

# EMERGENCY RESPONSE ACTION PLAN

## OILTANKING TEXAS CITY, L.P.

### Texas City Terminal

This Plan satisfies the following regulations:

- U.S. EPA 40 CFR Part 112 (OPA 90)
- U.S. EPA 40 CFR Part 264, 265, 279 (RCRA Contingency Plan)
- USCG 33 CFR Part 154
- DOT PHMSA 49 CFR Part 194
- OSHA 29 CFR 1910.38(a) (Emergency Action Plan)
- OSHA 29 CFR 1910.120 (HAZWOPER)
- 31 TAC 19 (GLO Oil Spill Prevention and Response)

*Prepared for:*

#### **TEXAS CITY TERMINAL**

2800 Loop 197 South  
Texas City, Texas 77590

*Prepared by:*

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# EMERGENCY RESPONSE ACTION PLAN

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## FIGURE 1.3

### FACILITY INFORMATION

#### GENERAL INFORMATION

<b>Facility Name:</b>	Oiltanking Texas City, L.P. - Texas City Terminal 2800 Loop 197 South Texas City, Texas 77590 (409) 797-1700 (409) 797-1701 (FAX)
<b>EPA FRP ID#:</b>	FRP-06TX-00727
<b>OPS Plan Sequence:</b>	TBA
<b>Owner Name:</b>	<b>Physical Address</b> Oiltanking Texas City, L.P. Attn: Rance Fromme 2800 Loop 197 South P.O. Box 29 Texas City, Texas 77592 (409) 797-1750
<b>Qualified Individual (Facility Spill Coordinator):</b> (Home address)	Mike Nieberlein HSSE Manager 2323 Fairwind Road Houston, Texas 77062 (b) (6) (Home) (409) 761-0396 (Mobile)
<b>Alternate Qual. Individual (Other Emergency Coordinator):</b> (Home address)	Todd Harms 1704 Redwood Circle Alvin, Texas 77511 (b) (6) (Home) (281) 430-4090 (Mobile)
<b>Alternate Qual. Individual (Other Emergency Coordinator):</b> (Home address)	Paul Vargas 1122 Woodham Houston, Texas 77062 (b) (6) (Home) (281) 914-3651 (Mobile)
<b>Telephone/FAX:</b>	Additional telephone references, including 24 hour numbers, for the Facility, Owner, and QI/AQI are provided in Figure 2.2.
<b>NAICS Code:</b>	493190
<b>Date of Initial Oil Storage:</b>	1979

**FIGURE 1.3****FACILITY INFORMATION (Cont'd)**

<b>FACILITY LOCATION</b>	
<b><i>Parish:</i></b>	Galveston County, Texas
<b><i>Latitude:</i></b>	(b) (7)(F)
<b><i>Longitude:</i></b>	(b) (7)(F)
<b><i>Area Map:</i></b>	Provided in Figure 1.1
<b><i>Facility Diagram:</i></b>	Provided in Figure 1.2
<b><i>Wellhead Protection Area:</i></b>	The Texas City Terminal is not located in a Texas Wellhead Protection Area.

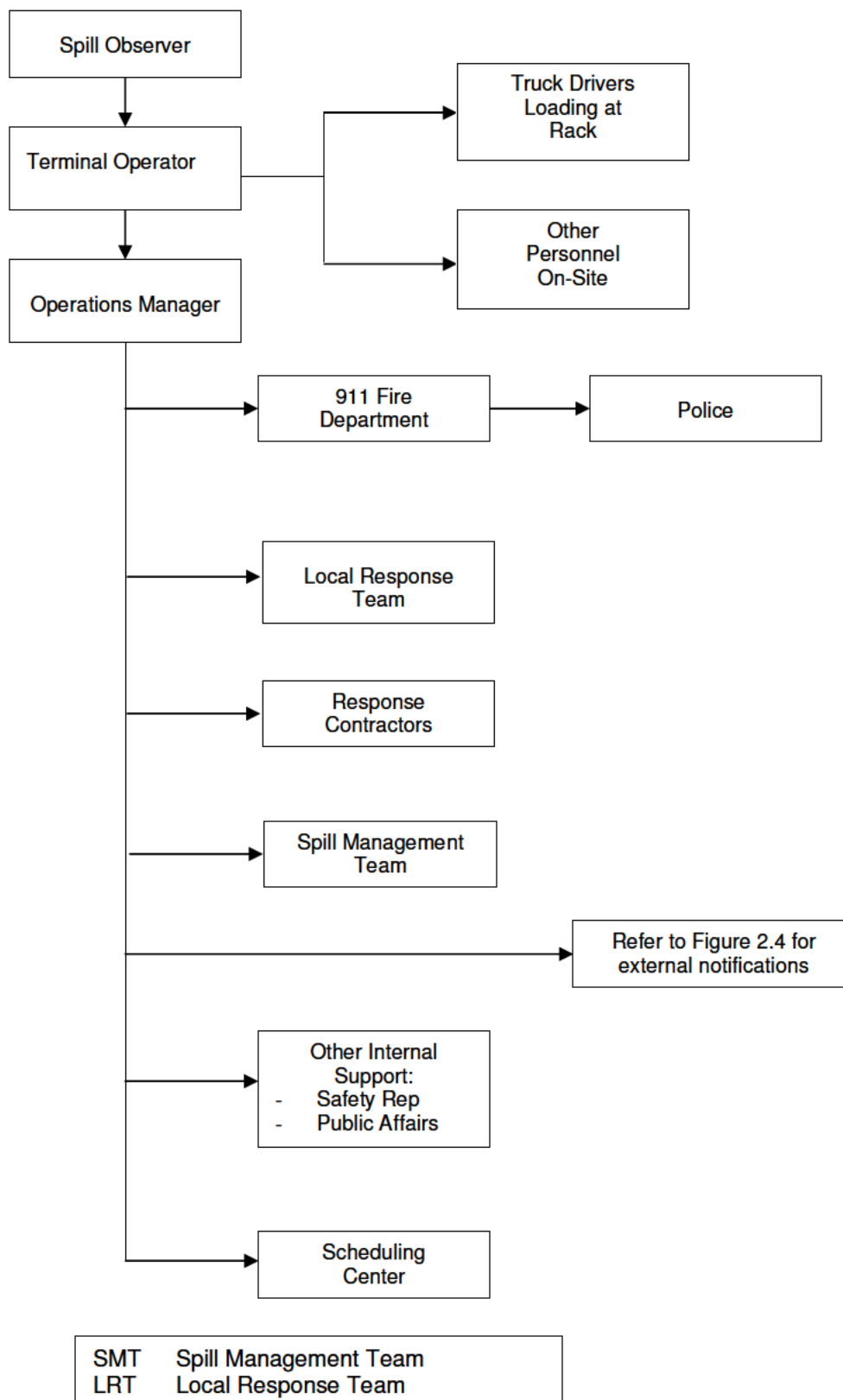
**FIGURE 2.1****INTERNAL NOTIFICATION SEQUENCE**

FIGURE 2.2

## INTERNAL NOTIFICATION REFERENCES

GENERAL FACILITY						
FACILITY AREA	ADDRESS			OFFICE	FAX NUMBER	
Texas City Terminal	2800 Loop 197 South Texas City, TX 77590			(409) 797-1700	(409) 797-1701	

LOCAL RESPONSE TEAM						
POSITION/TITLE	NAME	RESPONSE TIME	TRAINING LEVEL	OFFICE	HOME	OTHER
Terminal Manager	Rance Fromme	75 minutes	<ul style="list-style-type: none"> <li>HAZWOPER.</li> <li>ICP.</li> <li>SPCC Plan.</li> <li>Terminal and routine safe-operating procedures.</li> <li>ICS.</li> </ul>	(409) 797-1722	(b) (6)	(409) 761-0747 (MBL)
<i>Alt. Qualified Individual</i> / HSS Coordinator	Todd Harms	60 minutes		(409) 797-1740		(281) 430-4090 (MBL)
<i>Qualified Individual</i> / HSSE Manager	Mike Nieberlein	60 minutes		(409) 797-1742		(409) 761-0396 (MBL)
Emergency Response Coordinator	Paul Vargas	60 minutes		(409) 797-1753		(281) 914-3651 (MBL)

Texas City Terminal

ERAP-5

Integrated Contingency Plan  
October 2010

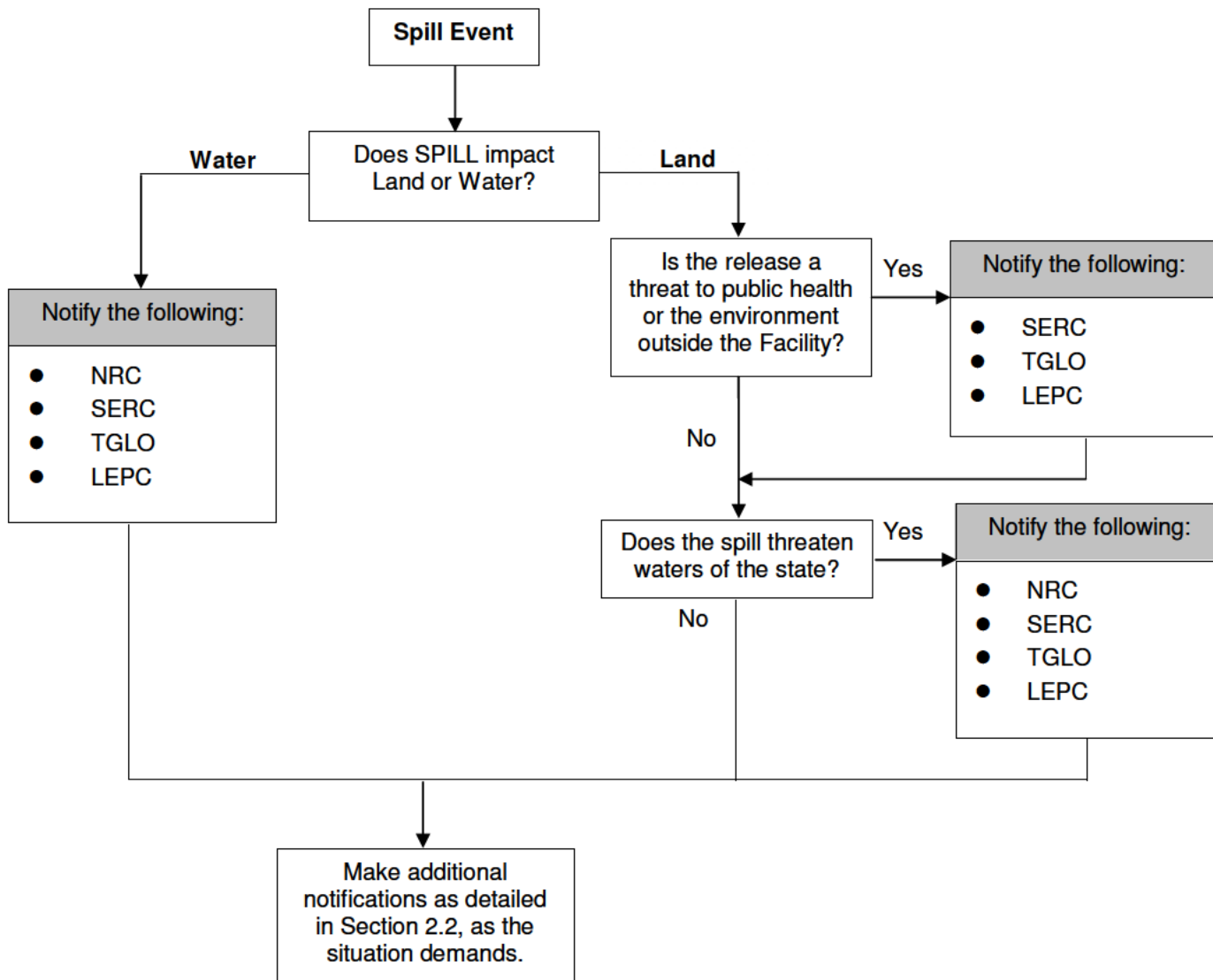
**FIGURE 2.2****INTERNAL NOTIFICATION REFERENCES (Cont'd)**

<b>HEADQUARTERS PRIORITY NOTIFICATION LIST*</b>					
	<b>NAME</b>	<b>RESPONSE TIME</b>	<b>OFFICE</b>	<b>HOME</b>	<b>OTHER</b>
Terminal Manager	Rance Fromme	75 min	(409) 797-1722	(b) (6)	(409) 761-0747 (MBL)
HSSE Manager	Mike Nieberlein	60 min	(409) 797-1742		(409) 761-0396 (MBL)
Logistics Manager	Margaret Halbert	45 min	(409) 797-1730		(409) 392-6233 (MBL)
Operations Manager	John Wilson	60 min	(409) 797-1720		(409) 761-0600 (MBL)
* Notify first available designated person on the list.					

**FIGURE 2.2****INTERNAL NOTIFICATION REFERENCES (Cont'd)**

<b>SPILL MANAGEMENT TEAM</b>					
<b>POSITION/TITLE</b>	<b>NAME</b>	<b>RESPONSE TIME</b>	<b>OFFICE</b>	<b>HOME</b>	<b>OTHER</b>
Terminal Manager	Rance Fromme	75 min	(409) 797-1722	(b) (6)	(409) 761-0747 (MBL)
HSS Coordinator	Todd Harms	60 min	(409) 797-1740		(281) 430-4090 (MBL)
HSSE Manager	Mike Nieberlein	60 min	(409) 797-1742		(409) 761-0396 (MBL)
Emergency Response Coordinator	Paul Vargas	60 min	(409) 797-1753		(281) 914-3651 (MBL)



**FIGURE 2.4****EXTERNAL NOTIFICATION FLOWCHART****Acronyms:**

- NRC = National Response Center
- SERC = State Emergency Response Commission
- TGLO = Texas General Land Office
- LEPC = Local Emergency Planning Committee



**FIGURE 2.5****EXTERNAL NOTIFICATION REFERENCES**

<b>REQUIRED NOTIFICATIONS</b>		
<b>AGENCY</b>	<b>TELEPHONE NUMBER</b>	<b>REPORTING REQUIREMENTS (IF ANY)</b>
<b>NATIONAL RESPONSE CENTER (NRC)</b> c/o United States Coast Guard (CG-3RPF-2) 2100 2 <sup>nd</sup> Street Southwest - Room 2111-B Washington, District of Columbia 20593-0001	(800) 424-8802 (24 Hr.) (202) 267-2675 (Day Phone) (800) 337-7455 (Night Phone)	TYPE: Any Discharge or sighting of oil, or hazardous substance exceeding an RQ. VERBAL: Immediately. WRITTEN: Not required.
<b>OFFICE OF PIPELINE SAFETY AND HAZARDOUS MATERIALS</b> U.S. Department of Transportation 1200 New Jersey Avenue SE-E-22-321 Washington, District of Columbia 20590	(202) 366-4000 (24 Hr.)	TYPE: In addition to the reporting of accidents to the NRC, a written accident report (PHMSA Form 7000-1, provided in Appendix K) must be submitted for releases resulting in any of the following: <ol style="list-style-type: none"> <li>1. Explosion or fire not intentionally set by the operator.</li> <li>2. Release of five gallons or more of hazardous liquid or carbon dioxide, except that no report is required for a release of less than five barrels resulting from a pipeline maintenance activity if the release is: <ol style="list-style-type: none"> <li>a. not one described under the NRC's reporting conditions.</li> <li>b. confined to the property or pipeline right-of-way; and</li> <li>c. cleaned up promptly.</li> </ol> </li> <li>3. Death of any person.</li> <li>4. Personal injury necessitating hospitalization.</li> <li>5. Estimated property damage, including cost of cleanup and recovery, value of lost product, and damage to the property of the operator or others, or both, exceeding \$50,000.</li> </ol> VERBAL: Call to the NRC meets the required verbal notification under DOT reporting requirement. WRITTEN: As soon as practicable, an accident meeting any of the above criteria must be reported on PHMSA Form 7000-1. The report must be sent to DOT no later than 30 days after the release. Changes or additions to the original report (PHMSA Form 7000-1) must be filed as a supplemental report within 30 days.
<b>TEXAS COMMISSION ON ENVIRONMENTAL QUALITY</b> 12100 PARK 35 CIRCLE AUSTIN, TX 78753	(800) 832-8224 (512) 239-2507 (512) 463-7727	TYPE: Any crude oil or petroleum product discharge into water; or, 25 gallons (petroleum product) or 210 gallons (crude oil) onto land. Any hazardous substance exceeding an RQ. VERBAL: Immediately WRITTEN: Within thirty (30) days after the release occurs.

**FIGURE 2.5****EXTERNAL NOTIFICATION REFERENCES (Cont'd)**

<b>REQUIRED NOTIFICATIONS</b>		
<b>AGENCY</b>	<b>TELEPHONE NUMBER</b>	<b>REPORTING REQUIREMENTS (IF ANY)</b>
<b>TEXAS GENERAL LAND OFFICE OIL SPILL PROGRAM</b> 1700 N. CONGRESS AVE. AUSTIN, TX 78701	(512) 475-1575 (800) 832-8224 (Alternate)	TYPE: Any unauthorized discharge or threat of discharge into the coastal environment. VERBAL: Within one (1) hour of discovery. WRITTEN: Within sixty (60) days after the response actions have been declared complete.
<b>GALVESTON - TEXAS CITY LEPC</b> 1725 25 <sup>TH</sup> STREET N TEXAS CITY, TX 77590	911/ (409) 643-5700	TYPE: Any spill which escapes the boundary of the Facility or exceeds an RQ. VERBAL: Immediately WRITTEN: As requested by the agency.
<b>TEXAS RAILROAD COMMISSION</b> P.O. BOX 12967 AUSTIN, TX 78711	(512) 463-6788 (24 hr.)	TYPE: Reportable accidents on intrastate hazardous liquid pipelines. VERBAL: Within two (2) hours of discovery. WRITTEN: Within thirty (30) days.
<b>TEXAS RAILROAD COMMISSION DISTRICT 3</b> OIL & GAS DIVISION 1706 SEAMIST DRIVE HOUSTON, TX 77008	(713) 869-5001	TYPE: Any crude oil spills greater than five (5) barrels. VERBAL: Immediately. WRITTEN: Immediately.

