completion	Weekly

Enclosure (3)

30 SEP 1957

DD FORM 1348-1 INSTRUCTIONS

Important items to fill in on DD Form 1348-1 are the following:

- a. Blocks 8 - 20: Federal Stock Number, if known.
- b. Blocks 23 - 24: Unit of Issue. (examples: EA=each, CN=can, DR=drum.
- c. Block A: Shipped from; address.
- d. Block B: Shipped to; Public Works Department, Hazardous Waste Section, Naval Amphibious Base, Little Creek.
- e. Block X: Item nomenclature; name of material turned in.
- f. Block DD: Approved for transfer, signature of authorizing official for transportation of material.
- g. Block 3: Total weight, estimate of amount of HW in gallons.

Enclosure (4)

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
GOC. IDENT.	SI FROM	M	FSC	STOCK NUMBER	NIIN	ADD	UNIT OF ISSUE	QUANTITY	DOCUMENT NUMBER	SERIAL	DATE	SUPPLEMENTARY ADDRESS	SIGNAL	FUND	DISTR.	PROJ. ECT	PRI. ORTY	REQ'D DEL DATE	APPRO	RI	UNIT PRICE	DOLLARS	CTS																																																								
800	00	PAINT	CN	00025X	63333	8002	7566																																																																								
SHIPPED FROM	YOUR UNIT/SHIP	NAVAL AMPHIBIOUS BASE,	LITTLE CREEK	SHIP TO	PUBLIC WORKS DEPT.	HAZARDOUS WASTE SECTION	NAVPHIBASE, LCREEK	MARK FOR	PROJECT	TOTAL PRICE	DOLLARS	CTS																																																																			
WAREHOUSE LOCATION	TYPE OF CARGO	UNIT PACK	UNIT WEIGHT	UNIT CUBE	U F C	N M F C	FREIGHT RATE	DOCUMENT DATE	MAT CONU	QUANTITY	R	S																																																																			
SUBSTITUTE DATA (ITEM ORIGINALLY REQUESTED)	FREIGHT CLASSIFICATION NOMENCLATURE	T	U	V	W	X WASTE PAINT	Y																																																																								
SELECTED BY AND DATE	TYPE OF CONTAINERS	TOTAL WEIGHT	RECEIVED BY AND DATE	INSPECTED BY AND DATE	PACKED BY AND DATE	NO. OF CONTAINERS	TOTAL CUBE	WAREHOUSED BY AND DATE	WAREHOUSE LOCATION																																																																						
REMARKS:	AA	BB	CC	DD APPROVED FOR TRANSFER	EE																																																																										
FIRST DESTINATION ADDRESS	DATE SHIPPED	11	12	FF	GG																																																																										
TRANSPORTATION CHARGEABLE TO	14 B/LADING, AWB, OR RECEIVER'S SIGNATURE (AND DATE)	15 RECEIVER'S DOCUMENT NUMBER																																																																													

\* U.S. GOVERNMENT PRINTING OFFICE: 1964 O-477-6000

2

90 SEP 1991



30 SEP 1991

HAZARDOUS WASTE/MATERIAL(S) PICK-UP PREPARATION PROCEDURES

1. Ensure Activity/Ship has scheduled for pick-up of HM/HW and has completed DD Form 1348-1s.
2. Dump all open one gallon paint cans into any empty or open five gallon paint cans, filling all five gallon paint cans then all remaining one gallon paint cans, ensuring cans are either empty or full. (i.e., no partially full cans)
3. All cans of paint which have exceeded shelf life and haven't been re-inspected in accordance with NAVSUP instructions should be removed. These cans should remain sealed for pick-up.
4. All other types of containers will be properly emptied and sealed for pick-up.
5. Paint brushes, roller heads, rags: Rags used for wiping hands, brushes, roller heads, etc., will be loosely tossed into the trash dumpster. Rags soaked in thinner, solvent, or oil, will be rung out (using rubber gloves) and placed into the dumpster loosely. Paint brushes and roller heads which will not be re-used upon completion of tasks, will be cleaned off on the edge of paint cans and dried with rags and disposed of in the dumpster. Roller heads, after scraping off all excess paint, will be wrapped in a rag and tossed into the dumpster.
6. All roller handles will be disposed of in the metal dumpsters on piers or adjacent to nearest commands.
7. Rule for rags: **No rags in bags!!...**Period. The only allowable exception will be rags used to wipe up spilled paint. In this case these rags will be placed into a triple plastic bag and turned into the Public Works hazardous waste facility.
8. Drums: All 10 - 55 gallon drums must be properly sealed, ensuring bung plugs and screw caps are screwed down snugly to prevent possible leakage while in transport.
9. Full oil drums are to be emptied by PWD Waste Oil Section at 464-7295, or 363-4007. Empty oil drums are to be turned into the PWD hazardous waste facility. NOTE: Must ensure oil drum has not been contaminated with Hazardous Waste or products unacceptable to Craney Island. (See enclosure (1)).
10. Do not discard hazardous materials/waste in unauthorized areas, such as trash dumpsters, or pierside and any other unauthorized place or containers. If you are not sure about