**FIGURE 2.5****EXTERNAL NOTIFICATION REFERENCES (Cont'd)**

OTHER POTENTIAL REQUIRED NOTIFICATIONS			
AGENCY	TELEPHONE NUMBER	REPORTING REQUIREMENTS (IF ANY)	
U.S. ENVIRONMENTAL PROTECTION AGENCY REGION VI 1445 ROSS AVENUE, SUITE 1200 DALLAS, TX 75202-2733	(866) EPA-SPIL 372-7745	TYPE: Immediately for all spills that impact or threaten navigable water or adjoining shoreline. VERBAL: Notification to the EPA is typically accomplished by the call to the NRC. WRITTEN: As the agency may request depending on circumstances.	
U.S. COAST GUARD – SECTOR HOUSTON-GALVESTON 9640 CLINTON DRIVE HOUSTON, TX 77029	(713) 671-5100	TYPE: Immediately for all spills that impact or threaten navigable water or adjoining shoreline. VERBAL: Notification to the USCG is typically accomplished by the call to the NRC. WRITTEN: As requested by the Agency.	
ASSISTANCE/ADVISORY NOTIFICATIONS (outside resources)			
AGENCY	LOCATION	OFFICE	ALTERNATE
OSHA (For Reportable Injury or Death)	Washington, D.C.	(800) 321-6742	
U.S. Coast Guard – Sector Houston-Galveston	Houston, TX 77029	(713) 671-5100	
CHEMTREC	-----	(800) 424-9300	
Chemical Referral Center	-----	(800) 262-8200	
U.S. Fish and Wildlife Service (USFWS)	Webster, TX	(281) 286-8282 (Local Day)	
Texas Parks and Wildlife	Dickinson, TX	(281) 534-0130	
Wildlife Rehab	League City, TX	(281) 332-8319	
TNRCC - Water Program	Houston, TX	(713) 767-3650	
Texas Railroad Commission	Austin, TX	(512) 463-6788	
Texas Parks and Wildlife Commission	Seabrook, TX	(281) 474-2811	
Texas State Police (DPS)	Texas City, TX	(409) 938-7899	
Harbormaster - Texas City	Texas City, TX	(409) 945-5011	
Texas City Response	Texas City, TX	(409) 643-5707	
Texas City Civil Defense	Texas City, TX	(409) 643-5707	
Galveston County Health District	LaMarque, TX	(409) 938-2251	
Electric Service - First Choice	Texas City, TX	(409) 945-2386	
Water Service - (Texas City Terminal Railway)	Texas City, TX	(409) 945-4461	
G & H Towing Texas City	Houston, TX	(409) 744-5215	
T & T Marine Service	Galveston, TX	(409) 744-1222	
Amato Linehandlers	Texas City, TX	(409) 945-7335	
BP Amoco Chemical Company	Texas City, TX	(409) 948-1601	
BP Amoco Refinery	Texas City, TX	(409) 945-1011	
Seaway Pipeline Co.	Texas City, TX	(409) 945-4555	

**FIGURE 2.5****EXTERNAL NOTIFICATION REFERENCES (Cont'd)**

<b>ASSISTANCE/ADVISORY NOTIFICATIONS (outside resources)</b>			
<b>AGENCY</b>	<b>LOCATION</b>	<b>OFFICE</b>	<b>ALTERNATE</b>
Applied Industrial Materials	Texas City, TX	(409) 945-7210	
Intercoastal Terminal	Texas City, TX	(409) 948-0208	
StanTrans Texas City Terminal	Texas City, TX	(409) 948-3561	
Valero	Texas City, TX	(409) 945-4451	

<b>MEDIA NOTIFICATIONS</b>			
<b>AGENCY</b>	<b>LOCATION</b>	<b>OFFICE</b>	<b>ALTERNATE</b>
Radio 740 AM - KTRH	Houston, TX	(713) 526-5874	
TV - KPRC Channel 2 (NBC)	Houston, TX	(713) 222-2222	
TV - KHOU Channel 11 (CBS)	Houston, TX	(713) 526-1111	
TV - KTRK Channel 13 (ABC)	Houston, TX	(713) 666-0713	

<b>LOCAL EMERGENCY SERVICES</b>			
<b><i>DIAL 911</i> for All Police, Fire, and Ambulance Emergencies</b>			
<b>SERVICE</b>	<b>LOCATION</b>	<b>OFFICE</b>	<b>ALTERNATE</b>
Fire Department	Texas City, TX	(409) 643-5741	
Ambulance	Texas City, TX	(409) 948-8414	
Hospital - Mainland Medical Center	Texas City, TX	(409) 938-5000	
Police Department	Texas City, TX	(409) 948-2525	

**FIGURE 2.5****EXTERNAL NOTIFICATION REFERENCES (Cont'd)**

<b>USCG CLASSIFIED OIL SPILL REMOVAL ORGANIZATIONS (OSRO)</b>					
<b>COMPANY</b>	<b>CONTRACT RESPONSIBILITY</b>	<b>RESPONSE TIME</b>	<b>LOCATION</b>	<b>OFFICE</b>	<b>ALTERNATE</b>
T&T Marine Salvage, Inc.	Petroleum product cleanup and disposal under direction of Q.I.	1 hour	Texas City, TX	(409) 744-1222 (281) 488-5757	
Garner Environmental Services, Inc.	Petroleum product cleanup and disposal under direction of Q.I.	1 hour	La Marque, TX	(800) 424-1716 (24 hr.)	(409) 935-0308 (409) 935-0678 FAX

<b>ADDITIONAL RESPONSE RESOURCES IDENTIFIED</b>				
<b>COMPANY</b>	<b>RESPONSIBILITY</b>	<b>LOCATION</b>	<b>OFFICE</b>	<b>ALTERNATE</b>
Texas City IMAS Dispatch Center	Fire / Explosion / Chemical Spill	Texas City, TX	(409) 948-2525	Network KKR-876 (Radio)
Response Management & Associates, Inc.	Spill Management Team	Spring, TX	(281) 320-9796	(281) 320-9700 FAX
Gulf Coast Wildlife Rescue	Wildlife Cleanup and Rehabilitation	Angleton, TX	(979) 849-0184	
International Bird Rescue Center	Wildlife Cleanup and Rehabilitation	Fairfield, CA	(707) 207-0380 (8 a.m.-5 p.m.)	
Tri-State Bird Rescue	Wildlife Cleanup and Rehabilitation	Newark, DE	(302) 737-9543 (9 a.m.-5 p.m.)	(800) 710-0695 PGR (800) 710-0696 PGR

### 3.1 INITIAL RESPONSE ACTIONS (Cont'd)

#### FIRST COMPANY PERSON NOTIFIED/ON SCENE

- \_\_\_\_\_ Follow the appropriate "***Specific Incident Response Checklist***" in Figure 3.1 and "***Product Specific Response Considerations***" in Figures 3.2, 3.3, and 3.4.
- \_\_\_\_\_ Notify **Facility Management** of the incident.
- \_\_\_\_\_ Utilize local emergency services as necessary (police, fire, medical).

#### FACILITY MANAGEMENT

- \_\_\_\_\_ **Evaluate the Severity**, Potential Impact, Safety Concerns, and Response Requirements based on the initial data provided by the first person on scene.
- \_\_\_\_\_ Assume the role of **Incident Commander**.
- \_\_\_\_\_ **Confirm safety** aspects at site, including need for personal protective equipment, sources of ignition, and potential need for evacuation.
- \_\_\_\_\_ Activate the **Local Response Team and primary response contractors**, as the situation demands.
- \_\_\_\_\_ Coordinate/perform **activation of additional spill response contractors**, as the situation demands (telephone reference is provided in Figure 2.5).
- \_\_\_\_\_ Perform notifications as per Figure 2.1, including Spill Management Team activation, as necessary.
- \_\_\_\_\_ Coordinate/perform **regulatory agency notification**, as the situation demands (notification procedures and telephone references are provided in Figures 2.4 and 2.5 respectively).
- \_\_\_\_\_ Proceed to spill site and **coordinate response and clean-up operations**.
- \_\_\_\_\_ Direct containment, dispersion, and/or clean-up operations in accordance with the Product Specific Response Considerations provided in Figures 3.2, 3.3, and 3.4.

#### LOCAL RESPONSE TEAM

- \_\_\_\_\_ Assigned personnel will immediately respond to a discharge from the Facility, as the situation demands.
- \_\_\_\_\_ Perform response/clean-up operations as directed or coordinated by the Incident Commander.
- \_\_\_\_\_ Assist as directed at the spill site.



**FIGURE 3.1****SPECIFIC INCIDENT RESPONSE CHECKLIST**

**Remember, Without Exception, Personnel Safety Is The First Priority. Excessive Exposure To The Vapor And Liquid Stages Of The Spilled Product Should Be Avoided.**

**INITIAL RESPONSE**

- \_\_\_\_ Take appropriate personal protective measures.
- \_\_\_\_ Call for medical assistance if an injury has occurred.
- \_\_\_\_ Restrict access to the spill site and adjacent area as the situation demands. Take any other steps necessary to minimize any threat to health and safety.
- \_\_\_\_ Verify the type of product and quantity released (Material Safety Data Sheets are retained separately at the Facility).
- \_\_\_\_ Advise personnel in the area of any potential threat and/or initiate evacuation procedures.
- \_\_\_\_ Use testing and sampling equipment to determine potential safety hazards, as the situation demands.
- \_\_\_\_ Identify/Isolate the source and minimize the loss of product.
- \_\_\_\_ Take necessary fire response actions.
- \_\_\_\_ Eliminate possible sources of ignition in the near vicinity of the spill.
- \_\_\_\_ Notify Facility Management of the incident.

**INITIAL RESPONSE**

**FIGURE 3.1****SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)****LINE BREAK OR LEAK, SPECIFIC RESPONSE**

- \_\_\_\_\_ Notify Control Room Operator of emergency.
- \_\_\_\_\_ Shut down pumping equipment.
- \_\_\_\_\_ Close upstream and downstream block valves.
- \_\_\_\_\_ Initiate Hazardous Work procedures.
- \_\_\_\_\_ Mitigate spreading of the product, as the situation demands. Potential containment strategies include:
  - Earthen dike/berm
  - Ditching
  - Spreading sorbent material over the spill
- \_\_\_\_\_ Prevent the spill from entering the waterways, sewer, etc. to the greatest extent possible.
- \_\_\_\_\_ Determine the direction and expected duration of spill movement. Refer to the maps in Section 6.0.
- \_\_\_\_\_ If located within containment area, ensure that drainage valve(s) is "closed".
- \_\_\_\_\_ Drain the line section, as the situation demands.
- \_\_\_\_\_ Make all necessary repairs.
- \_\_\_\_\_ Return the line/rack to service when repairs are complete.
- \_\_\_\_\_ Clean up spilled product to eliminate any possible environmental problems. Be alert for underground cables.
- \_\_\_\_\_ If the spill escapes the containment area, review the location of socio-economic and environmentally sensitive areas identified in Section 6.0. Determine which of these may be threatened by the spill and direct the response operation to these locations. Initiate protection and recovery actions.
- \_\_\_\_\_ Inform local operators such as utilities, telephone company, railway.
- \_\_\_\_\_ Complete follow-up and written reporting, as the situation demands.



## FIGURE 3.1

## SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)

**ABNORMAL PIPELINE OPERATIONS**

- \_\_\_\_\_ If operating design limits have been exceeded (increase or decrease pressure or flow) and no emergency condition exists, stop operations and immediately investigate the pipeline.
- \_\_\_\_\_ Verify whether a true safety problem, equipment malfunction, or operator error is present.
- \_\_\_\_\_ If the situation is due to malfunctioning equipment, can transfer operations can continue safely? If yes, then bypass the faulty equipment until the completion of the transfer and make appropriate repairs. **Note: In all cases, safety to operations, the general public, and property will govern actions taken.**
- \_\_\_\_\_ If the transfer can not continue safely, make appropriate repairs before continuing operations. **Note: Corrective action will only be done by qualified personnel to perform the type of work involved.**
- \_\_\_\_\_ Monitor affected systems until normal operations are resumed.
- \_\_\_\_\_ Inform local operators such as utilities, telephone, and/or railway.
- \_\_\_\_\_ Complete follow-up and written reporting, as the situation demands.

Note: Abnormal operations are further detailed in the Company's O&M Manual (Procedure #P-195.402(d)).

**FIGURE 3.1****SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)****STORAGE TANK LEAK, SPECIFIC RESPONSE**

- \_\_\_\_\_ Shut down all tank farm product movement operations and isolate the tank.
- \_\_\_\_\_ Initiate Hazardous Work procedures (i.e. Hot Work, Safe Work, Confined Space), as applicable.
- \_\_\_\_\_ Ensure that the containment area drainage valve(s) is "closed".
- \_\_\_\_\_ If possible, block drainage of spilled material from traveling offsite.
- \_\_\_\_\_ If near tank bottom, consider filling tank with water and maintain water bottom to suspend the discharge.
- \_\_\_\_\_ Stop all traffic in hazardous area (inside and outside of property boundaries), as the situation demands.
- \_\_\_\_\_ Remove product from containment area (at a sump or in a low area) with an explosion proof pump, oil skimmer, and/or vacuum truck w/ skimmer attachments.
- \_\_\_\_\_ Determine the direction and expected duration of spill movement. Refer to the maps in Section 6.0.
- \_\_\_\_\_ Empty tank as soon as possible.
- \_\_\_\_\_ Make all necessary repairs. Return the line/tank to service when repairs are complete and tested.
- \_\_\_\_\_ Clean up product spill to eliminate any possible environmental problems. Be alert for underground cables.
- \_\_\_\_\_ Stockpile waste for eventual disposal.
- \_\_\_\_\_ If the spill escapes the containment area, review the location of socio-economic and environmentally sensitive areas identified in Section 6.0 and ACP. Determine which of these may be threatened by the spill and direct the response to these locations. Initiate protection and recovery actions.
- \_\_\_\_\_ Inform local operators such as utilities, telephone company, railway.
- \_\_\_\_\_ Complete follow-up and written reporting, as the situation demands.

**LEAKS / SPILLS**

**FIGURE 3.1****SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)****LEAK OR SPILL AT THE TRUCK RACK, SPECIFIC RESPONSE**

- \_\_\_\_\_ Evacuate personnel from the truck rack area, as the situation demands.
- \_\_\_\_\_ Shut down all loading operations, pump motors and loading valves.
- \_\_\_\_\_ Guard against all source of ignition.
- \_\_\_\_\_ Stop all traffic from entering rack or hazardous area.
- \_\_\_\_\_ If a line leak, close off riser valves and/or tank valves.
- \_\_\_\_\_ Clean area as directed by Facility Management.
- \_\_\_\_\_ Resume truck loading operations as directed by Facility Management.

**LEAKS / SPILLS**

**FIGURE 3.1****SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)****MARINE OPERATION SPILLS/LEAKS, SPECIFIC RESPONSE**

- \_\_\_\_\_ Shut down all engines/motors/transfer operations by immediate notification to the vessel by radio or other means.
- \_\_\_\_\_ Close all line and ship manifold discharge valves.
- \_\_\_\_\_ Notify Facility personnel (i.e. Operators, Supervisor, Operations Manager, (and General Manager).
- \_\_\_\_\_ The Operator on duty shall turn on the amber rotating light at the dock indicating to passing traffic that there has been a spill.
- \_\_\_\_\_ If hose rupture, drain line into barge, drums, buckets, and blank line to stop spill into water.
- \_\_\_\_\_ Initiate Hazardous Work procedures, as applicable.
- \_\_\_\_\_ If other than hose rupture, determine source of leak and stop.
- \_\_\_\_\_ Prevent discharge from entering the water if at all possible by:
  - Pumping from sump or deck drainage system into drums, tanks, containment area, or other storage facility.
  - Directing the flow into a containment or collection area away from the water, if feasible.
  - Placing containment boom or sorbent material around area (provided that a safe operating environment exists).
- \_\_\_\_\_ If the product enters the water and a safe operating environment exists, try to contain by:
  - Deploying spill response equipment (facility and/or contract) to prevent/mitigate spill impact (spreading of spill).
  - Attempting to divert/contain the spill:
    - In quiet area or low current areas of the water.
    - Away from strong winds or in areas that could be affected by change in wind direction.
    - Away from areas of hazard to public, property improvements, marinas, water intakes, etc.
- \_\_\_\_\_ Make all necessary repairs.
- \_\_\_\_\_ Return the line/vessel to service when repairs are complete (USCG must approve).

**LEAKS / SPILLS**

**FIGURE 3.1****SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)****MARINE OPERATION SPILLS/LEAKS (Cont'd)**

- \_\_\_\_\_ Clean up spilled product to eliminate any possible environmental problems. Be alert for underground cables.
- \_\_\_\_\_ If the spill escapes the containment area, review the location of socio-economic and environmentally sensitive areas identified in Section 6.0 and the ACP. Determine which of these may be threatened by the spill and direct the response operation to these locations. Initiate protection and recovery actions.
- \_\_\_\_\_ Request local authorities (USCG, Marine Patrol, Harbor Police, etc.) to establish traffic control in the area, as the situation demands.
- \_\_\_\_\_ Inform local operators such as utilities, telephone company, railway.
- \_\_\_\_\_ Complete follow-up and written reporting, as the situation demands.

**VESSEL BREAKAWAYS**

- \_\_\_\_\_ Terminate transfer operations and close all transfer valves.
- \_\_\_\_\_ Notify tug/owner.
- \_\_\_\_\_ Deploy tug (in the event it is on standby away from the tow) to retrieve the barge(s) and resecure mooring to the dock.

**LEAKS / SPILLS**

**FIGURE 3.1****SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)****EXPLOSIONS AND/OR FIRE, SPECIFIC RESPONSE****INDIVIDUAL DISCOVERING THE FIRE - (All Employees)**

- \_\_\_\_\_ Call the Fire Department (911).
- \_\_\_\_\_ Sound the Facility fire alarm.
- \_\_\_\_\_ Push the red emergency shutdown switch.
- \_\_\_\_\_ Notify Facility Management.
- \_\_\_\_\_ Return to the scene of the fire and, if practical and safe, attempt to extinguish same with the nearest fire equipment available.
- \_\_\_\_\_ In the event the fire is too large for an individual to fight alone, the individual sounding the alarm or making the phone call should stand by at a safe distance to direct the fire department to the scene of the fire and keep personnel and vehicles from entering the danger area.
- \_\_\_\_\_ Alert all Facility areas of the exact location and extent of the fire.
- \_\_\_\_\_ Instruct all drivers to discontinue loading, disconnect loading arms, and tell all drivers present to stand by their trucks and wait for instructions to remove same to safe area.
- \_\_\_\_\_ Shut off pumps.
- \_\_\_\_\_ Close loading rack valves and stand by truck loading rack for instructions.
- \_\_\_\_\_ In the event that a vessel is tied up at the dock, instruct the Person-in-Charge on duty to stand-by to shut off all valves at the dock.
- \_\_\_\_\_ If product is being received from pipelines, notify the appropriate pipeline personnel of the fire and request that the pipeline be shut down. The tank which is receiving product from the pipeline must not be closed until assurance is received that the pipeline is down, unless that tank is involved in the fire.
- \_\_\_\_\_ After confirmation has been received that pipelines have been shut down, close the pipeline header valves.

**FIRE / EXPLOSIONS**

**FIGURE 3.1****SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)****EXPLOSIONS AND/OR FIRE (Cont'd)**

- \_\_\_\_\_ Drivers with trucks in the Facility, stand by truck for instructions on where to move vehicles. Others report to the office and await further instructions.
- \_\_\_\_\_ Shut off power at the electrical panel to any vapor recovery units.
- \_\_\_\_\_ Press the emergency shut off for any vapor recovery units.
- \_\_\_\_\_ Close valves for the tanks in the tank farm.

**INDIVIDUAL DISCOVERING THE FIRE (in the absence of Supervision)**

- \_\_\_\_\_ In the event of fire and the absence of a member of supervision, any Company employee on duty is designated as the individual in charge.
- \_\_\_\_\_ The individual discovering the fire will adhere to the instructions issued for the normal operation.
- \_\_\_\_\_ Ensure that the fire department has been notified.
- \_\_\_\_\_ Alert all Facility areas of the exact location and extent of the fire.
- \_\_\_\_\_ Ensure supervision is notified by telephone (refer to Figure 2.2).
- \_\_\_\_\_ Shut down the pipeline if running and proceed to close tank valves.
- \_\_\_\_\_ Prior to the arrival of a member of supervision, the individual will remain in charge and will direct the fire department to the scene of the fire.

**All personnel are reminded that outsiders other than emergency services will not be allowed in the Facility during the time of an emergency, and that no statements will be issued to the media or other interested parties except by designated Facility Management. Be courteous with media representatives and direct them to the designated spokesman.**

**FIRE / EXPLOSIONS**

**FIGURE 3.1****SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)****VAPOR CLOUD (from a massive spill, line rupture, etc.), SPECIFIC RESPONSE**

- \_\_\_\_\_ The person who discovers the vapor cloud will sound the alarm and notify the supervisor on duty and vacate the area.
- \_\_\_\_\_ **Remember: the only proper action in the presence of a vapor cloud is to get away from it. Do not shut off electrical equipment.**
- \_\_\_\_\_ All personnel will report to the evacuation muster point for roll call and further instructions.
- \_\_\_\_\_ After all personnel have been accounted for, the Facility Management, the Facility Supervisor or a Facility Operator will initiate the following actions as deemed necessary:
  1. Shut down pipeline.
  2. Evacuation of adjacent property.
  3. Only the fire department will be permitted to enter the Facility.
- \_\_\_\_\_ Contact the appropriate agencies and potentially affected neighbors (refer to Figure 2.5).

**VAPOR CLOUD**



## FIGURE 3.1

### SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)

(b) (7)(F)



## FIGURE 3.1

### SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)

(b) (7)(F)



**FIGURE 3.1****SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)****NATURAL DISASTER (Hurricane/Tornado/Severe Storms), SPECIFIC RESPONSE**

Although many disasters cannot be prevented or predicted, preparation can significantly reduce losses. In the event of a severe weather condition or a natural disaster, the Facility Manager or a Facility Operator will be the emergency coordinator.

- **Be Aware of Changing Weather Conditions**
  1. Tornado watch - conditions are right for the formation of a tornado.
  2. Hurricane watch - there is the threat of a hurricane.
  3. Tornado warning - a tornado has been sighted but is not in the area at this time.
  4. Hurricane warning - a hurricane is expected within 24 hours.
  5. Tornado alert - a tornado has been sighted in the immediate area - take cover immediately.
- **If Severe Weather Conditions Threaten**
  1. Sound fire alarm.
  2. Alert Facility personnel of condition.
  3. If time permits, all personnel should assemble at an inside room in the Facility for shelter.
  4. If time does not permit, seek shelter in low level area away from glass.
  5. Make certain Facility personnel are aware of the condition.
  6. Stay in shelter until "**all clear**" has been issued.
- **Immediately After the Storm**
  1. Account for all personnel.
  2. Survey for damages to Facility property.
  3. Initiate team for any repairs if needed (i.e. high tank alarms, lighting, etc.).
  4. Refer to this Plan for additional response guidance regarding fires, spills, etc., as needed.

**FIGURE 3.1****SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)****MEDICAL EMERGENCY, SPECIFIC RESPONSE**

- \_\_\_\_\_ Apply appropriate first aid for both injury and shock, exercising care not to cause further injury.
- \_\_\_\_\_ If victim is unconscious and not breathing, immediately apply artificial respiration (if trained in CPR) and continue without interruption until natural breathing is restored or relieved by another trained CPR personnel or other qualified medical personnel.
- \_\_\_\_\_ Call for ambulance or other medical evacuation resources, if appropriate.
- \_\_\_\_\_ Notify hospital of patient arrival and extent of injury.
- \_\_\_\_\_ Notify victim's immediate family.
- \_\_\_\_\_ Complete follow-up and written reporting, as the situation demands.

**MEDICAL EMERGENCY**

FIGURE 3.2

FLAMMABLE LIQUIDS (Non-Polar/Water-Immiscible)				
The following information is intended to provide the initial responder(s) with data that may be useful in making quick decisions and executing prompt response actions. <u>The information is intended for guideline purposes only.</u>				
PRODUCTS	Diesel Fuel	Gasoline	Naphtha	Gasoline Additives
HAZARD IDENTIFICATION / RECOGNITION				
GUIDE NO. 128	<b>DANGERS</b> <ul style="list-style-type: none"><li>● HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames.</li><li>● Vapors may form explosive mixtures with air.</li><li>● Vapors may travel to source of ignition and flash back.</li><li>● Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks).</li><li>● Vapor explosion hazard indoors, outdoors or in sewers.</li><li>● Those substances designated with a "P" may polymerize explosively when heated or involved in a fire.</li><li>● Runoff to sewer may create fire or explosion hazard.</li><li>● Containers may explode when heated.</li><li>● Many liquids are lighter than water.</li><li>● Substance may be transported hot.</li></ul>			
	<b>HEALTH</b> <ul style="list-style-type: none"><li>● Move victim to fresh air. Call 911 or emergency medical service.</li><li>● Apply artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult.</li><li>● Remove and isolate contaminated clothing and shoes.</li><li>● In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.</li><li>● Wash skin with soap and water.</li><li>● Keep victim warm and quiet.</li><li>● Ensure that medical personnel are aware of the material(s) involved, and take precautions.</li></ul>			
PUBLIC SAFETY				
<ul style="list-style-type: none"><li>● Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions.</li><li>● Keep unauthorized personnel away.</li><li>● Stay upwind.</li><li>● Keep out of low areas.</li><li>● Ventilate closed spaces before entering.</li></ul>				
EVACUATION	<b>Large Spill</b> <ul style="list-style-type: none"><li>● Consider initial downwind evacuation for at least 300 meters (1,000 feet).</li></ul>			
	<b>Fire</b> <ul style="list-style-type: none"><li>● If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.</li></ul>			
Information provided by the Emergency Response Guidebook 2000.				

FIGURE 3.3

<b>FLAMMABLE LIQUIDS</b> <b>(Non-Polar/Water-Immiscible)</b>	
The following information is intended to provide the initial responder(s) with data that may be useful in making quick decisions and executing prompt response actions. <u>The information is intended for guideline purposes only.</u>	
<b>PRODUCTS</b>	<b>Benzene</b>
HAZARD IDENTIFICATION / RECOGNITION	
<b>GUIDE NO.</b> <b>130</b>	<b>DANGERS</b> <ul style="list-style-type: none"> <li>● HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames.</li> <li>● Vapors may form explosive mixtures with air.</li> <li>● Vapors may travel to source of ignition and flash back.</li> <li>● Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks).</li> <li>● Vapor explosion hazard indoors, outdoors or in sewers.</li> <li>● Those substances designated with a "P" may polymerize explosively when heated or involved in a fire.</li> <li>● Runoff to sewer may create fire or explosion hazard.</li> <li>● Containers may explode when heated.</li> <li>● Many liquids are lighter than water.</li> </ul>
HEALTH	
<ul style="list-style-type: none"> <li>● May cause toxic effects if inhaled or absorbed through skin.</li> <li>● Inhalation or contact with material may irritate or burn skin and eyes.</li> <li>● Fire will produce irritating, corrosive and/or toxic gases.</li> <li>● Vapors may cause dizziness or suffocation.</li> <li>● Runoff from fire control or dilution water may cause pollution.</li> </ul>	
PUBLIC SAFETY	
<ul style="list-style-type: none"> <li>● Isolate spill or leak area immediately for at least 50 meters (150 feet) in all directions.</li> <li>● Keep unauthorized personnel away.</li> <li>● Stay upwind.</li> <li>● Keep out of low areas.</li> <li>● Ventilate closed spaces before entering.</li> </ul>	
<b>EVACUATION</b>	<b>Large Spill</b> <ul style="list-style-type: none"> <li>● Consider initial downwind evacuation for at least 300 meters (1,000 feet).</li> </ul> <b>Fire</b> <ul style="list-style-type: none"> <li>● If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.</li> </ul>
Information provided by the Emergency Response Guidebook 2004.	

## **EVACUATION PLAN**

---

In case of an emergency within the Facility that would necessitate evacuation, some or all of the following steps are taken, depending on type of emergency and circumstances:

### ***Initial Response***

- Sound an alarm or give verbal alarm.
- Call 911.
- Shut down loading and pipeline receiving operations.
- Evacuate trucks from facility (provided that a safe operating environment exists).
- Divert incoming trucks to a safe distance away.
- Evacuate all personnel to staging area.

### ***Internal Alarms***

- The Facility has a plant radio system and a Audio Alarm system to notify employees for required evacuations and preferred routes.

### ***Evacuation Diagram***

- An evacuation diagram is posted in the office and on the following page, showing evacuation routes from different areas of the Facility.

### ***Muster Points and Roll Call***

- The main exits are the five (5) gates:
- The Primary Muster Point is Gate B Parking Area – Security Guard Station, southeast corner of the terminal, main entrance to the terminal by the Parking Lot by Main Office. If an evacuation is required, a roll call would be taken at the Muster Point area to account for all personnel. It is vital to the safety of emergency personnel to be able to quickly determine whether someone has been left at the emergency site.
- The Secondary Muster Point is Gate A – North side Pipeline Junction area, near B301, northwest corner of the terminal on the north side with egress on Seawall Rd.
- If the preferred evacuation procedure is to shelter in place all personnel will be directed to report to the Main Office. Once all personnel are accounted for the office windows and doors will be sealed and any outside air source eliminated. (i.e. HVAC make up air).
- If conditions permit, the initial command center will be established in the Main Office.

### ***External Notification***

- All emergency response units (fire, police, ambulance) Police can be reached by calling 911. The primary arrival route of emergency response personnel and response equipment is Loop 197 South (from North or South) based on the wind direction.

## **EVACUATION PLAN (Cont'd)**

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**Location of Stored Materials and Hazardous Imposed by Stored Materials:** The Facility stores a variety of hazardous materials (petroleum products) in the bulk storage tanks that comprise the majority of the Facility. All personnel should be aware of the contents of the tanks and the hazards they may pose during an incident (including fire, suffocating of irritating vapors and chemical or thermal burns). The person directing the evacuation should consider these hazards, and those that may arise as a result of the incident, when choosing the safest evacuation route.

**Spill Flow Direction:** The predicted overall direction of a spill from each of the facilities is indicated on the Drainage Diagram in Appendix H. During an incident the person directing the evacuation will determine the actual direction of the spill and direct the use of alternate evacuation route if necessary.

**Prevailing Wind Speed and Direction at the Facility:** The prevailing winds at the facility are normally from the south or southeast at seven to ten miles per hour. However, changing in weather condition require that the person directing any evacuation be cognizant of the wind direction and speed. A shift in the wind direction may expose personnel to smoke or fumes. An increase in wind speed may accelerate and spread a fire.

**Water Currents Tides, or Wave Conditions:** The water conditions at the docks should not effect the evacuation required by any incident at the non-transportation related portion of the facility.

**Arrival Routes of Response Personnel and Equipment:** Response equipment will arrive from Dock Road. Response contractors are instructed to report to the Qualified Individual or designated field operation personnel for instruction on deployment.

**Alternate Evacuation Routes:** Alternate routes are discussed above.

**Transportation Route of Injured person to Nearest Hospital:** The nearest hospital is Mainland Medical Center located at 6801 Emmett F. Lowry Exwy. approximately 9 miles away. Local EMS Services or a commercial ambulance service will transport injured personnel to the hospital.

**Directions to Mainland  
Medical Center:**

6801 Emmett  
F. Lowry Exwy.

Take Texas City Port Blvd./TX-197 Loop South.  
Turn right on HWY 3 going North.



## **EVACUATION PLAN (Cont'd)**

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**Location of Alarms/Notifying System:** The Facility does not have an evacuation alarm system. All employees will be notified of required evacuations and preferred routes via hand held radios issued to all operators.

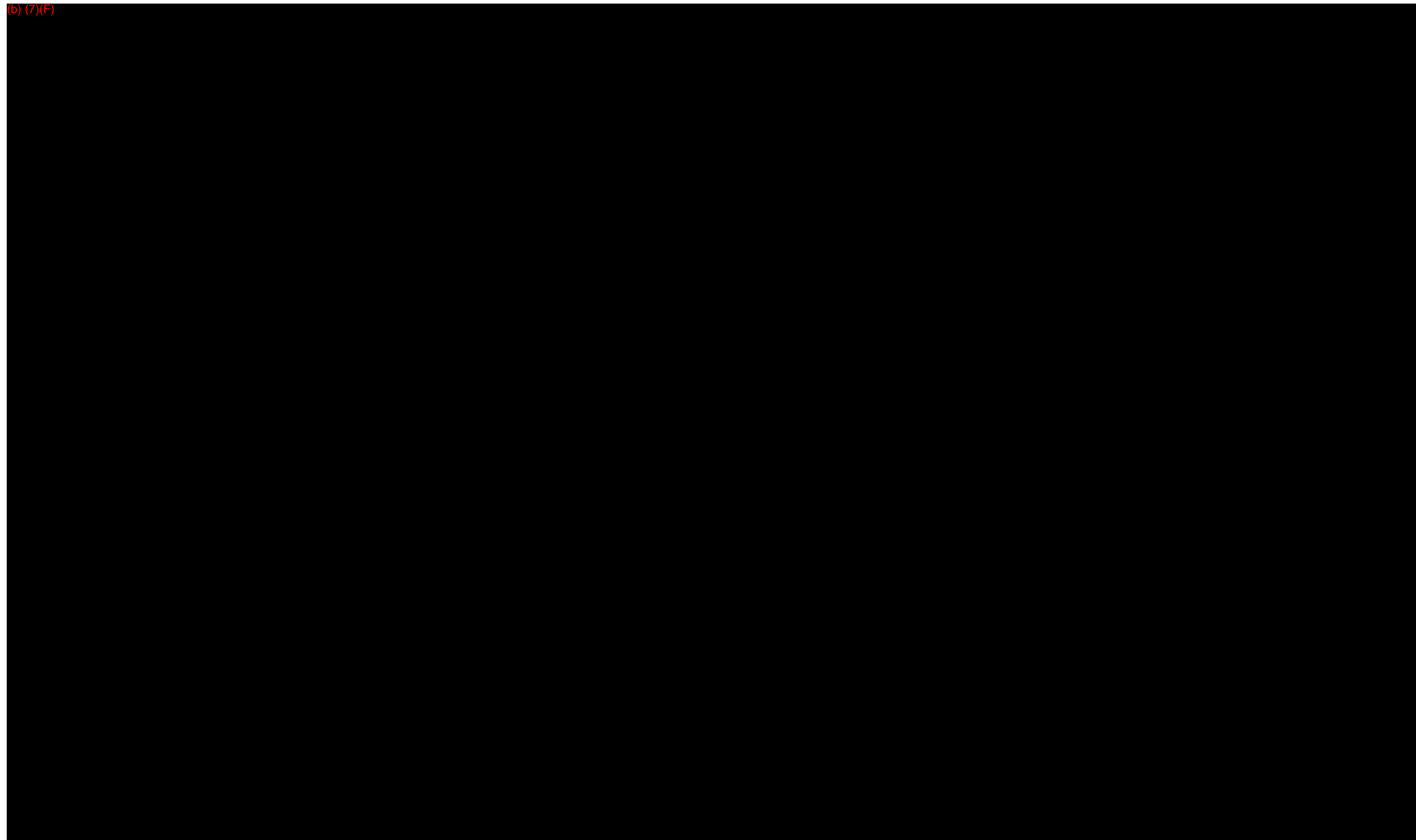
**Mitigation Control Center:** The initial mitigation control center will be established at the Main Office.

**Shelter in Place:** If the preferred evacuation procedure is to shelter in place all personnel will be directed to report to the office buildings of the Facility at which they are located. Once all personnel are accounted for the office windows and doors will be sealed and any outside air source eliminated. (i.e. HVAC make up air)

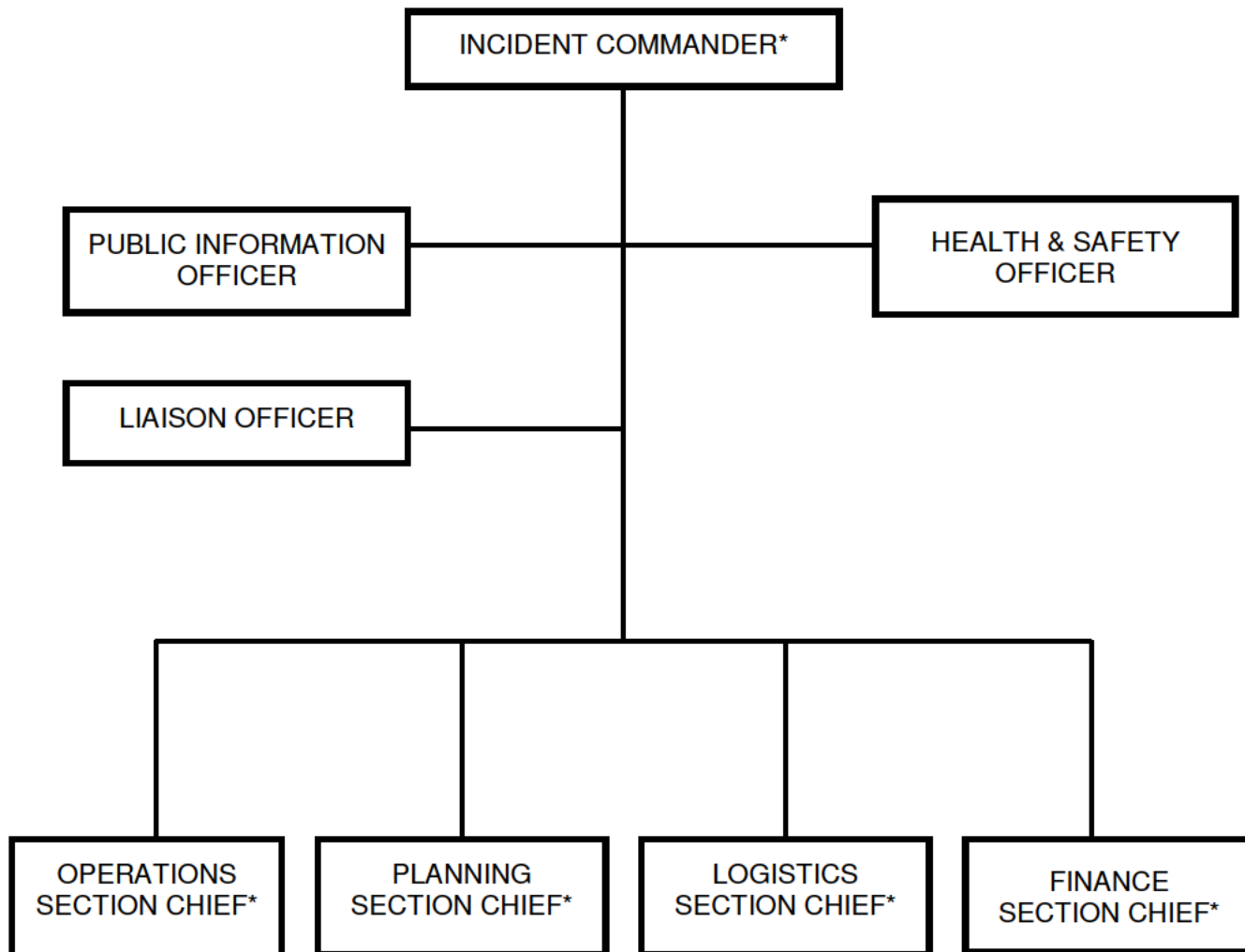
**Evacuation of the Surrounding Community:** If the Qualified Individual or Manager in Charge determines that the incident warrants evacuation of the surrounding community, he/she will contact the Fire Department or Police to coordinate the recommended evacuation. All community evacuations will be ordered and directed by the appropriate public emergency response officials from the affected jurisdictions. Oiltanking will cooperate fully with all requests from these agencies.