Enclosure (5)

NAVPHIBASELCREEKINST 6280.1A

**30 SEP 1991**

these materials call the HW program manager at 464-7363/7358/8566. ALWAYS ASK BEFORE ACTING--Mishandling hazardous material can cause personal injury, health problems, and environmental problems!! Get the facts before you act.

8 0 SEP 1991

OIL SPILL REPORT  
(MESSAGE OR NAVGRAM FORMAT)

**Precedence:** Oil Spill messages will normally be by routine precedence provided prior telephone report has been made; if not, use priority precedence.

**Classification:** Spill reports are unclassified, unless necessary, to prevent disclosure of classified information.

**Addressee and Info Blocks:** For oil spills to waters of the United States and its contiguous zone:

**FROM:** Navy Activity/Ship (Spiller)  
**TO:** SOPA ADMIN LITTLE CREEK SUBAREA VA//N3//  
 Operational Commander (Ship's)  
 COMDT COGARD WASHINGTON DC//JJJ//  
 COMNAVSURFLANT NORFOLK VA//N9E//  
 COMNAVBASE NORFOLK VA//N34/N4//  
 CCGDFIVE PORTSMOUTH VA//JJJ//  
 SOPA LITTLE CREEK SUBAREA VA//JJJ//  
**INFO:** CNO WASHINGTON DC//09F/OP-45//  
 CINCLANTFLT NORFOLK VA//N4423//  
 COMNAVSEASYS COM WASHINGTON DC//5643//  
 COMNAVFACENGCOM ALEXANDRIA VA//18//  
 COMOCEANSYSLANT NORFOLK VA//N9//  
 (FOR SPILLS REQUIRING OIL SLICK MOVEMENT PREDICTIONS)  
 NEESA PORT HUENEME CA//112//  
 LANTNAVFACENGCOM NORFOLK VA//18//  
 EPA REGION THREE PHILADELPHIA PA//JJJ//  
 NAVPHIBASE LITTLE CREEK VA//N4//

**Addressee and Info Blocks:** For oil spills to waters of foreign countries and international waters:

NAVPHIBASELCREEKINST 6280.1A

30 SEP 1991

FROM: Navy Activity/Ship (HS releaser)  
TO: SOPA ADMIN LITTLE CREEK SUBAREA VA//N3//  
Operational Commander (Ship's)  
COMNAVSURFLANT NORFOLK VA//N9E//  
COMNAVBASE NORFOLK VA//N34/N4//  
SOPA LITTLE CREEK SUBAREA VA//JJJ//

INFO: CNO WASHINGTON DC//09F/OP-45//  
CINCLANTFLT NORFOLK VA//N4423//  
COMNAVSEASYS COM WASHINGTON DC//5643//  
COMNAVFACENGCOM ALEXANDRIA VA//18//  
NEESA PORT HUENEME CA//112//  
NAVPHIBASE LITTLE CREEK VA//N4//

Body of Report: The body of the message/NAVGRAM will be in  
the following format:

UNCLAS//NO5090//

SUBJ: OIL SPILL REPORT (REPORT SYMBOL OPNAV 5090-2)