## EVACUATION DIAGRAM

(b) (7)(F)



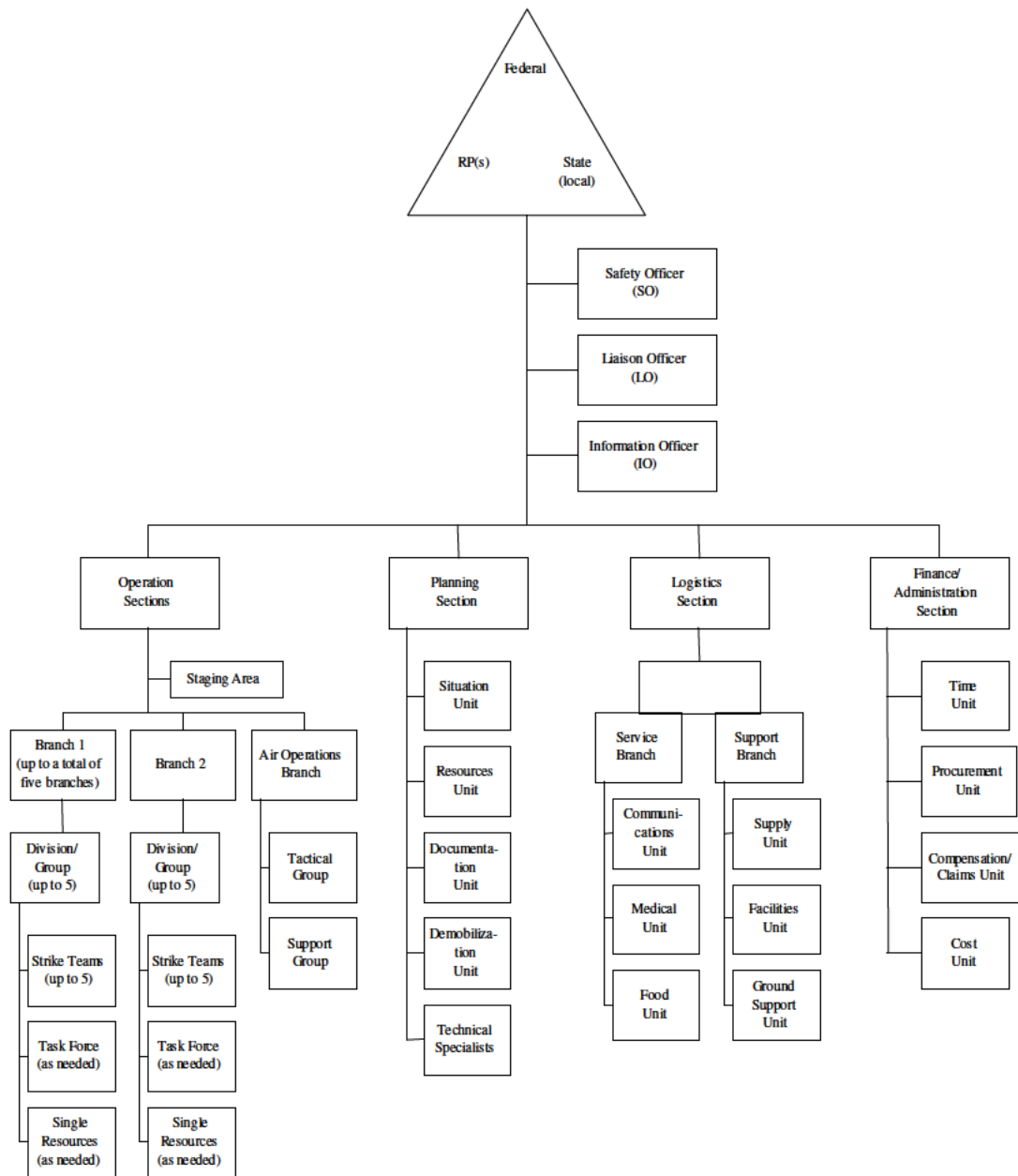
**FIGURE 4.1**  
**LOCAL RESPONSE TEAM**  
(For Initial Response and Class I & II Incidents)



\* NOTE: Spill Management Team (SMT) personnel can assume any of these positions as necessary.

## FIGURE 4.2 SPILL MANAGEMENT TEAM

(For incidents beyond the response capability of the Local Response Team)



**Corporate Support and RMA to provide staff in a manner commensurate with required spill cleanup operations.**

**FIGURE 5.1****EXTERNAL RESPONSE RESOURCES**

Houston Captain of the Port (COTP) Zone

<b>USCG Classified Oil Spill Removal Organization (OSRO)</b>							
OSRO Name	Contract Number	Environment Type	Facility Classification Level				High Volume Port
			MM	W1	W2	W3	
T&T Marine Salvage Inc. Response Time - Within 1 Hr.	(App. C)	River/Canal	X	X	X	X	Yes
		Inland	X	X			
		Open Ocean					
		Offshore					
		Nearshore					
Garner Environmental Services, Inc. Response Time - Within 1 Hr.	T-531-B (App. C)	River/Canal	X	X	X	X	Yes
		Inland	X	X	X	X	
		Open Ocean			X	X	
		Offshore			X	X	
		Nearshore			X	X	

**Note:** USCG Classification is provided in Appendix C and telephone numbers are provided in Figure 2.5.

**FIGURE 5.2  
FACILITY RESPONSE EQUIPMENT**

<b>Date of Last Update:</b>						
<b>Inspected By:</b>						
<b>SKIMMERS/PUMPS</b>						
Type/Model/Year	Operational Status	Quantity	Capacity gal./min.	Daily Effective Recovery Rate	Storage Location(s)	Date Fuel Last Changed
	<b>NONE</b>					
<b>BOOM</b>						
Type/Model/Year	Operational Status	Number	Size (Length)	Containment Area	Storage Location(s)	
	<b>NONE</b>					
<b>CHEMICAL DISPERSANTS</b>						
Type	Operational Status	Amt.	Date Purchased	Treatment Capacity	Storage Location(s)	Date Fuel Last Changed
	<b>NONE</b>					
<b>DISPERSANT DISPENSING EQUIPMENT</b>						
Type/Year	Operational Status	Capacity	Storage Location(s)		Response Time	
	<b>NONE</b>					

**FIGURE 5.2 (Cont'd)  
FACILITY RESPONSE EQUIPMENT**

<b>Date of Last Update:</b>				
<b>Inspected By:</b>				
<b>SORBENTS</b>				
<b>Type/Year Purchased</b>	<b>Operational Status</b>	<b>Amount</b>	<b>Absorption Capacity gal.</b>	<b>Storage Location(s)</b>
	<b>NONE</b>			
<b>HAND TOOLS</b>				
<b>Type/Year</b>	<b>Operational Status</b>	<b>Quantity</b>	<b>Storage Location(s)</b>	
Shovels/Racks	Ready	4	Maintenance Shops	
Wrenches	Ready	20	Maintenance Shops	
<b>COMMUNICATION EQUIPMENT</b>				
<b>Type/Year</b>	<b>Operational Status</b>	<b>Quantity</b>	<b>Storage Location(s)/Number</b>	
Radio/Varies	Ready	50	On-Person	
Marine Radio	Ready	2	Operations Control Room	
<b>FIRE FIGHTING AND PERSONNEL PROTECTIVE EQUIPMENT</b>				
<b>Type/Year</b>	<b>Operational Status</b>	<b>Quantity</b>	<b>Storage Location(s)</b>	
	<b>NONE</b>			
<b>OTHER EQUIPMENT</b>				
<b>Type/Year</b>	<b>Operational Status</b>	<b>Quantity</b>	<b>Storage Location(s)</b>	
	<b>NONE</b>			

\* Operating Frequency = 463.2125 (MHz), 462.3875 (MHz), 462.4375 (MHz), 463.35 (MHz)



**FIGURE 5.3**

<b>EXAMPLE RESPONSE EQUIPMENT TESTING/DEPLOYMENT LOG</b>
Date of Last Update: _____
Last Inspection or Response Equipment Test Date: *
Inspection Frequency:
Last Deployment Drill Date:
Deployment Frequency:
OSRO Certification:
* Cellular phones are used on a daily basis. Fire extinguishers are tested by Fire Marshall requirements and are documented accordingly.

## HAZARD IDENTIFICATION TANKS

(Tank = any container that stores oil)

Container I.D.	Substance Stored (Oil & Haz. Substance)	Average Quantity Stored (Gallons)	Maximum Capacity (Gallons)	Container Type (i.e. floating roof, fixed roof, etc.)	Year Built	Potential Failure (Leak/Rupture/Overflow)	Rate of Flow	Failure / Cause (Record cause and date of any Tank failure which has resulted in a loss of tank contents)	Direction of Flow	Secondary Containment Capacity (Volume - Gallons) (Construction Material) (Drainage Type)
<b>South Tank Farm</b>										
E1	Gasoline/Fuel Oil/Refined Petroleum Products	(b) (7)(F)		IFR	2006	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	(b) (7)(F)
E2	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	2006	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
14	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1971	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
15	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1971	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
16	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1971	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
17	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1971	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
30	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	2008	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
31	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	2008	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
32	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	2008	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
33	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	2008	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3770	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1967	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
BW5	Oil Service			IFR	1968	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
BW6	Oil Service			IFR	1968	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
BW10	Oil Service			IFR	1966	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
BW11	Oil Service			IFR	1966	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
BW12	Oil Service			IFR	1966	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
213	Oil Service			IFR	1960	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
21	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1964	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
22	Napthas			EFR	1975	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
23	Napthas			IFR	1976	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
24	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	2006	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
25	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	2006	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
26	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1963	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	

Texas City Terminal

ERAP-42

Integrated Contingency Plan  
September 2010

## HAZARD IDENTIFICATION TANKS

(Tank = any container that stores oil)

Container I.D.	Substance Stored (Oil & Haz. Substance)	Average Quantity Stored (Gallons)	Maximum Capacity (Gallons)	Container Type (i.e. floating roof, fixed roof, etc.)	Year Built	Potential Failure (Leak/Rupture / Overflow)	Rate of Flow	Failure / Cause (Record cause and date of any Tank failure which has resulted in a loss of tank contents)	Direction of Flow	Secondary Containment Capacity (Volume - Gallons) (Construction Material) (Drainage Type)
South Tank Farm (Cont'd)										
27	Gasoline/Fuel Oil/Refined Petroleum Products	(b) (7)(F)		IFR	2006	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	(b) (7)(F)
28	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	2006	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
29	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	2006	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
960	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1954	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
18	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1964	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3724	Gasoline/Fuel Oil/Refined Petroleum Products			Fixed	1964	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3725	Gasoline/Fuel Oil/Refined Petroleum Products			Fixed	1964	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3726	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1964	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3727	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1964	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3728	Gasoline/Fuel Oil/Refined Petroleum Products			Fixed	1964	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3729	Gasoline/Fuel Oil/Refined Petroleum Products			Fixed	1964	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3744	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1965	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3745	Gasoline/Fuel Oil/Refined Petroleum Products			Fixed	1964	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3746	Gasoline/Fuel Oil/Refined Petroleum Products			Fixed	1975	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3747	Gasoline/Fuel Oil/Refined Petroleum Products			Fixed	1965	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3752	Gasoline/Fuel Oil/Refined Petroleum Products			Fixed	1964	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3760	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1965	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3761	Gasoline/Fuel Oil/Refined Petroleum Products			Fixed	1972	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3762	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1972	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3763	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1966	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	

Texas City Terminal

ERAP-43

Integrated Contingency Plan  
September 2010

## HAZARD IDENTIFICATION TANKS

(Tank = any container that stores oil)

Container I.D.	Substance Stored (Oil & Haz. Substance)	Average Quantity Stored (Gallons)	Maximum Capacity (Gallons)	Container Type (i.e. floating roof, fixed roof, etc.)	Year Built	Potential Failure (Leak/Rupture/Overflow)	Rate of Flow	Failure / Cause (Record cause and date of any Tank failure which has resulted in a loss of tank contents)	Direction of Flow	Secondary Containment Capacity (Volume - Gallons) (Construction Material) (Drainage Type)
South Tank Farm (Cont'd)										
3764	Gasoline/Fuel Oil/Refined Petroleum Products	(b) (7)(F)		Fixed	1966	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	(b) (7)(F)
3765	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1967	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3766	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1975	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3767	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1975	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3768	Gasoline/Fuel Oil/Refined Petroleum Products			Fixed	1974	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3730	Gasoline/Fuel Oil/Refined Petroleum Products			Fixed	1963	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3773	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1976	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3775	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1976	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3776	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1976	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3777	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1975	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3741	Gasoline/Fuel Oil/Refined Petroleum Products			Fixed	1963	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3734	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1963	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3736	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1963	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
D-66	Diesel Fuel			Horizontal	Unk	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
D-67	Diesel Fuel			Horizontal	Unk	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
PAT 3	Oily Water			Fixed	Unk	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
Fire Water Pump #4	Diesel			Fixed	1972	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
Fire Water Pump #66 Dock	Diesel			Fixed	1972	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
Fire Water Pump #67 Dock	Diesel			Fixed	1972	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
	Total Oil Storage Capacity									

Texas City Terminal

ERAP-45

Integrated Contingency Plan  
September 2010

## HAZARD IDENTIFICATION TANKS

(Tank = any container that stores oil)

Container I.D.	Substance Stored (Oil & Haz. Substance)	Average Quantity Stored (Gallons)	Maximum Capacity (Gallons)	Container Type (i.e. floating roof, fixed roof, etc.)	Year Built	Potential Failure (Leak/Rupture/Overflow)	Rate of Flow	Failure / Cause (Record cause and date of any Tank failure which has resulted in a loss of tank contents)	Direction of Flow	Secondary Containment Capacity (Volume - Gallons) (Construction Material) (Drainage Type)
Mobile Storage										
L-Con Construction (The Hill)	Diesel		(b) (7)(F)	Mobile	Unk	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	na	*	(b) (7)(F)
L-Con Construction (The Hill)	Gasoline			Mobile	Unk	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	na	*	
L-Con Construction (flat bed trailer) (The Hill)	Diesel			Mobile	Unk	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	na	*	
L-Con Construction (Skid) (The Hill)	Diesel			Mobile	Unk	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	na	*	
Anchor Paint Contractor (Skid) (The Hill)	Diesel			Mobile	Unk	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	na	*	
Oiltanking new maintenance area	Gas			Mobile	2008	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	na	*	
Oiltanking new maintenance area	Diesel			Mobile	2008	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	na	*	
Oiltanking Locomotive Diesel (Rack 7 Area)	Diesel			Mobile	2008	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	na	*	
			Mobile Storage Areas							
Maintenance Shop	Various Petroleum Products			Drum (3-ave.)	Varies	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	na	*	
Bldg. 331	Used Oil			Drum (3-ave.)	Varies	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	na	*	



Texas City Terminal

ERAP-46

Integrated Contingency Plan  
May 2009

POTENTIAL SPILL SOURCES AND CONTAINER IDENTIFICATION (Any container that stores oil)											
Equipment I.D.	Substation / Location	Substance Stored (Oil & Haz. Substance)	Average Quantity Stored (Gallons)	Maximum Capacity (Gallons)	Equipment Type (i.e. transformer, oil-filled equipment, etc.)	Year Built	Potential Failure	Rate of Flow	Failure / Cause (Record cause and date of any Tank failure which has resulted in a loss of tank contents)	Direction of Flow	Secondary Containment Capacity
TRANSFORMERS											
Westinghouse	M/T	Univolt Oil	(b) (7)(F)		Transformer	Unk.	N/A	Ground	N/A	Drainage Diagram	----
Westinghouse	M/T	Univolt Oil			Transformer	Unk.	N/A	Ground	N/A		----
Westinghouse	M/T	Univolt Oil			Transformer	Unk.	N/A	Ground	N/A		----
Westinghouse	M/T	Univolt Oil			Transformer	Unk.	N/A	Process Sewer	N/A		----
Westinghouse	M/T	Univolt Oil			Transformer	Unk.	N/A	Ground	N/A		----
Ferranti	M/T	Univolt Oil			Transformer	Unk.	N/A	Ground	N/A		----
Westinghouse	M/T	Univolt Oil			Transformer	Unk.	N/A	Ground	N/A		----
Westinghouse	M/T	Univolt Oil			Transformer	Unk.	N/A	Dike	N/A		(b) (7)(F)
Niagara	M/T	Univolt Oil			Transformer	Unk.	N/A	Ground	N/A		----
Hevi Duty	M/T	Univolt Oil			Transformer	Unk.	N/A	Dike	N/A		----
Westinghouse	M/T	Univolt Oil			Transformer	Unk.	N/A	Ground	N/A		----
Standard	M/T	Univolt Oil			Transformer	Unk.	N/A	Ground	N/A		----
Vantran	M/T	Univolt Oil			Transformer	Unk.	N/A	Ground	N/A		----
Delta Star	M/T	Univolt Oil			Transformer	Unk.	N/A	Ground	N/A		----
Delta Star	M/T	Univolt Oil			Transformer	Unk.	N/A	Process Sewer	N/A		----
Esco	M/T	Univolt Oil			Transformer	Unk.	N/A	Process Sewer	N/A		----
Westinghouse	M/T	Univolt Oil			Transformer	Unk.	N/A	Process Sewer	N/A		----
Westinghouse	M/T	Univolt Oil			Transformer	Unk.	N/A	Process Sewer	N/A		----
Westinghouse	M/T	Univolt Oil			Transformer	Unk.	N/A	Process Sewer	N/A		----
Westinghouse	M/T	Univolt Oil			Transformer	Unk.	N/A	Process Sewer	N/A		----

HAZARD IDENTIFICATION SURFACE IMPOUNDMENTS (SI) (Surface Impoundment = natural topographic depression, man-made excavation, or diked area)						
SI Number	Substance Stored	Quantity Stored (Gallons)	Maximum Capacity (Gallons)	Surface Area	Year Built	Failure / Cause (Record cause and date of any IS failure which has resulted in the loss of IS contents)
		There are no surface impoundments used for product storage at this Facility				

HAZARD IDENTIFICATION TANKS UNDERGROUND TANKS							
Tank Number	Substance Stored (Oil & Haz. Substance)	Quantity Stored (Gallons)	Maximum Capacity (Gallons)	Tank Type (ie. floating roof, fixed roof, etc.)	Year Built	Failure / Cause (Record cause and date of any Tank failure which has resulted in the loss of IS contents)	Containment Capacity (Gallons)
		There are no underground storage tanks at this Facility					

**FIGURE 1.2**  
**FACILITY DIAGRAM**



(b) (7)(F)



# INTEGRATED CONTINGENCY PLAN

## OILTANKING TEXAS CITY, L.P.

### Texas City Terminal

This Plan satisfies the following regulations:

- U.S. EPA 40 CFR Part 112 (OPA 90)
- U.S. EPA 40 CFR Part 264, 265, 279 (RCRA Contingency Plan)
- USCG 33 CFR Part 154
- DOT PHMSA 49 CFR Part 194
- OSHA 29 CFR 1910.38(a) (Emergency Action Plan)
- OSHA 29 CFR 1910.120 (HAZWOPER)
- 31 TAC 19 (GLO Oil Spill Prevention and Response)

*Prepared for:*

#### **TEXAS CITY TERMINAL**

**2800 Loop 197 South  
Texas City, Texas 77590**

*Prepared by:*

**Response Management Associates, Inc.**  
6620 Cypresswood Drive, Suite 200  
Spring, Texas 77379  
Phone: (281) 320-9796 • Fax: (281) 320-9700  
[www.rmaworld.com](http://www.rmaworld.com)

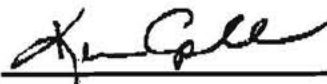
## INTEGRATED CONTINGENCY PLAN

### ACKNOWLEDGMENT AND PLAN APPROVAL

The information and procedures in this Plan must be treated as guidelines only. The user should determine to what extent it is practical and advisable to follow them. This decision may involve considerations not discussed in this Plan.

**I certify that the information and procedures contained herein are considered to be accurate and true as of this date, and that the accidental spill measures described in this document will be implemented as described. The information and procedures contained herein are also consistent with the National Contingency Plan (NCP) and applicable Area Contingency Plans (ACP) as detailed in Section 1.5.**

Plan Approved:



Kevin Campbell  
Terminal Manager  
Oiltanking Texas City, L.P.  
Texas City Terminal

Date: 11/7/08

NOTE: Response Management Associates, Inc. (RMA) provided consulting and plan development services in the preparation of this plan utilizing data provided by the Company and/or the Facility. RMA assumes no liability for injury, loss, or damage of any kind resulting directly or indirectly from the use of the regulatory interpretation, response planning, or information contained in this plan.

## INTEGRATED CONTINGENCY PLAN

### CERTIFICATION OF QUALIFIED INDIVIDUAL

Oiltanking Texas City, L.P. hereby certifies to the Coast Guard and Environmental Protection Agency that the Individuals Identified as Qualified Individual and Alternate Qualified Individual in this plan have the full authority in accordance with the applicable federal regulations and this Plan to:

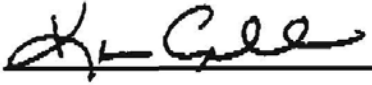
1. Activate and engage in contacting with Oil Spill Removal Organizations,
2. Act as a liaison with the pre-designated Federal On-Scene Coordinator (OSC), and
3. Obligate funds required to carry out response activities.