MSGID/GENADMIN/ORIGINATOR//

RMKS/

1. GMT DTG RELEASE OCCURRED/DISCOVERED.
2. ACTIVITY/SHIP ORIGINATING RELEASE:
  - a. For ships: list name, hull no., and UIC
  - b. For shore activities: list name, UIC
  - c. For non-Navy spills discovered by Navy activity, list name of responsible party (if from commercial firm under contract to Navy, list names of firm and contracting activity)
  - d. For spills from unknown source, indicate whether spill is thought to have originated from Navy operations
3. SPILL LOCATION:
  - a. For spills at sea, list latitude, longitude, and distance to nearest land
  - b. For spills in port, list port name and specific location (pier or mooring designation, etc.)
  - c. For spills ashore, list specific location within activity (building or area designation, etc.)
4. AMOUNT SPILLED IN GALLONS: (best estimate; if oil/water mixture, indicate percentage oil)

30 SEP 1991

5. TYPE OF OIL SPILLED: (choose one):
- Diesel Fuel Marine (DFM)
  - Naval Distillate
  - Navy Special Fuel Oil (NSFO)
  - Jet fuels (JP-4, JP-5)
  - Aviation/automotive gasoline
  - Automotive diesel
  - Heating fuels (Grades 1 and 2, Kerosine)
  - Residual burner fuel (Grades 4, 5, and 6/Bunker C)
  - Lube/hydraulic oils
  - Oil/oil mixture (including slop and waste oils)
  - Oil/water mixture (including bilge waste)
  - Other (specify)
  - Unknown (provide best estimate if possible)
6. OPERATION UNDERWAY WHEN SPILL OCCURRED: (choose one):
- Fueling/defueling
  - Internal transfer of fuel (includes transport of fuel from one storage area to another)
  - Bilge dewatering (including donut operations)
  - Salvage
  - Other (specify)
  - Unknown
7. SPILL CAUSE (provide narrative description of specific spill cause; indicate if one of the following was a principal cause):
- Structural failure (specify)
  - Hose failure or leak
  - Other type equipment failure (specify)
  - Collision/grounding/sinking
  - Valve misalignment
  - Monitoring error
  - Other procedural/communications error (specify)
  - Other (specify)
  - Unknown
8. SLICK DESCRIPTION AND MOVEMENT
- Size: length and width
  - Color (choose one): barely visible, silvery, faint color, bright color bands, dull brown, or dark brown
  - On-scene wind (direction, speed)
  - Sea state
  - Slick movement (direction, speed)
9. AREAS DAMAGED OR THREATENED
- Name of body of water affected
  - Nature and extent of damage to property, wildlife, or other resources (if any)
  - Areas or resources threatened

30 SEP 1991

10. TELEPHONIC REPORT TO NATIONAL RESPONSE CENTER WAS/WAS NOT MADE
11. SAMPLES WERE/WERE NOT TAKEN
12. CONTAINMENT METHOD PLANNED/USED: (if none, state reason; indicate which of the following equipment utilized):
  - a. Boom
  - b. Ship's hull
  - c. Camel
  - d. Water spray
  - e. Chemical agent (specify)
  - f. Other (specify)
13. SPILL REMOVAL METHOD PLANNED/USED: (if none, state reason; indicate which of the following equipment utilized):
  - a. DIP 1002 Skimmer
  - b. DIP 3002 Skimmer
  - c. SLURP Skimmer
  - d. Sorbents (oil absorbing pads, chips, or other materials)
  - e. Dipersants
  - f. Vacuum trucks/pumps
  - g. Other (specify)
14. PARTIES PERFORMING SPILL REMOVAL: (indicate one or more of the following):
  - a. Navy (specify lead organization in charge)
  - b. Commercial firm under contract to Navy
  - c. United States Coast Guard
  - d. Environmental Protection Agency
  - e. State or local agency
  - f. Other (specify)
15. ASSISTANCE REQUIRED/ADDITIONAL COMMENTS
16. ACTIVITY CONTACT FOR ADDITIONAL INFORMATION: (Name, Code, Autovon and/or Commercial)//

Note:

1. If information on items 12, 13, and 14 cannot be provided in initial spill notification message, forward after-action report to NEESA Port Hueneme, CA within 72 hours of spill.
2. During conditions of "minimize", ensure "MINIMIZE CONSIDERED" is typed in the special instructions block of the DD 173/2 message form.

8 0 SEP 1991

HAZARDOUS SUBSTANCE RELEASE REPORT  
(MESSAGE OR NAVGRAM FORMAT)

**Precedence:** HS release messages will normally be by routine precedence provided prior telephone report has been made; if not, use priority precedence.