Oiltanking Texas City, L.P.

11/7/2008  
Date

  
\_\_\_\_\_  
Kevin Campbell  
Terminal Manager

## INTEGRATED CONTINGENCY PLAN

FACILITY RESPONSE CAPABILITY CERTIFICATION	
Pursuant to Section 4202(a) (5) (F)	
FRP – DOT Tracking No. TBA	
<p>The undersigned, the owner or operator of the above referenced facility who is authorized to sign this certification on behalf of this facility, hereby certifies that the above referenced facility has ensured by contract or other acceptable means approved by the President the availability of private personnel and equipment necessary to respond, to the maximum extent practicable, to a worst case discharge or a substantial threat of such a discharge.</p>	
Name:	Kevin Campbell
Title:	Terminal Manager
Signature:	
Date:	1/7/2008

## INTEGRATED CONTINGENCY PLAN

### DISTRIBUTION LIST

The Distribution of this Plan is controlled by the Copy Number located on the front cover. Plan Distribution Procedures are provided in Section 1.3 and the Plan Review and Update Procedures are provided in Section 1.4 and should be followed when making any and all changes.

COPY NUMBER	PLAN HOLDER (Entire Plan)	LOCATION
1, 2	Oiltanking Texas City, L.P. 2800 Loop 197 South Texas City, TX 77590	Texas City, TX
3	Removed from Circulation	-----
4	U.S. Coast Guard Marine Safety Unit Galveston 3101 FM 2004 Texas City, TX 77591	Galveston, TX
5 (Electronic)	U.S. Environmental Protection Agency - Region 6 Contingency Planning Section 1445 Ross Avenue, Suite 1200 Dallas, TX 75202-2733	Dallas, TX
6, 7 (Electronic)	Melanie Barber Office of Pipeline Safety - PHMSA U.S. Department of Transportation 1200 New Jersey Avenue, SE-E-22-321 Washington, D.C. 20590	Washington, D.C.
8 (Electronic)	Railroad Commission of Texas Gas Services Division P.O. Box 12967 Austin, TX 78711-2967	Austin, TX
9	O'Brien's Response Management Inc. (formerly Response Management Associates, Inc.) 6620 Cypresswood Drive Spring, TX 77379	Spring, TX
NOTE <sup>1</sup>	Texas General Land Office Region 2 11811 North D Street LaPorte, TX 77571	LaPorte, TX

NOTE<sup>1</sup> Internet, mail or fax notification of facility database changes only; no plan copy retained by the Agency.

## INTEGRATED CONTINGENCY PLAN

### REVISION RECORD

It is the responsibility of the holder of this Plan to ensure that all changes and updates are made. The holder shall:

- Remove and discard obsolete page5s.
- Replace obsolete pages with the updated pages.
- Initial once completed.

Change Date	Affected Page Number(s)	Description of Change(s)	Initial
December 2004	Entire Plan	Initial Distribution of Plan	
January 2005	Pgs. ERAP-39 thru ERAP-44, v, 1-8, App. H-4 thru H-15, M-2	Addition of tanks to oil service (only to US Coast Guard)	
February 2005	Pgs. ERAP-39, ERAP-40, v, G-9, H-4, H-5	Tank additions	
April 2006	Pgs. ERAP cover, ERAP-2, ERAP-6, ERAP-10 thru ERAP-47, Foreword cover, iv thru x, 1-2 thru 1-4, 1-9 thru 1-13, 2-5, 2-9 thru 2-13, 3-4 thru 3-26, 4-4, 5-2, 6-6 thru 6-38, A-1, A-22 thru A-25, App. C (inserts), G-1, G-13 thru G-16, H-2, H-4, K-1, K-43 and inserts, M-2, M-4 (insert)	DOT PHMSA Submission	
December 2006	ERAP-12, ERAP-35, ERAP-42 thru ERAP-47, v, vi, 1-8, 2-11, H-4 thru H-8, H-15, K-3 thru K-6, L-12	Tank additions	
January 2008	ERAP-2, ERAP-5 thru ERAP-7, ERAP-14, ERAP-38, ii, iii, iv, vi, 1-9, 2-4 thru 2-6, 2-13, 5-4, C-1 and C-6	Add OSRO and change job title/name for Terminal Manager	
August 2008	ERAP-2, ERAP-5, ERAP-10, ERAP-12, ERAP-14, ERAP-42, ERAP-47 & insert, v, vi, 1-8 & insert, 1-9, 2-4, 2-9, 2-11, 2-13, H-4	Added Texas Parks and Wildlife Dickinson, Texas and Wildlife Rehab, League City, Texas and Annual Update	
December 2008	ERAP-10, ERAP-14, ERAP-40, v, vi, 1-3, 1-10 thru 1-12, 2-9, 2-13, 5-6, H-1, H-15, and insert drainage diagrams, I-2	EPA Review	
May 2009	ERAP cover page, ERAP-14, ERAP-35 & insert, ERAP-42 thru ERAP-47, ERAP-48 & insert, FWD cover page, vi, 1-8 & insert, 1-10, 2-13, D-6 & insert, Appendix H (all), Appendix J (all), M-2	Update with tanks added and change of service, miscellaneous revisions	
August 2009	vi, 1-4, diagram insert, 1-9, 1-13, 4-3	Annual update	
September 2010	ERAP-35 & insert, ERAP 48 & insert, ERAP-42 thru 45, v, vi, 1-3, 1-8 & insert, D-6 & insert, H-4 thru H-7, H-16 & insert	Annual update	
October 2010	ERAP-2, ERAP-5 thru ERAP-7, vi, 1-9, 2-4 thru 2-6	QI Changes	

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## 1.0 INTRODUCTION AND PLAN CONTENT

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### 1.1 PLAN PURPOSE/OBJECTIVES

The purpose of this Integrated Contingency Plan (hereinafter referred to as "Plan") is to assist the Oiltanking Texas City, L.P.'s Texas City Terminal (hereinafter referred to as "Facility") personnel prepare for and respond quickly and safely to a discharge originating from the Facility. The Plan provides techniques and guidelines for achieving an efficient, coordinated, and effective response to a discharge incident that may occur at the Facility.

The specific objectives of the Plan are to:

- Establish a Local Response Team, assign individuals to fill the positions on the team, and define the roles and responsibilities of team members.
- Define notification, activation, and mobilization procedures to be followed when a discharge occurs.
- Define organizational lines of responsibility to be adhered to during a response operation.
- Document equipment, manpower, and other resources available to assist with the response.
- Ensure compliance with applicable federal, state, and local regulations.
- Ensure consistency with the National Contingency Plan and Area Contingency Plan(s) for the area of operation.

### 1.2 FORMAT AND SCOPE OF PLAN

This Plan has been developed under the general guidance published in the Federal Register by the EPA entitled "The National Response Team's Integrated Contingency Plan" (61 FR 28642). The NRT guidance was developed in conjunction with the Environmental Protection Agency, Department of Transportation (U.S. Coast Guard, Research and Special Programs Administration), Department of the Interior (Minerals Management Service), and the Department of Labor (Occupational Safety and Health Administration).

This guidance also provides for state and local contingency planning requirements to be incorporated into the Plan. A summary of the applicable regulations and the facilities effected by each regulation is provided in Section 1.5.

#### ***Plan Integration***

This Plan contains prioritized procedures for Facility personnel to mitigate or prevent any discharge resulting from in-terminal operations. A description of the operations conducted at the Facility has been detailed in Figure 1.3 with additional information provided in the "Hazard Evaluation" in the appendices. Facility spill mitigation procedures and response guidelines are provided in Section 3.0 for discharges that could result from any of the following scenarios:

## 1.2 FORMAT AND SCOPE OF PLAN (Cont'd)

- Tank overflow/failure
- Piping rupture/leak
- Explosion and/or fire
- Equipment failure (e.g. pumping system failure, relief valve failure, etc.)

These scenarios could result in the following discharge volumes:

Discharge Scenario	Potential Oil Group	Planning Volumes			
		EPA	USCG	PHMSA	Facility Maximum
Small/Average Most Probable	1	(b) (7)(F)			
Medium/Maximum Most Probable	1				
Worst Case	1				

These worst case discharge volumes are utilized in calculating the planning volume for response resources. The planning volume is used to determine the necessary on-water recovery capacity to respond within the three tiered response times. The identified oil spill recovery devices should be capable of arriving at the scene of a discharge within the time specified for the applicable response tier. Appendix G of this Plan demonstrates a series of calculations and planning volume determinations based on guidance provided by the U. S. Environmental Protection Agency (EPA) in 40 CFR Part 112 and DOT Pipeline and Hazardous Materials Safety Administration (PHMSA) in 49 CFR Part 194. The inclusion of these calculations is for demonstration of the response planning volumes and response capability necessary for on-water and on-shore recovery requirements as the result of the discharge scenarios outlined in the table above.

## 1.3 PLAN DISTRIBUTION PROCEDURES

Headquarters Environmental Safety and Health shall have the responsibility for distribution of the Plan. Distribution will be handled in the following manner:

- Distribution of the Plan is controlled by the number on the front cover. A Distribution List is included in the Foreword to facilitate control.
- Company personnel who may be called upon to provide assistance during discharge response activities will have access to a copy of the Plan for their use and training.
- It is the responsibility of any person holding a copy of the Plan to ensure that the copy is transferred to their replacement in the event of reassignment or change in responsibility.
- Various regulatory agencies will also be distributed a copy of the Plan. The list of agencies is detailed in the Distribution List located in the Foreword.

## 1.4 PLAN REVIEW AND UPDATE PROCEDURES

### *Annual Review/Update*

HSSE Department will coordinate the following Plan review and update procedures with Terminal Management.

- At least once each year review and make appropriate revisions as required by operational or organizational changes.
- At least once each year review and make appropriate revisions as required by changes in the names and telephone numbers detailed in Section 2.0.
- HSSE Department will coordinate the word processing, publication, and distribution efforts of completing the revisions and maintaining the Plan.
- Plan review opportunities may occur during response team tabletop exercises or actual emergency responses.

### *Incorporation of Plan Revisions*

The **plan holder**, immediately upon receipt of any revisions, shall:

- Review and insert the revised pages into the Plan.
- Discard the obsolete pages.
- Record the action on the "Revision Record" page in the Foreword.

### *Agency Revision Requirements*

The Facility will revise and resubmit revised portions of the Plan for each change that may materially affect the response to a worst case discharge, including:

CONDITIONS REQUIRING CHANGES	EPA	USCG	DOT/ PHMSA	TX GLO
Relocation or replacement of portions of the Facility (including the pipeline) which in any way substantially affect the information included in this Plan, such as a change to the worst case discharge volume.	✓	✓	✓	✓
Emergency response procedures.		✓	✓	✓
A change in the listings of economically important or environmentally sensitive areas identified in the applicable ACP in effect six (6) months prior to the Plan review.		✓	✓	✓
Change in the Facility's configuration that materially alters the information included in the Plan.	✓	✓	✓	✓
Change in the type of oil handled, stored, or transferred that materially alters the required response resources.	✓	✓	✓	✓
A change in the name of the Oil Spill Removal Organization (OSRO).		✓	✓	✓
Material change in capabilities of the Oil Spill Removal Organization(s) (OSROs) that provide equipment and personnel.	✓	✓	✓	✓
Material change in the Facility's spill prevention and response procedures.	✓		✓	✓
Any other changes that materially affect the implementation of the Plan.	✓	✓	✓	✓

**NOTE:** Any agency may require revisions to this Plan at any time if deficiencies are found under their applicable regulations or during an actual response.

## 1.4 PLAN REVIEW AND UPDATE PROCEDURES (Cont'd)

### *Submission of Revisions*

When submitting revisions to the applicable agencies always include the Facility identification number (see Figure 1.3) with the revisions. The applicable agencies require revisions to be submitted as follows:

- **EPA** requires changes to be submitted within 60 days of the change to the EPA's Regional Office.
- **USCG** requires changes to be submitted to them in a timely manner to the Sector (in duplicate). The Plan review must occur within one (1) month of the anniversary date of the USCG approval letter. If NO CHANGES are required, the Facility will submit a letter to the USCG stating "NO CHANGES REQUIRED".
- **TX GLO** requires changes should be submitted in a timely manner for potential modification of the Facility Certification.
- **DOT/PHMSA** - The Facility shall revise and resubmit changes to the Pipeline Response Plans Officer within 30 days for new or different operating conditions or information which will substantially affect the implementation of the response plan [49 CFR 194.121]. Since Texas City Terminal is a substantial harm facility, the Facility will review the Plan at least every five years of the most recent date of submission and resubmit the ICP to the Office of Pipeline Safety (OPS) with any changed portions, as required.

## 1.5 REGULATORY COMPLIANCE

The development, maintenance, and utilization of this Plan implements company policy and addresses the following regulatory requirements and guidelines. Specific regulatory cross reference is provided in Appendix A:

- Federal Oil Pollution Act of 1990: U.S. EPA Final Rule for Non-Transportation Related On-shore Facilities as published in 40 CFR Part 112.
- Federal Oil Pollution Act of 1990: U.S. Coast Guard Final Rule for Transportation Related On-Shore Facilities as published in 33 CFR Part 154.
- Federal Oil Pollution Act of 1990: U.S. DOT Final Rule for Transportation Related On-Shore Facilities as published in 49 CFR Part 194.
- OSHA's Emergency Action Plan Regulation, 29 CFR 1910.38(a).
- OSHA's HAZWOPER Regulation, 29 CFR 1910.120.
- U.S. EPA Resource Conservation and Recovery Act (RCRA) regulations as published in 40 CFR Part 265.50-265.56.
- Texas Oil Spill Prevention and Response Act of 1991, 31 TAC Sec. 19.

This Plan is consistent with the most recent version of the applicable Area Contingency Plans (ACPs). The applicable ACPs for the Facility are:

- U.S. Environmental Protection Agency - Region VI, Regional Integrated Contingency Plan.
- U. S. Coast Guard – One Gulf Plan and Sector Houston – Galveston Geographic Response Plan (GRP).

## 1.5 REGULATORY COMPLIANCE (Cont'd)

This Plan is consistent with the most recent version National Contingency Plan (NCP). The NCP for the Facility is:

- U.S. Environmental Protection Agency; National Oil and Hazardous Substances Pollution Contingency Plan.

## 1.6 DISCHARGE CLASSIFICATION

The severity of a discharge will have a bearing on the level of management involvement necessary and the extent of resource mobilization. The following definitions provide guidance in the early classification of discharges:

<b>CLASS I EVENT</b>
Incident Command will normally be assumed by Terminal Management. Regional and Head Office support will be utilized on an as needed basis.
<b>Exposure</b>
The potential public and environmental exposure is moderate. The type and quantity of material released, while considering the overall nature of the incident (e.g. fire, proximity to private dwellings, etc.), will have moderate impact on the public and/or the environment.
<b>Degree of Control</b>
The incident can be controlled in a short period of time through implementation of the local resources available to the Facility (including contract resources).
<b>Governmental Involvement</b>
Government involvement will be moderate and generally restricted to State and Local levels.
<b>Media Involvement</b>
Media interest will be moderate and generally restricted to State and Local levels.



## 1.6 DISCHARGE CLASSIFICATION (Cont'd)

<b>CLASS II EVENT</b>
Local Company resources may have to be supplemented with Head office and external resources to manage the spill incident.
<b>Exposure</b>
The potential public and environmental exposure is moderately high. The type and quantity of material released, while considering the overall nature of the incident (e.g. fire, proximity to private dwellings, etc.), will have moderately high impact on the public and/or the environment.
<b>Degree of Control</b>
The incident can be brought under control in a moderate period of time through implementation of local resources available to the Facility (including contract resources) with possible implementation of regional resources.
<b>Governmental Involvement</b>
Government involvement will be moderately high and generally restricted to Regional levels.
<b>Media Involvement</b>
Media interest will be moderately high and generally restricted to Regional levels.

<b>CLASS III EVENT</b>
Maximum Company and external resources must be implemented to respond to the spill incident.
<b>Exposure</b>
The potential public and environmental exposure is significant. The type and quantity of material released, while considering the overall nature of the incident (e.g. fire, proximity to private dwellings, etc.), will have significant impact on the public and/or the environment.
<b>Degree of Control</b>
Maximum Company and third party resources must be implemented in order to gain control of the incident.
<b>Governmental Involvement</b>
Government involvement will be intense.
<b>Media Involvement</b>
Media interest will be intense.

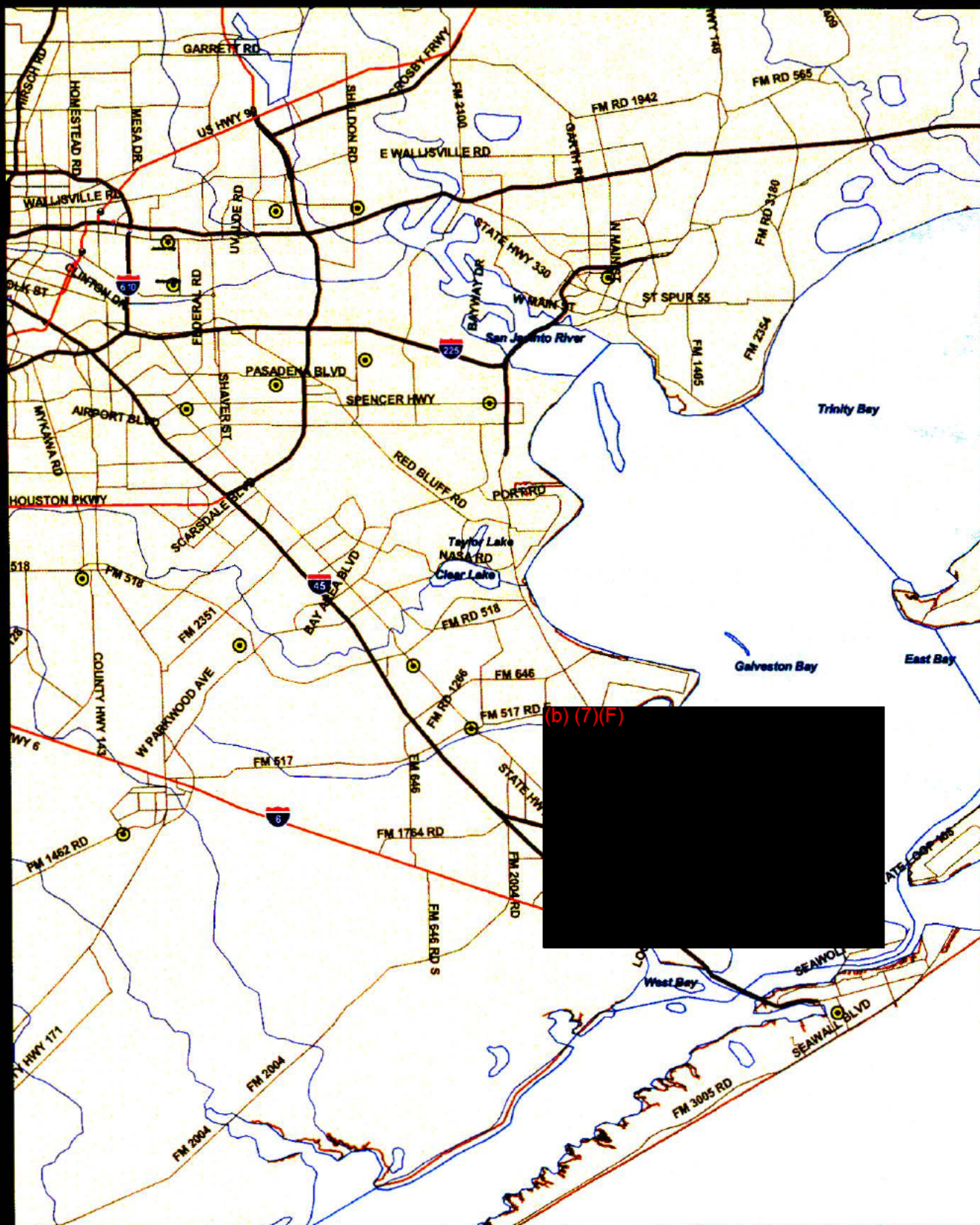
## **FIGURE 1.1**

### **AREA MAP**



# Figure 1.1 - Area Map

Map Prepared By  
Response Management Associates  
(281) 320-9796



**FIGURE 1.2**  
**FACILITY DIAGRAM**

(b) (7)(F)



(b) (7)(F)



## FIGURE 1.3

### FACILITY INFORMATION

#### GENERAL INFORMATION

<b>Facility Name:</b>	Oiltanking Texas City, L.P. - Texas City Terminal 2800 Loop 197 South Texas City, Texas 77590 (409) 797-1700 (409) 797-1701 (FAX)
<b>EPA FRP ID#:</b>	FRP-06TX-00727
<b>OPS Plan Sequence:</b>	TBA
<b>Owner Name:</b>	<b>Physical Address</b> Oiltanking Texas City, L.P. Attn: Rance Fromme 2800 Loop 197 South P.O. Box 29 Texas City, Texas 77592 (409) 797-1750
<b>Qualified Individual (Facility Spill Coordinator): (Home address)</b>	Mike Nieberlein HSSE Manager 2323 Fairwind Road Houston, Texas 77062 (b) (6) (Home) (409) 761-0396 (Mobile)
<b>Alternate Qual. Individual (Other Emergency Coordinator): (Home address)</b>	Todd Harms 1704 Redwood Circle Alvin, Texas 77511 (b) (6) (Home) (281) 430-4090 (Mobile)
<b>Alternate Qual. Individual (Other Emergency Coordinator): (Home address)</b>	Paul Vargas 1122 Woodham Houston, Texas 77062 (b) (6) (Home) (281) 914-3651 (Mobile)
<b>Telephone/FAX:</b>	Additional telephone references, including 24 hour numbers, for the Facility, Owner, and QI/AQI are provided in Figure 2.2.
<b>NAICS Code:</b>	493190
<b>Date of Initial Oil Storage:</b>	1979



**FIGURE 1.3****FACILITY INFORMATION (Cont'd)****FACILITY LOCATION**

<b>Parish:</b>	Galveston County, Texas
<b>Latitude:</b>	(b) (7)(F)
<b>Longitude:</b>	
<b>Area Map:</b>	Provided in Figure 1.1
<b>Facility Diagram:</b>	Provided in Figure 1.2
<b>Wellhead Protection Area:</b>	The Texas City Terminal is not located in a Texas Wellhead Protection Area.