**Classification:** HS release reports are unclassified, unless necessary, to prevent disclosure of classified information.

**Addressee and Info Blocks:** For HS releases in the United States and its contiguous zone:

**FROM:** Navy Activity/Ship (HS releaser)  
**TO:** SOPA ADMIN LITTLE CREEK SUBAREA VA//N3//  
 Operational Commander (Ship's)  
 COMDT COGARD WASHINGTON DC//JJJ//  
 COMNAVSURFLANT NORFOLK VA//N9E//  
 COMNAVBASE NORFOLK VA//N34/N4//  
 SOPA LITTLE CREEK SUBAREA VA//JJJ//  
**INFO:** CNO WASHINGTON DC//09F/OP-45//  
 CINCLANTFLT NORFOLK VA//N4423//  
 COMNAVSEASYS COM WASHINGTON DC//56Y3//  
 COMNAVFACECOM ALEXANDRIA VA//18//  
 NEESA PORT HUENEME CA//112//  
 LANTNAVFACENGCOM NORFOLK VA//18//  
 NAVPHIBASE LITTLE CREEK VA//N4//  
 EPA REGION THREE PHILADELPHIA PA//JJJ//

**Addressee and Info Blocks:** For HS releases in foreign countries and international waters:

Enclosure (7)

NAVPHIBASELCREEKINST 6280.1A

**30 SEP 1991**

FROM: Navy Activity/Ship (HS releaser)  
TO: SOPA ADMIN LITTLE CREEK SUBAREA VA//N3//  
Operational Commander (Ship's)  
COMNAVSURFLANT NORFOLK VA//N9E//  
COMNAVBASE NORFOLK VA//N34/N4//  
SOPA LITTLE CREEK SUBAREA VA//JJJ//  
INFO: CNO WASHINGTON DC//O9F/OP-45//  
CINCLANTFLT NORFOLK VA//N4423//  
COMNAVSEASYS COM WASHINGTON DC//56Y3//  
COMNAVFACECOM ALEXANDRIA VA//18//  
NEESA PORT HUENEME CA//112//  
NAVPHIBASE LITTLE CREEK VA//N4//

Body of Report: The body of the message/NAVGRAM will be in the following format:

UNCLAS//NO5090//

SUBJ: HS RELEASE REPORT (REPORT SYMBOL OPNAV 5090-3)

MSGID/GENADMIN/ORIGINATOR//

RMKS/

1. GMT DTG RELEASE OCCURRED/DISCOVERED.
2. ACTIVITY/SHIP ORIGINATING RELEASE:
  - a. For ships: list name, hull no., and UIC
  - b. For shore activities: list name, UIC
  - c. For Navy releases that occurred during transportation, list name of activity responsible for shipment
  - d. For non-Navy releases, list name of responsible party (if from commercial firm under contract to Navy, list name of firms and contracting activity)
  - e. For unknown source releases, indicate whether release is thought to have originated from Navy operations
3. RELEASE LOCATION:
  - a. For releases at sea, list latitude, longitude, and distance to nearest land
  - b. For releases in port, list port name and exact location (pier, warehouse, etc.)
  - c. For releases ashore, list specific location within activity (building or area designation, etc.)
  - d. During transportation, give exact location (highway or street name, number, city, or miles from nearest city)

30 SEP 1991

4. TYPE OF OPERATION AT SOURCE: (Plating shop, painting shop, HW facility, truck, ship, pipeline, ship rebuilding, entomology shop, etc. Be specific.)

5. TYPE OF CONTAINER FROM WHICH SUBSTANCE(S) ESCAPED: (55-gal drums, 5-lb bags, tank truck, storage tank, can, etc. Estimate number of containers damaged or dangerously exposed)

6. DESCRIPTION OF HS RELEASED: (Consider container labels and user directions, HM reference books, personal knowledge, expert's advice, etc. Be concise but complete.) If substance(s) known, give chemical and/or product names, formula, synonym(s) (if known), physical and chemical characteristics, and inherent hazards. EXAMPLE: Label on container identifies substance released as acrylonitrile. Synonyms: cyansethylene vintlayanide. Characteristics and hazards: poisonous liquid and vapor, skin irritant; highly reactive and flammable. If substance(s) unknown, describe appearance, physical and chemical characteristics, and the actual and potential hazards observed.