**PHYSICAL DESCRIPTION - GENERAL****Description of Operation:**

- The Facility stores petroleum, chemicals, and other liquids.
- The Facility has a total oil storage capacity of approximately (b) (7)(F). Daily throughput is approximately (b) (7)(F) by all modes of transport.
- Product is received via marine vessels, truck, and railcar.
- The Facility operates 24 hours per day, 365 days per year.

**Products Handled:**

- Naphthas
- Diesel
- Gasoline
- Blendstocks
- Organic Chemicals
- LHG

**Note:** Material Safety Data Sheets (MSDS) are maintained separately at the Facility.



**FIGURE 1.3****FACILITY INFORMATION (Cont'd)****PHYSICAL DESCRIPTION - MARINE OPERATIONS*****General Operation:***

Twelve (1) vessels may be unloading simultaneously at the Facility.

***Dock Detail: 65 (Barge Dock):***

Construction: Concrete/Steel with wood and steel piles for mooring.

***Dock Detail: 66 (Ship Dock):***

Construction: Steel/Wood with wood and steel piles for mooring.

***Dock Detail: 67 and 67B Docks (Ship / Barge):***

- Length (ft.) : The face of 67 dock is 100 ft. The face of 67B dock is 50 ft
- Construction: Concrete dock with wood and steel piles for mooring.
- Loading Rate (Bbls/Hr.): 15,000 BPH max
- Offloading Rate (Bbls/Hr.): 15,000 BPH max

**PHYSICAL DESCRIPTION - MARINE OPERATIONS**

**Loading Arms:** None

**Transfer Hoses:** 6" and 8" Marine hoses marked "Oil Service"

***Vessel Detail:***

- **Type:** Barges/Ships (Marine Vessels)
- **Length (ft):** 260 ft
- **Capacity (Bbls):** (b) (7)(F)
- Total Line Fill Capacity for the pipelines is 350 Bbls. (Approximate) from all three docks to the first block valve within secondary containment. Approximate the line fill for each loading area to the first valve within containment.

**FIGURE 1.3****FACILITY INFORMATION (Cont'd)****PHYSICAL DESCRIPTION - TRUCK RACK*****Description of Operation:***

- The Facility is equipped with 15 tank truck loading spots which handle all products.
- A maximum of 15 trucks may load simultaneously.
- The loading operations are conducted on a 24-hour, 7-day/week basis.

**Loading Rate:** 400 gpm (*per truck*)

**Truck Capacity:** (b) (7)(F)

***Discharge Prevention:***

- Meters, tank gauges, block valves, ullage alarms.

**PHYSICAL DESCRIPTION - RAIL CAR RACK*****Description of Operation:***

- The Facility is equipped with 53 loading/unloading spots, which handle all products.
- A maximum of 53 rail cars may load/unload at a time.

**Loading/Unloading Rate:** 1,000 Bbl/hr

**Rail Car Capacity:** (b) (7)

***Discharge Prevention:***

- Meters, tank gauges, block valves, ullage alarms.

**PHYSICAL DESCRIPTION – DOT PIPELINES*****Pipeline Response Zone Information Summary:*****General:**

- Since all maintenance / operational functions are conducted by Company personnel located at the Facility, a single Response Zone (DOT/PHMSA response planning requirement under OPA 90) has been developed. Subsequently, the requirement for a Core Plan and a separate Response Zone Plan / Appendix for each Response Zone have been combined into this one Integrated Contingency Plan.
- The Company operates the pipelines on an as needed basis. There are no breakout tanks.

**FIGURE 1.3****FACILITY INFORMATION (Cont'd)****PHYSICAL DESCRIPTION – DOT PIPELINES (Cont'd)**

- (b) (7)(F)

- ROWs are inspected 26 times a year at intervals not exceeding three (3) weeks.

Response Zone	Line Section	Description	County, State
Response Zone One	Naphtha	8 inch Line	Galveston County, TX
Response Zone One	Crude Benzene	6 inch Line	Galveston County, TX

- This ICP is written in English and understood by personnel responsible for carrying out the Plan

**Determination of Significant and Substantial Harm (DOT/PHMSA):**

- This Response Zone does not meet the criteria for "Significant and Substantial Harm".
- See Appendix M for the Significant and Substantial Harm Determination.

**Response Resources:**

- Line Length: 5,800 ft.
- Worst Case Discharge: (b) (7)(F)
- Contracted Resources: Agreement numbers and classifications are detailed in Appendix A.
- Geographic Area: See Figures 1.1, 1.2, and 6.1.
- Areas Traversed: Texas City, Galveston County, Texas

**OTHER FACILITY DATA**

- Additional facility data (including storage information) is provided in Appendix H and discharge detection and inspection information is provided in Appendix I.

## 2.0 NOTIFICATION PROCEDURES

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This section is a guide for notification procedures that should be implemented immediately after discovering a discharge incident and securing the source (if at all possible). Internal and external notifications are described separately for clarification purposes only. All notifications are of extreme importance and must be completed in a timely manner.

### 2.1 INTERNAL NOTIFICATION

The following internal notifications should be made for each emergency incident to the extent that the incident demands (Internal Notification Sequence and Internal Notification References (telephone list) are provided in Figures 2.1 and 2.2 respectively). In no event shall notification be delayed because the immediate supervisor is inaccessible.

**Authorization is given to bypass management levels if necessary to provide immediate notification to upper management.** The Facility Spill Management Team will consist of members of the Local Team, as well as contract personnel as the situation demands. The typical internal notification responsibilities for each person potentially involved in the initial response are as follows:

#### ***First Company Person Notified/On-Scene***

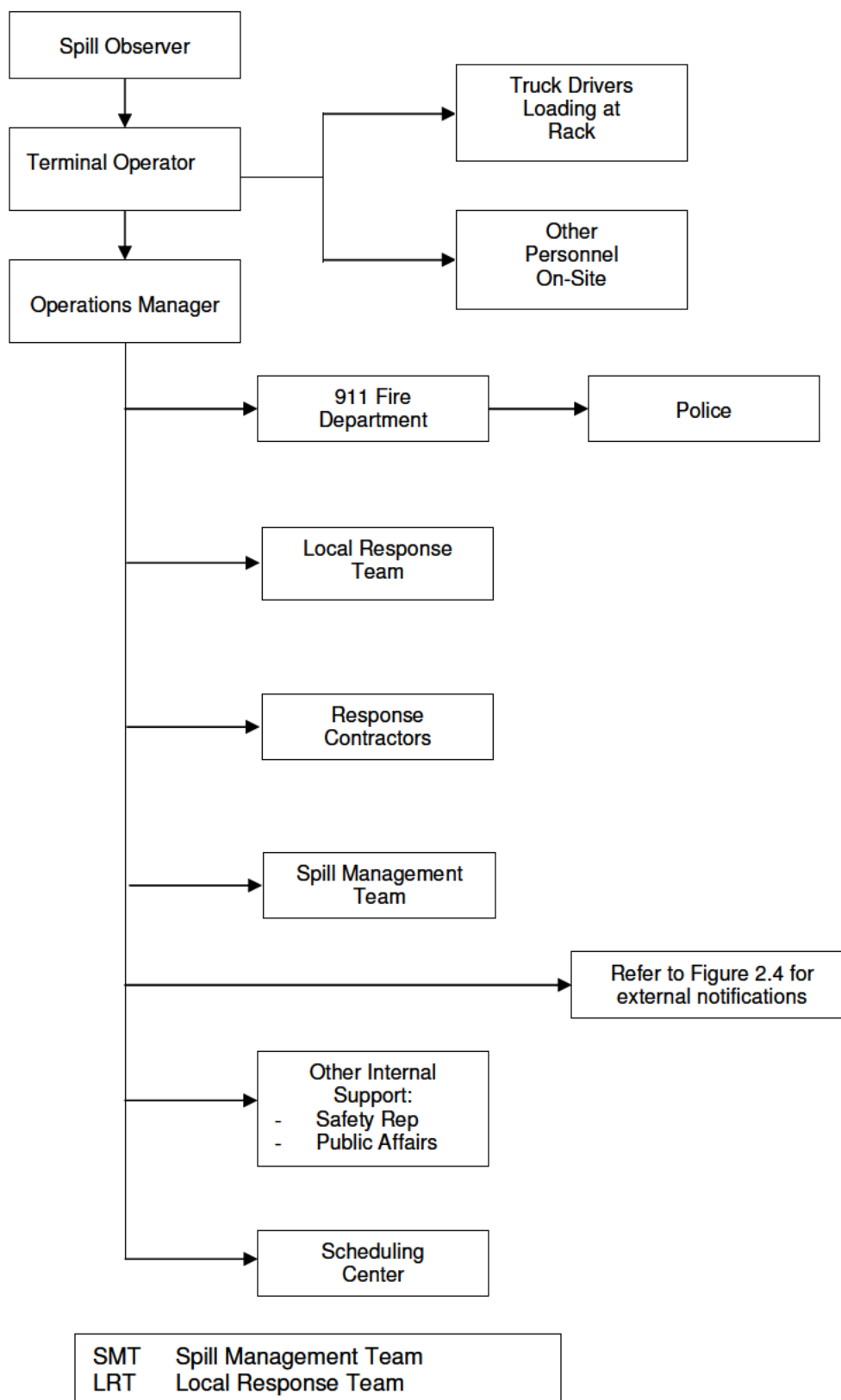
- Immediately notify the **Terminal Operator, Vessel Personnel or Truck Rack Personnel**, as the situation demands.
- Immediately notify **Facility Management**.
- ***Facility Management***
- Activate the **Local Response Team**, as the situation demands.
- Activate **local emergency response resources (Oil Spill Removal Organizations (OSRO), fire, police, medical, etc.)**.
- To report incidents internally,
- Contact the Area Manager and the Headquarters Notification List referred to in Figure 2.2.
- Notify all **regulatory/governmental agencies** and other external organizations as detailed in Section 2.2 and Figure 2.5. Coordinate with **Headquarters Environmental, Health, and Safety** as the situation demands.
- **Coordinate** activation of additional response and clean-up resources with the **Area Manager** as the situation demands.

## 2.2 EXTERNAL NOTIFICATION

The external notifications should be made in accordance with federal, state, and local regulations for all reportable discharges. A "Notification Data Sheet" (Figure 2.3) should be used to facilitate documentation and data retrieval for these notifications. The Facility Manager/Qualified Individual shall ensure that the "Required Notifications" and "Other Notifications" are made as the situation demands. Telephone reference is provided in Figure 2.5 and the typical reporting flowchart is demonstrated in Figure 2.4.

### SPILL REPORTING GUIDELINES

- Never include information which has **not been verified.**
- **Never speculate** as to the cause of an incident or make any acknowledgment of liability.
- **DOCUMENT:**
  - Agency notified
  - Time agency notified
  - Person notified
  - Content of message given
- **DO NOT DELAY** reporting due to incomplete information.

**FIGURE 2.1****INTERNAL NOTIFICATION SEQUENCE**

**FIGURE 2.2****INTERNAL NOTIFICATION REFERENCES**

<b>GENERAL FACILITY</b>			
<b>FACILITY AREA</b>	<b>ADDRESS</b>	<b>OFFICE</b>	<b>FAX NUMBER</b>
Texas City Terminal	2800 Loop 197 South Texas City, TX 77590	(409) 797-1700	(409) 797-1701

<b>LOCAL RESPONSE TEAM</b>						
<b>POSITION/TITLE</b>	<b>NAME</b>	<b>RESPONSE TIME</b>	<b>TRAINING LEVEL</b>	<b>OFFICE</b>	<b>HOME</b>	<b>OTHER</b>
Terminal Manager	Rance Fromme	75 minutes	<ul style="list-style-type: none"> <li>HAZWOPER.</li> <li>ICP.</li> <li>SPCC Plan.</li> <li>Terminal and routine safe-operating procedures.</li> <li>ICS.</li> </ul>	(409) 797-1722	(b) (6)	(409) 761-0747 (MBL)
<i>Alt. Qualified Individual</i> / HSS Coordinator	Todd Harms	60 minutes		(409) 797-1740		(281) 430-4090 (MBL)
<i>Qualified Individual</i> / HSSE Manager	Mike Nieberlein	60 minutes		(409) 797-1742		(409) 761-0396 (MBL)
Emergency Response Coordinator	Paul Vargas	60 minutes		(409) 797-1753		(281) 914-3651 (MBL)

**FIGURE 2.2****INTERNAL NOTIFICATION REFERENCES (Cont'd)**

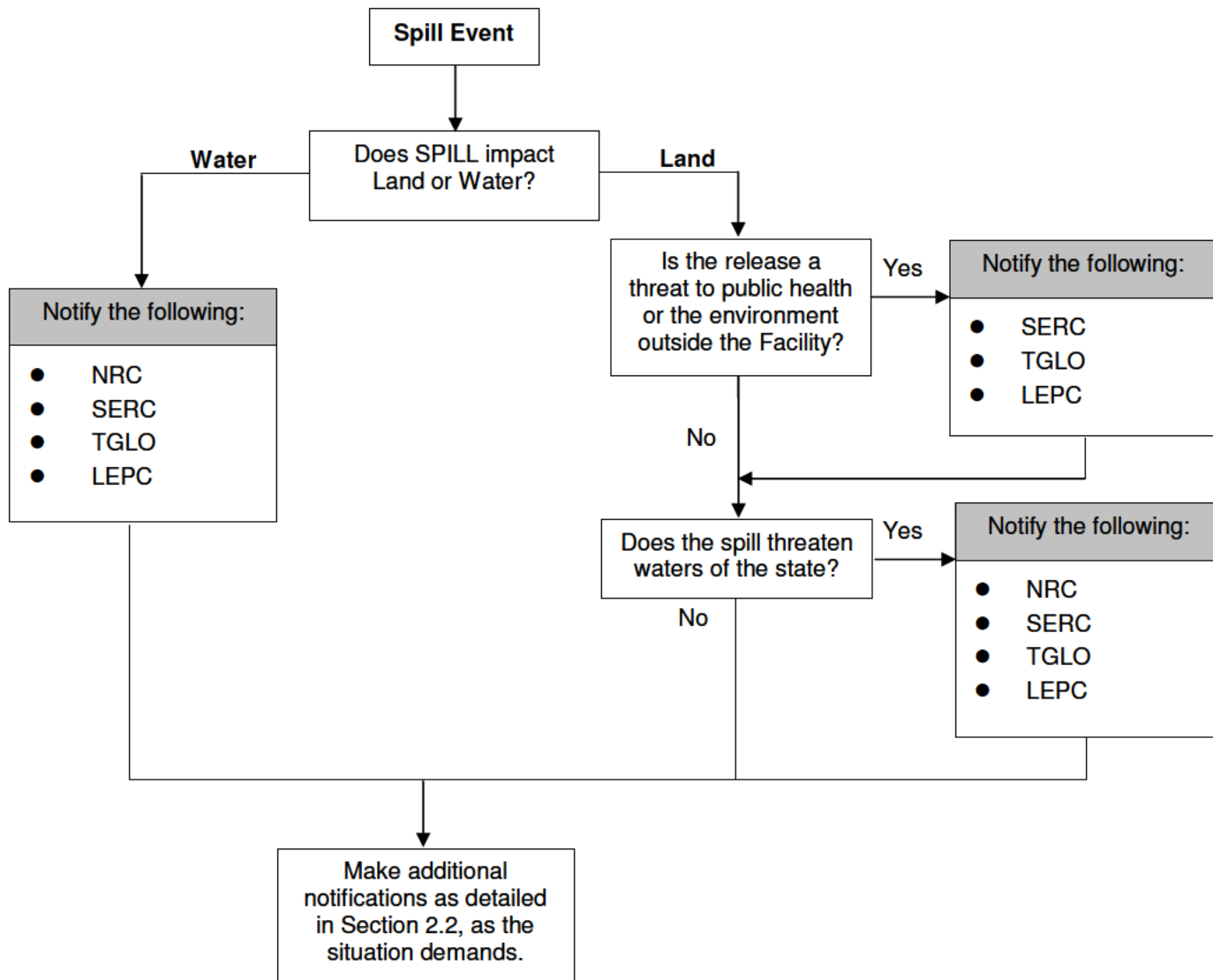
<b>HEADQUARTERS PRIORITY NOTIFICATION LIST*</b>					
<b>POSITION/TITLE</b>	<b>NAME</b>	<b>RESPONSE TIME</b>	<b>OFFICE</b>	<b>HOME</b>	<b>OTHER</b>
Terminal Manager	Rance Fromme	75 min	(409) 797-1722	(b) (6)	(409) 761-0747 (MBL)
HSSE Manager	Mike Nieberlein	60 min	(409) 797-1742		(409) 761-0396 (MBL)
Logistics Manager	Margaret Halbert	45 min	(409) 797-1730		(409) 392-6233 (MBL)
Operations Manager	John Wilson	60 min	(409) 797-1720		(409) 761-0600 (MBL)
* Notify first available designated person on the list.					