EXAMPLE: Substance released is a colorless to light yellow unidentified liquid; highly irritant to eyes and nose; smells like kernels of peach pits. Is vaporizing quickly posing ignition problem.

7. FIELD TESTINGS: (If none, so state; indicate findings and conclusions (i.e., concentrations of substance(s) present, PH, etc.), of any analyses.)

8. ESTIMATED AMOUNT RELEASED: (Use convenient units of weight or volume (kilograms, pounds, gallons, liters, etc.): For continuous release, estimate rate of release and amount left in container)

9. CAUSE OF RELEASE: (Describe the specific cause of release; account for any personnel error, equipment failure, accident, or act of God directly contributing to the release.)

EXAMPLE: Railing supporting 55 gal drums on a flatbed truck gave way because it was not securely fastened, causing 7 drums to fall and fracture.

10. RELEASE SCENE DESCRIPTION: (Describe scene of release.) Include information about the physical characteristics, size and complexity of release, the actual and potential danger or damage to the immediate area and the surrounding environment, including weather conditions if relevant. EXAMPLE: Solvent released formed shallow pond covering area about 30 ft by 45 ft of bare

30 SEP 1991

soil. Solvent is slowly running off into floor drain leading to storm drain and is also infiltrating soil. Pond is emitting highly toxic and flammable vapors. Dark clouds threatening to rain. Wind speed about 10 miles/hr., drifting vapors northbound to residential area. Vapors form layer about 30 ft just above ground.

11. NOTIFICATIONS MADE AND ASSISTANCE REQUESTED: (List all organizations informed of the release in and out of Navy jurisdiction; include Navy, Federal, state, and local authorities, NRC response teams, fire departments, hospitals, etc. Specify kind of assistance required from these organizations.)
12. DESCRIBE CONTROL AND CONTAINMENT ACTIONS TAKEN/PLANNED: (If none, state reason; specify method used to control and contain release; indicate parties carrying out response.) EXAMPLE: Gas barriers used to control and contain vapor emissions. Runoff contained by excavating ditch circumscribing affected area. In-house personnel and members of city of Portstown fire department carried out containment actions.
13. DESCRIBE CLEAN-UP ACTIONS TAKEN/PLANNED: (If none, state reason; indicate whether clean-up is made by on-site or off-site treatment, the method used, the parties involved in clean-up/removal, and the eventual disposal area.) EXAMPLE: No clean-up action taken. Toxic vapors present, potential danger to clean-up crew. Contaminated soil will be excavated and shipped by on-base personnel to Class I HW disposal site in Portstown, CA, when conditions allow.
14. ACTIVITY CONTACT FOR ADDITIONAL INFORMATION: (Name, Code, Autovon and/or Commercial.)
15. ADDITIONAL COMMENTS//

Note: During conditions of "minimize", ensure "MINIMIZE CONSIDERED" is typed in the Special Instructions block of the DD 173/2 message form.

30 SEP 1991

## RECALL BILL FOR INCIDENT RESPONSES &amp; FUNCTIONS

Command Department	POC	Telephone # H=Home W=Work	Function
1. Fire Dept	Duty Crew	363-4444W	Assess or respond
2. CDO	Duty Officer	464-7385W	Notification
3. Port Services	Duty Crew	464-7791W	OSOT, W Coordinator*
4. OOD (ships)	Duty Crew		OSOT, W Coordinator*
5. Public Works	Willie Barnes	464-8566W 625-3224H	OSOT, L Coordinator*
6. Public Works	Tommy Napier	464-7363W	OSOT, L Coordinator*
7. Public Works	Bob Moran	464-7358W 721-0037H	Waste handling
8. Public Works	Janice Streeter	464-8564W 622-3326H	Supervisory Environmental Engineer
9. Public Works	Bill Niven	464-7287W	Advisor
10. Public Works	S.W. Daignault CDR, CEC USN	464-7285W 460-9844H	On-scene commander
11. Safety	G. Maynard	464-7774W 363-4444H	Advisor

\*OSOT, W/L Coordinator- On-Scene Operations Team, Water/Land Coordinator overall responsibility for the proper clean-up of spills

W- responsibility for clean-up of spills in water

L- responsibility for clean-up of spills on land

Enclosure (8)