**FIGURE 2.2****INTERNAL NOTIFICATION REFERENCES (Cont'd)**

<b>SPILL MANAGEMENT TEAM</b>					
<b>POSITION/TITLE</b>	<b>NAME</b>	<b>RESPONSE TIME</b>	<b>OFFICE</b>	<b>HOME</b>	<b>OTHER</b>
Terminal Manager	Rance Fromme	75 min	(409) 797-1722	(b) (6)	(409) 761-0747 (MBL)
HSS Coordinator	Todd Harms	60 min	(409) 797-1740		(281) 430-4090 (MBL)
HSSE Manager	Mike Nieberlein	60 min	(409) 797-1742		(409) 761-0396 (MBL)
Emergency Response Coordinator	Paul Vargas	60 min	(409) 797-1753		(281) 914-3651 (MBL)



**FIGURE 2.4****EXTERNAL NOTIFICATION FLOWCHART****Acronyms:**

- NRC = National Response Center
- SERC = State Emergency Response Commission
- TGLO = Texas General Land Office
- LEPC = Local Emergency Planning Committee

**FIGURE 2.5****EXTERNAL NOTIFICATION REFERENCES**

<b>REQUIRED NOTIFICATIONS</b>		
<b>AGENCY</b>	<b>TELEPHONE NUMBER</b>	<b>REPORTING REQUIREMENTS (IF ANY)</b>
<b>NATIONAL RESPONSE CENTER (NRC)</b> c/o United States Coast Guard (CG-3RPF-2) 2100 2 <sup>nd</sup> Street Southwest - Room 2111-B Washington, District of Columbia 20593-0001	(800) 424-8802 (24 Hr.) (202) 267-2675 (Day Phone) (800) 337-7455 (Night Phone)	TYPE: Any Discharge or sighting of oil, or hazardous substance exceeding an RQ. VERBAL: Immediately. WRITTEN: Not required.
<b>OFFICE OF PIPELINE SAFETY AND HAZARDOUS MATERIALS</b> U.S. Department of Transportation 1200 New Jersey Avenue SE-E-22-321 Washington, District of Columbia 20590	(202) 366-4000 (24 Hr.)	TYPE: In addition to the reporting of accidents to the NRC, a written accident report (PHMSA Form 7000-1, provided in Appendix K) must be submitted for releases resulting in any of the following: <ol style="list-style-type: none"> <li>1. Explosion or fire not intentionally set by the operator.</li> <li>2. Release of five gallons or more of hazardous liquid or carbon dioxide, except that no report is required for a release of less than five barrels resulting from a pipeline maintenance activity if the release is: <ol style="list-style-type: none"> <li>a. not one described under the NRC's reporting conditions.</li> <li>b. confined to the property or pipeline right-of-way; and</li> <li>c. cleaned up promptly.</li> </ol> </li> <li>3. Death of any person.</li> <li>4. Personal injury necessitating hospitalization.</li> <li>5. Estimated property damage, including cost of cleanup and recovery, value of lost product, and damage to the property of the operator or others, or both, exceeding \$50,000.</li> </ol> VERBAL: Call to the NRC meets the required verbal notification under DOT reporting requirement. WRITTEN: As soon as practicable, an accident meeting any of the above criteria must be reported on PHMSA Form 7000-1. The report must be sent to DOT no later than 30 days after the release. Changes or additions to the original report (PHMSA Form 7000-1) must be filed as a supplemental report within 30 days.
<b>TEXAS COMMISSION ON ENVIRONMENTAL QUALITY</b> 12100 PARK 35 CIRCLE AUSTIN, TX 78753	(800) 832-8224 (512) 239-2507 (512) 463-7727	TYPE: Any crude oil or petroleum product discharge into water; or, 25 gallons (petroleum product) or 210 gallons (crude oil) onto land. Any hazardous substance exceeding an RQ. VERBAL: Immediately WRITTEN: Within thirty (30) days after the release occurs.

**FIGURE 2.5****EXTERNAL NOTIFICATION REFERENCES (Cont'd)**

<b>REQUIRED NOTIFICATIONS</b>		
<b>AGENCY</b>	<b>TELEPHONE NUMBER</b>	<b>REPORTING REQUIREMENTS (IF ANY)</b>
<b>TEXAS GENERAL LAND OFFICE OIL SPILL PROGRAM</b> 1700 N. CONGRESS AVE. AUSTIN, TX 78701	(512) 475-1575 (800) 832-8224 (Alternate)	TYPE: Any unauthorized discharge or threat of discharge into the coastal environment. VERBAL: Within one (1) hour of discovery. WRITTEN: Within sixty (60) days after the response actions have been declared complete.
<b>GALVESTON - TEXAS CITY LEPC</b> 1725 25 <sup>TH</sup> STREET N TEXAS CITY, TX 77590	911/ (409) 643-5700	TYPE: Any spill which escapes the boundary of the Facility or exceeds an RQ. VERBAL: Immediately WRITTEN: As requested by the agency.
<b>TEXAS RAILROAD COMMISSION</b> P.O. BOX 12967 AUSTIN, TX 78711	(512) 463-6788 (24 hr.)	TYPE: Reportable accidents on intrastate hazardous liquid pipelines. VERBAL: Within two (2) hours of discovery. WRITTEN: Within thirty (30) days.
<b>TEXAS RAILROAD COMMISSION DISTRICT 3</b> OIL & GAS DIVISION 1706 SEAMIST DRIVE HOUSTON, TX 77008	(713) 869-5001	TYPE: Any crude oil spills greater than five (5) barrels. VERBAL: Immediately. WRITTEN: Immediately.

**FIGURE 2.5****EXTERNAL NOTIFICATION REFERENCES (Cont'd)**

OTHER POTENTIAL REQUIRED NOTIFICATIONS			
AGENCY	TELEPHONE NUMBER	REPORTING REQUIREMENTS (IF ANY)	
U.S. ENVIRONMENTAL PROTECTION AGENCY REGION VI 1445 ROSS AVENUE, SUITE 1200 DALLAS, TX 75202-2733	(866) EPA-SPIL 372-7745	TYPE: Immediately for all spills that impact or threaten navigable water or adjoining shoreline. VERBAL: Notification to the EPA is typically accomplished by the call to the NRC. WRITTEN: As the agency may request depending on circumstances.	
U.S. COAST GUARD – SECTOR HOUSTON- GALVESTON 9640 CLINTON DRIVE HOUSTON, TX 77029	(713) 671-5100	TYPE: Immediately for all spills that impact or threaten navigable water or adjoining shoreline. VERBAL: Notification to the USCG is typically accomplished by the call to the NRC. WRITTEN: As requested by the Agency.	
ASSISTANCE/ADVISORY NOTIFICATIONS (outside resources)			
AGENCY	LOCATION	OFFICE	ALTERNATE
OSHA (For Reportable Injury or Death)	Washington, D.C.	(800) 321-6742	
U.S. Coast Guard – Sector Houston- Galveston	Houston, TX 77029	(713) 671-5100	
CHEMTREC	-----	(800) 424-9300	
Chemical Referral Center	-----	(800) 262-8200	
U.S. Fish and Wildlife Service (USFWS)	Webster, TX	(281) 286-8282 (Local Day)	
Texas Parks and Wildlife	Dickinson, TX	(281) 534-0130	
Wildlife Rehab	League City, TX	(281) 332-8319	
TNRCC - Water Program	Houston, TX	(713) 767-3650	
Texas Railroad Commission	Austin, TX	(512) 463-6788	
Texas Parks and Wildlife Commission	Seabrook, TX	(281) 474-2811	
Texas State Police (DPS)	Texas City, TX	(409) 938-7899	
Harbormaster - Texas City	Texas City, TX	(409) 945-5011	
Texas City Response	Texas City, TX	(409) 643-5707	
Texas City Civil Defense	Texas City, TX	(409) 643-5707	
Galveston County Health District	LaMarque, TX	(409) 938-2251	
Electric Service - First Choice	Texas City, TX	(409) 945-2386	
Water Service - (Texas City Terminal Railway)	Texas City, TX	(409) 945-4461	
G & H Towing Texas City	Houston, TX	(409) 744-5215	
T & T Marine Service	Galveston, TX	(409) 744-1222	
Amato Linehandlers	Texas City, TX	(409) 945-7335	
BP Amoco Chemical Company	Texas City, TX	(409) 948-1601	
BP Amoco Refinery	Texas City, TX	(409) 945-1011	
Seaway Pipeline Co.	Texas City, TX	(409) 945-4555	

**FIGURE 2.5****EXTERNAL NOTIFICATION REFERENCES (Cont'd)**

<b>ASSISTANCE/ADVISORY NOTIFICATIONS (outside resources)</b>			
<b>AGENCY</b>	<b>LOCATION</b>	<b>OFFICE</b>	<b>ALTERNATE</b>
Applied Industrial Materials	Texas City, TX	(409) 945-7210	
Intercoastal Terminal	Texas City, TX	(409) 948-0208	
StanTrans Texas City Terminal	Texas City, TX	(409) 948-3561	
Valero	Texas City, TX	(409) 945-4451	

<b>MEDIA NOTIFICATIONS</b>			
<b>AGENCY</b>	<b>LOCATION</b>	<b>OFFICE</b>	<b>ALTERNATE</b>
Radio 740 AM - KTRH	Houston, TX	(713) 526-5874	
TV - KPRC Channel 2 (NBC)	Houston, TX	(713) 222-2222	
TV - KHOU Channel 11 (CBS)	Houston, TX	(713) 526-1111	
TV - KTRK Channel 13 (ABC)	Houston, TX	(713) 666-0713	

<b>LOCAL EMERGENCY SERVICES</b>			
<b><i>DIAL 911</i> for All Police, Fire, and Ambulance Emergencies</b>			
<b>SERVICE</b>	<b>LOCATION</b>	<b>OFFICE</b>	<b>ALTERNATE</b>
Fire Department	Texas City, TX	(409) 643-5741	
Ambulance	Texas City, TX	(409) 948-8414	
Hospital - Mainland Medical Center	Texas City, TX	(409) 938-5000	
Police Department	Texas City, TX	(409) 948-2525	



**FIGURE 2.5****EXTERNAL NOTIFICATION REFERENCES (Cont'd)**

<b>USCG CLASSIFIED OIL SPILL REMOVAL ORGANIZATIONS (OSRO)</b>					
<b>COMPANY</b>	<b>CONTRACT RESPONSIBILITY</b>	<b>RESPONSE TIME</b>	<b>LOCATION</b>	<b>OFFICE</b>	<b>ALTERNATE</b>
T&T Marine Salvage, Inc.	Petroleum product cleanup and disposal under direction of Q.I.	1 hour	Texas City, TX	(409) 744-1222 (281) 488-5757	
Garner Environmental Services, Inc.	Petroleum product cleanup and disposal under direction of Q.I.	1 hour	La Marque, TX	(800) 424-1716 (24 hr.)	(409) 935-0308 (409) 935-0678 FAX

ADDITIONAL RESPONSE RESOURCES IDENTIFIED				
COMPANY	RESPONSIBILITY	LOCATION	OFFICE	ALTERNATE
Texas City IMAS Dispatch Center	Fire / Explosion / Chemical Spill	Texas City, TX	(409) 948-2525	Network KKR-876 (Radio)
Response Management & Associates, Inc.	Spill Management Team	Spring, TX	(281) 320-9796	(281) 320-9700 FAX
Gulf Coast Wildlife Rescue	Wildlife Cleanup and Rehabilitation	Angleton, TX	(979) 849-0184	
International Bird Rescue Center	Wildlife Cleanup and Rehabilitation	Fairfield, CA	(707) 207-0380 (8 a.m.-5 p.m.)	
Tri-State Bird Rescue	Wildlife Cleanup and Rehabilitation	Newark, DE	(302) 737-9543 (9 a.m.-5 p.m.)	(800) 710-0695 PGR (800) 710-0696 PGR



## 3.0 RESPONSE ACTIONS

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### 3.1 INITIAL RESPONSE ACTIONS

Initial response actions are those taken by local personnel immediately upon becoming aware of a discharge or emergency incident, before the Local Response Team (described in Section 4.0) is formed and functioning. Timely implementation of these initial steps is of the utmost importance because they can greatly affect the overall response operation.

It is important to note that **these actions are intended only as guidelines**. The appropriate response to a particular incident may vary depending on the nature and severity of the incident and on other factors that are not readily addressed. Note that, **without exception, personnel and public safety is first priority**.

The first Company person on scene will function as the person-in-charge until relieved by an authorized supervisor who will assume the position of Incident Commander (IC). Transfer of command will take place as more senior management respond to the incident. For response operations within the control of the Local Response Team, the role of IC will typically be assumed and retained by Facility Management.

The person functioning as **Incident Commander** during the initial response period **has the authority to take the steps necessary to control the situation and must not be constrained by these general guidelines**.

#### INITIAL RESPONSE ACTIONS - SUMMARY

- Personnel and Public Safety is first priority
- Eliminate sources of ignition
- Isolate the source of the discharge, minimize further flow
- Make internal notifications
- Make external notifications
- Activate the Local Response Team as necessary
- Activate response contractors and other external resources as necessary
- Monitor and control the containment and clean-up effort

### 3.1 INITIAL RESPONSE ACTIONS (Cont'd)

#### FIRST COMPANY PERSON NOTIFIED/ON SCENE

- \_\_\_\_\_ Follow the appropriate "***Specific Incident Response Checklist***" in Figure 3.1 and "***Product Specific Response Considerations***" in Figures 3.2, 3.3, and 3.4.
- \_\_\_\_\_ Notify **Facility Management** of the incident.
- \_\_\_\_\_ Utilize local emergency services as necessary (police, fire, medical).

#### FACILITY MANAGEMENT

- \_\_\_\_\_ **Evaluate the Severity**, Potential Impact, Safety Concerns, and Response Requirements based on the initial data provided by the first person on scene.
- \_\_\_\_\_ Assume the role of **Incident Commander**.
- \_\_\_\_\_ **Confirm safety** aspects at site, including need for personal protective equipment, sources of ignition, and potential need for evacuation.
- \_\_\_\_\_ Activate the **Local Response Team and primary response contractors**, as the situation demands.
- \_\_\_\_\_ Coordinate/perform **activation of additional spill response contractors**, as the situation demands (telephone reference is provided in Figure 2.5).
- \_\_\_\_\_ Perform notifications as per Figure 2.1, including Spill Management Team activation, as necessary.
- \_\_\_\_\_ Coordinate/perform **regulatory agency notification**, as the situation demands (notification procedures and telephone references are provided in Figures 2.4 and 2.5 respectively).
- \_\_\_\_\_ Proceed to spill site and **coordinate response and clean-up operations**.
- \_\_\_\_\_ Direct containment, dispersion, and/or clean-up operations in accordance with the Product Specific Response Considerations provided in Figures 3.2, 3.3, and 3.4.

#### LOCAL RESPONSE TEAM

- \_\_\_\_\_ Assigned personnel will immediately respond to a discharge from the Facility, as the situation demands.
- \_\_\_\_\_ Perform response/clean-up operations as directed or coordinated by the Incident Commander.
- \_\_\_\_\_ Assist as directed at the spill site.

**FIGURE 3.1****SPECIFIC INCIDENT RESPONSE CHECKLIST**

**Remember, Without Exception, Personnel Safety Is The First Priority. Excessive Exposure To The Vapor And Liquid Stages Of The Spilled Product Should Be Avoided.**

**INITIAL RESPONSE**

- \_\_\_\_\_ Take appropriate personal protective measures.
- \_\_\_\_\_ Call for medical assistance if an injury has occurred.
- \_\_\_\_\_ Restrict access to the spill site and adjacent area as the situation demands. Take any other steps necessary to minimize any threat to health and safety.
- \_\_\_\_\_ Verify the type of product and quantity released (Material Safety Data Sheets are retained separately at the Facility).
- \_\_\_\_\_ Advise personnel in the area of any potential threat and/or initiate evacuation procedures.
- \_\_\_\_\_ Use testing and sampling equipment to determine potential safety hazards, as the situation demands.
- \_\_\_\_\_ Identify/Isolate the source and minimize the loss of product.
- \_\_\_\_\_ Take necessary fire response actions.
- \_\_\_\_\_ Eliminate possible sources of ignition in the near vicinity of the spill.
- \_\_\_\_\_ Notify Facility Management of the incident.

**INITIAL RESPONSE**

**FIGURE 3.1****SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)****LINE BREAK OR LEAK, SPECIFIC RESPONSE**

- \_\_\_\_\_ Notify Control Room Operator of emergency.
- \_\_\_\_\_ Shut down pumping equipment.
- \_\_\_\_\_ Close upstream and downstream block valves.
- \_\_\_\_\_ Initiate Hazardous Work procedures.
- \_\_\_\_\_ Mitigate spreading of the product, as the situation demands. Potential containment strategies include:
  - Earthen dike/berm
  - Ditching
  - Spreading sorbent material over the spill
- \_\_\_\_\_ Prevent the spill from entering the waterways, sewer, etc. to the greatest extent possible.
- \_\_\_\_\_ Determine the direction and expected duration of spill movement. Refer to the maps in Section 6.0.
- \_\_\_\_\_ If located within containment area, ensure that drainage valve(s) is "closed".
- \_\_\_\_\_ Drain the line section, as the situation demands.
- \_\_\_\_\_ Make all necessary repairs.
- \_\_\_\_\_ Return the line/rack to service when repairs are complete.
- \_\_\_\_\_ Clean up spilled product to eliminate any possible environmental problems. Be alert for underground cables.
- \_\_\_\_\_ If the spill escapes the containment area, review the location of socio-economic and environmentally sensitive areas identified in Section 6.0. Determine which of these may be threatened by the spill and direct the response operation to these locations. Initiate protection and recovery actions.
- \_\_\_\_\_ Inform local operators such as utilities, telephone company, railway.
- \_\_\_\_\_ Complete follow-up and written reporting, as the situation demands.

**FIGURE 3.1****SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)****ABNORMAL PIPELINE OPERATIONS**

- \_\_\_\_\_ If operating design limits have been exceeded (increase or decrease pressure or flow) and no emergency condition exists, stop operations and immediately investigate the pipeline.
- \_\_\_\_\_ Verify whether a true safety problem, equipment malfunction, or operator error is present.
- \_\_\_\_\_ If the situation is due to malfunctioning equipment, can transfer operations can continue safely? If yes, then bypass the faulty equipment until the completion of the transfer and make appropriate repairs. **Note: In all cases, safety to operations, the general public, and property will govern actions taken.**
- \_\_\_\_\_ If the transfer can not continue safely, make appropriate repairs before continuing operations. **Note: Corrective action will only be done by qualified personnel to perform the type of work involved.**
- \_\_\_\_\_ Monitor affected systems until normal operations are resumed.
- \_\_\_\_\_ Inform local operators such as utilities, telephone, and/or railway.
- \_\_\_\_\_ Complete follow-up and written reporting, as the situation demands.

Note: Abnormal operations are further detailed in the Company's O&M Manual (Procedure #P-195.402(d)).

**LEAKS / SPILLS**

**FIGURE 3.1****SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)****STORAGE TANK LEAK, SPECIFIC RESPONSE**

- \_\_\_\_\_ Shut down all tank farm product movement operations and isolate the tank.
- \_\_\_\_\_ Initiate Hazardous Work procedures (i.e. Hot Work, Safe Work, Confined Space), as applicable.
- \_\_\_\_\_ Ensure that the containment area drainage valve(s) is "closed".
- \_\_\_\_\_ If possible, block drainage of spilled material from traveling offsite.
- \_\_\_\_\_ If near tank bottom, consider filling tank with water and maintain water bottom to suspend the discharge.
- \_\_\_\_\_ Stop all traffic in hazardous area (inside and outside of property boundaries), as the situation demands.
- \_\_\_\_\_ Remove product from containment area (at a sump or in a low area) with an explosion proof pump, oil skimmer, and/or vacuum truck w/ skimmer attachments.
- \_\_\_\_\_ Determine the direction and expected duration of spill movement. Refer to the maps in Section 6.0.
- \_\_\_\_\_ Empty tank as soon as possible.
- \_\_\_\_\_ Make all necessary repairs. Return the line/tank to service when repairs are complete and tested.
- \_\_\_\_\_ Clean up product spill to eliminate any possible environmental problems. Be alert for underground cables.
- \_\_\_\_\_ Stockpile waste for eventual disposal.
- \_\_\_\_\_ If the spill escapes the containment area, review the location of socio-economic and environmentally sensitive areas identified in Section 6.0 and ACP. Determine which of these may be threatened by the spill and direct the response to these locations. Initiate protection and recovery actions.
- \_\_\_\_\_ Inform local operators such as utilities, telephone company, railway.
- \_\_\_\_\_ Complete follow-up and written reporting, as the situation demands.

**FIGURE 3.1****SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)****LEAK OR SPILL AT THE TRUCK RACK, SPECIFIC RESPONSE**

- \_\_\_\_\_ Evacuate personnel from the truck rack area, as the situation demands.
- \_\_\_\_\_ Shut down all loading operations, pump motors and loading valves.
- \_\_\_\_\_ Guard against all source of ignition.
- \_\_\_\_\_ Stop all traffic from entering rack or hazardous area.
- \_\_\_\_\_ If a line leak, close off riser valves and/or tank valves.
- \_\_\_\_\_ Clean area as directed by Facility Management.
- \_\_\_\_\_ Resume truck loading operations as directed by Facility Management.

**LEAKS / SPILLS**



**FIGURE 3.1****SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)****MARINE OPERATION SPILLS/LEAKS, SPECIFIC RESPONSE**

- \_\_\_\_\_ Shut down all engines/motors/transfer operations by immediate notification to the vessel by radio or other means.
  - \_\_\_\_\_ Close all line and ship manifold discharge valves.
  - \_\_\_\_\_ Notify Facility personnel (i.e. Operators, Supervisor, Operations Manager, (and General Manager).
  - \_\_\_\_\_ The Operator on duty shall turn on the amber rotating light at the dock indicating to passing traffic that there has been a spill.
  - \_\_\_\_\_ If hose rupture, drain line into barge, drums, buckets, and blank line to stop spill into water.
  - \_\_\_\_\_ Initiate Hazardous Work procedures, as applicable.
  - \_\_\_\_\_ If other than hose rupture, determine source of leak and stop.
  - \_\_\_\_\_ Prevent discharge from entering the water if at all possible by:
    - Pumping from sump or deck drainage system into drums, tanks, containment area, or other storage facility.
    - Directing the flow into a containment or collection area away from the water, if feasible.
    - Placing containment boom or sorbent material around area (provided that a safe operating environment exists).
  - \_\_\_\_\_ If the product enters the water and a safe operating environment exists, try to contain by:
    - Deploying spill response equipment (facility and/or contract) to prevent/mitigate spill impact (spreading of spill).
    - Attempting to divert/contain the spill:
      - In quiet area or low current areas of the water.
      - Away from strong winds or in areas that could be affected by change in wind direction.
      - Away from areas of hazard to public, property improvements, marinas, water intakes, etc.
- Note: Use of dispersants is prohibited without prior approval by the Federal On-Scene-Coordinator (FOSC), in conjunction with the Regional Response Team (RRT), as authorized by the provisions of the National Response Plan (NCP).
- \_\_\_\_\_ Make all necessary repairs.
  - \_\_\_\_\_ Return the line/vessel to service when repairs are complete (USCG must approve).



**FIGURE 3.1****SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)****MARINE OPERATION SPILLS/LEAKS (Cont'd)**

- \_\_\_\_\_ Clean up spilled product to eliminate any possible environmental problems. Be alert for underground cables.
- \_\_\_\_\_ If the spill escapes the containment area, review the location of socio-economic and environmentally sensitive areas identified in Section 6.0 and the ACP. Determine which of these may be threatened by the spill and direct the response operation to these locations. Initiate protection and recovery actions.
- \_\_\_\_\_ Request local authorities (USCG, Marine Patrol, Harbor Police, etc.) to establish traffic control in the area, as the situation demands.
- \_\_\_\_\_ Inform local operators such as utilities, telephone company, railway.
- \_\_\_\_\_ Complete follow-up and written reporting, as the situation demands.

**VESSEL BREAKAWAYS**

- \_\_\_\_\_ Terminate transfer operations and close all transfer valves.
- \_\_\_\_\_ Notify tug/owner.
- \_\_\_\_\_ Deploy tug (in the event it is on standby away from the tow) to retrieve the barge(s) and resecure mooring to the dock.

**LEAKS / SPILLS**

**FIGURE 3.1****SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)****EXPLOSIONS AND/OR FIRE, SPECIFIC RESPONSE****INDIVIDUAL DISCOVERING THE FIRE - (All Employees)**

- \_\_\_\_\_ Call the Fire Department (911).
- \_\_\_\_\_ Sound the Facility fire alarm.
- \_\_\_\_\_ Push the red emergency shutdown switch.
- \_\_\_\_\_ Notify Facility Management.
- \_\_\_\_\_ Return to the scene of the fire and, if practical and safe, attempt to extinguish same with the nearest fire equipment available.
- \_\_\_\_\_ In the event the fire is too large for an individual to fight alone, the individual sounding the alarm or making the phone call should stand by at a safe distance to direct the fire department to the scene of the fire and keep personnel and vehicles from entering the danger area.
- \_\_\_\_\_ Alert all Facility areas of the exact location and extent of the fire.
- \_\_\_\_\_ Instruct all drivers to discontinue loading, disconnect loading arms, and tell all drivers present to stand by their trucks and wait for instructions to remove same to safe area.
- \_\_\_\_\_ Shut off pumps.
- \_\_\_\_\_ Close loading rack valves and stand by truck loading rack for instructions.
- \_\_\_\_\_ In the event that a vessel is tied up at the dock, instruct the Person-in-Charge on duty to stand-by to shut off all valves at the dock.
- \_\_\_\_\_ If product is being received from pipelines, notify the appropriate pipeline personnel of the fire and request that the pipeline be shut down. The tank which is receiving product from the pipeline must not be closed until assurance is received that the pipeline is down, unless that tank is involved in the fire.
- \_\_\_\_\_ After confirmation has been received that pipelines have been shut down, close the pipeline header valves.

**FIGURE 3.1****SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)****EXPLOSIONS AND/OR FIRE (Cont'd)**

- \_\_\_\_\_ Drivers with trucks in the Facility, stand by truck for instructions on where to move vehicles. Others report to the office and await further instructions.
- \_\_\_\_\_ Shut off power at the electrical panel to any vapor recovery units.
- \_\_\_\_\_ Press the emergency shut off for any vapor recovery units.
- \_\_\_\_\_ Close valves for the tanks in the tank farm.

**INDIVIDUAL DISCOVERING THE FIRE (in the absence of Supervision)**

- \_\_\_\_\_ In the event of fire and the absence of a member of supervision, any Company employee on duty is designated as the individual in charge.
- \_\_\_\_\_ The individual discovering the fire will adhere to the instructions issued for the normal operation.
- \_\_\_\_\_ Ensure that the fire department has been notified.
- \_\_\_\_\_ Alert all Facility areas of the exact location and extent of the fire.
- \_\_\_\_\_ Ensure supervision is notified by telephone (refer to Figure 2.2).
- \_\_\_\_\_ Shut down the pipeline if running and proceed to close tank valves.
- \_\_\_\_\_ Prior to the arrival of a member of supervision, the individual will remain in charge and will direct the fire department to the scene of the fire.

**All personnel are reminded that outsiders other than emergency services will not be allowed in the Facility during the time of an emergency, and that no statements will be issued to the media or other interested parties except by designated Facility Management. Be courteous with media representatives and direct them to the designated spokesman.**

**FIGURE 3.1****SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)****VAPOR CLOUD (from a massive spill, line rupture, etc.), SPECIFIC RESPONSE**

- \_\_\_\_\_ The person who discovers the vapor cloud will sound the alarm and notify the supervisor on duty and vacate the area.
- \_\_\_\_\_ **Remember: the only proper action in the presence of a vapor cloud is to get away from it. Do not shut off electrical equipment.**
- \_\_\_\_\_ All personnel will report to the evacuation muster point for roll call and further instructions.
- \_\_\_\_\_ After all personnel have been accounted for, the Facility Management, the Facility Supervisor or a Facility Operator will initiate the following actions as deemed necessary:
  1. Shut down pipeline.
  2. Evacuation of adjacent property.
  3. Only the fire department will be permitted to enter the Facility.
- \_\_\_\_\_ Contact the appropriate agencies and potentially affected neighbors (refer to Figure 2.5).

**VAPOR CLOUD**

## FIGURE 3.1

### SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)

(b) (7)(F)



## FIGURE 3.1

### SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)

(b) (7)(F)



**FIGURE 3.1****SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)****NATURAL DISASTER (Hurricane/Tornado/Severe Storms), SPECIFIC RESPONSE**

Although many disasters cannot be prevented or predicted, preparation can significantly reduce losses. In the event of a severe weather condition or a natural disaster, the Facility Manager or a Facility Operator will be the emergency coordinator.

- **Be Aware of Changing Weather Conditions**
  1. Tornado watch - conditions are right for the formation of a tornado.
  2. Hurricane watch - there is the threat of a hurricane.
  3. Tornado warning - a tornado has been sighted but is not in the area at this time.
  4. Hurricane warning - a hurricane is expected within 24 hours.
  5. Tornado alert - a tornado has been sighted in the immediate area - take cover immediately.
- **If Severe Weather Conditions Threaten**
  1. Sound fire alarm.
  2. Alert Facility personnel of condition.
  3. If time permits, all personnel should assemble at an inside room in the Facility for shelter.
  4. If time does not permit, seek shelter in low level area away from glass.
  5. Make certain Facility personnel are aware of the condition.
  6. Stay in shelter until "**all clear**" has been issued.
- **Immediately After the Storm**
  1. Account for all personnel.
  2. Survey for damages to Facility property.
  3. Initiate team for any repairs if needed (i.e. high tank alarms, lighting, etc.).
  4. Refer to this Plan for additional response guidance regarding fires, spills, etc., as needed.

**FIGURE 3.1****SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)****MEDICAL EMERGENCY, SPECIFIC RESPONSE**

- \_\_\_\_\_ Apply appropriate first aid for both injury and shock, exercising care not to cause further injury.
- \_\_\_\_\_ If victim is unconscious and not breathing, immediately apply artificial respiration (if trained in CPR) and continue without interruption until natural breathing is restored or relieved by another trained CPR personnel or other qualified medical personnel.
- \_\_\_\_\_ Call for ambulance or other medical evacuation resources, if appropriate.
- \_\_\_\_\_ Notify hospital of patient arrival and extent of injury.
- \_\_\_\_\_ Notify victim's immediate family.
- \_\_\_\_\_ Complete follow-up and written reporting, as the situation demands.

**MEDICAL EMERGENCY**



FIGURE 3.2

FLAMMABLE LIQUIDS (Non-Polar/Water-Immiscible)				
The following information is intended to provide the initial responder(s) with data that may be useful in making quick decisions and executing prompt response actions. <u>The information is intended for guideline purposes only.</u>				
PRODUCTS	Diesel Fuel	Gasoline	Naphtha	Gasoline Additives
HAZARD IDENTIFICATION / RECOGNITION				
GUIDE NO. 128	<b>DANGERS</b> <ul style="list-style-type: none"><li>● HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames.</li><li>● Vapors may form explosive mixtures with air.</li><li>● Vapors may travel to source of ignition and flash back.</li><li>● Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks).</li><li>● Vapor explosion hazard indoors, outdoors or in sewers.</li><li>● Those substances designated with a "P" may polymerize explosively when heated or involved in a fire.</li><li>● Runoff to sewer may create fire or explosion hazard.</li><li>● Containers may explode when heated.</li><li>● Many liquids are lighter than water.</li><li>● Substance may be transported hot.</li></ul>			
	<b>HEALTH</b> <ul style="list-style-type: none"><li>● Move victim to fresh air. Call 911 or emergency medical service.</li><li>● Apply artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult.</li><li>● Remove and isolate contaminated clothing and shoes.</li><li>● In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.</li><li>● Wash skin with soap and water.</li><li>● Keep victim warm and quiet.</li><li>● Ensure that medical personnel are aware of the material(s) involved, and take precautions.</li></ul>			
PUBLIC SAFETY				
<ul style="list-style-type: none"><li>● Isolate spill or leak area immediately for at least 25 to 50 meters (80 to 160 feet) in all directions.</li><li>● Keep unauthorized personnel away.</li><li>● Stay upwind.</li><li>● Keep out of low areas.</li><li>● Ventilate closed spaces before entering.</li></ul>				
EVACUATION	<b>Large Spill</b> <ul style="list-style-type: none"><li>● Consider initial downwind evacuation for at least 300 meters (1,000 feet).</li></ul>			
	<b>Fire</b> <ul style="list-style-type: none"><li>● If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.</li></ul>			
Information provided by the Emergency Response Guidebook 2000.				

FIGURE 3.3

<b>FLAMMABLE LIQUIDS</b> <b>(Non-Polar/Water-Immiscible)</b>	
The following information is intended to provide the initial responder(s) with data that may be useful in making quick decisions and executing prompt response actions. <u>The information is intended for guideline purposes only.</u>	
<b>PRODUCTS</b>	<b>Benzene</b>
HAZARD IDENTIFICATION / RECOGNITION	
<b>GUIDE NO.</b> <b>130</b>	<b>DANGERS</b> <ul style="list-style-type: none"> <li>● HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames.</li> <li>● Vapors may form explosive mixtures with air.</li> <li>● Vapors may travel to source of ignition and flash back.</li> <li>● Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks).</li> <li>● Vapor explosion hazard indoors, outdoors or in sewers.</li> <li>● Those substances designated with a "P" may polymerize explosively when heated or involved in a fire.</li> <li>● Runoff to sewer may create fire or explosion hazard.</li> <li>● Containers may explode when heated.</li> <li>● Many liquids are lighter than water.</li> </ul>
HEALTH	
<ul style="list-style-type: none"> <li>● May cause toxic effects if inhaled or absorbed through skin.</li> <li>● Inhalation or contact with material may irritate or burn skin and eyes.</li> <li>● Fire will produce irritating, corrosive and/or toxic gases.</li> <li>● Vapors may cause dizziness or suffocation.</li> <li>● Runoff from fire control or dilution water may cause pollution.</li> </ul>	
PUBLIC SAFETY	
<ul style="list-style-type: none"> <li>● Isolate spill or leak area immediately for at least 50 meters (150 feet) in all directions.</li> <li>● Keep unauthorized personnel away.</li> <li>● Stay upwind.</li> <li>● Keep out of low areas.</li> <li>● Ventilate closed spaces before entering.</li> </ul>	
<b>EVACUATION</b>	<b>Large Spill</b> <ul style="list-style-type: none"> <li>● Consider initial downwind evacuation for at least 300 meters (1,000 feet).</li> </ul> <b>Fire</b> <ul style="list-style-type: none"> <li>● If tank, rail car or tank truck is involved in a fire, ISOLATE for 800 meters (1/2 mile) in all directions; also, consider initial evacuation for 800 meters (1/2 mile) in all directions.</li> </ul>
Information provided by the Emergency Response Guidebook 2004.	

## 3.2 DOCUMENTATION OF INITIAL RESPONSE ACTIONS

It is difficult, particularly during the first few minutes of an initial response operation to think about the importance of documentation. A log should be maintained which documents the history of the events and communications that occur during the response. When recording this information, it is important to remember that the log may become instrumental in legal proceedings, therefore:

- Record only facts, do not speculate.
- Do not criticize the efforts and/or methods of other people/operations.
- Do not speculate on the cause of the spill.
- Do not skip lines between entries or make erasures. If an error is made, draw a line through it, add the correct entry above or below it, and initial the change.
- Record the recommendations, instructions, and actions taken by government/regulatory officials.
- Document conversations (telephone or in person) with government/regulatory officials.
- **Request that government/regulatory officials document and sign their recommendations or orders (especially if company personnel do not agree with the suggestions, instructions, or actions).**

## 3.3 OIL CONTAINMENT, RECOVERY AND DISPOSAL

After initial response has been taken to stop further spillage and notifications made to the required agencies, the Company will begin spill containment, recovery, and disposal operations.

The Incident Commander will assess the size and hazards of the spill. The type of product, the location of the spill, and the predicted movement of the spill will be considered.

Based on this assessment, additional clean-up personnel and equipment will be dispatched to the site and deployed to control and contain the spill. Boom may be deployed in waterways to contain the spill and to protect socio-economic and environmentally sensitive areas. Booms may also be used in waterways to deflect or guide the spill to locations where it can more effectively be cleaned up using skimmers, vacuum trucks, or sorbent material. Clean-up equipment and material will be used in the manner most effective for rapid and complete clean-up of all spilled product.

Response and cleanup will continue until all recoverable product is removed, the environment is returned to its pre-spill state, and the unified command of the Company Incident Commander and the Federal and/or State On-Scene Coordinators determine that further response and cleanup is no longer necessary.

### 3.4 STORAGE/DISPOSAL

Strict rules designed to ensure safe and secure handling of waste materials govern the Company waste disposal activities. To ensure proper disposal of recovered oil and associated debris, the following guidelines should be considered:

- In the event of a product spill, the Facility has limited capacity to store recovered product and water. Separated product is pumped to trucks to be carried to the Facility for processing.
- Oily debris will be segregated on site and containerized for temporary storage prior to disposal in accordance with RCRA/CERCLA regulations.
- Transportation of waste material will be performed in accordance with all applicable federal and state guidelines.
- Waste associated with the spill will be disposed of at Company pre-approved sites which have the necessary permits to accept the type of waste to be discharged.

Headquarters Environmental Safety and Health will coordinate activities and secure the necessary permits to ensure proper disposal or recycling of recovered product and debris.

### 3.5 SAMPLING AND WASTE ANALYSIS PROCEDURES

The Company's sampling and waste analysis practices are governed by the regulations for the applicable state and the United States Environmental Protection Agency (EPA). These regulations outline methods and procedures for determining the chemical and physical characteristics of wastes generated by the Facility, including waste associated with spills, so that they may be properly stored, treated, or disposed of.

### 3.6 SAFETY AWARENESS

It is the corporate policy of the Company to provide a safe workplace for all workers. All employees and contractors are responsible for maintaining the safety and health of all workers at the Facility and the response operations.

Prior to engaging in **any** spill response activity:

- All employees/contractors must have received orientation from the Company Safety Plan.
- All contractor response personnel must be in compliance with OSHA training requirements.
- All other personnel will have completed appropriate training for their position as outlined in Section 4.0.
- No employee/contractor shall engage in activities which place them at risk without the appropriate protective equipment and training.

## 3.6 SAFETY AWARENESS (Cont'd)

### 3.6.1 General Response Safety

All company and contractor personnel are expected to comply with the Site Safety and Health Plan for each spill incident.

- Any concern regarding health or safety issues should be immediately addressed.
- The First Responder must consider the spill site as dangerous and the local atmosphere explosive until air monitoring procedures prove that the area is safe.
- The First Responder must exit the area against or across the wind if possible and must also evacuate others who are working in the area.
- All injuries, no matter how minor, must be reported to the Facility Management in a timely manner.
- Prior to entering a spill area, a qualified person must perform an initial safety and health evaluation of the site.

### 3.6.2 Air Monitoring

If the product is volatile, a Safety Monitor shall be designated who is trained in the operation of air monitoring equipment. The Incident Commander must ensure that Safety Monitors are trained and that their equipment is maintained and ready for use.

- The air monitoring equipment shall be activated and checked at the location in which it is stored.
- If petroleum hydrocarbons are involved, air monitoring measurements which are to be made prior to entry into the spill area include:
  - Lower Explosive Limit (LEL)
  - Oxygen content
  - Benzene level
- LEL readings above 10% require immediate evacuation of the area and elimination of ignition sources.
- Oxygen readings below 19.5% require the use of air supplied respiratory protection.
- After assuring that there are no hazards relating to explosion or oxygen depletion, sampling for benzene shall dictate the appropriate respiratory devices to be used by persons entering the area as follows:

## 3.6 SAFETY AWARENESS (Cont'd)

### 3.6.2 Air Monitoring (Cont'd)

#### ***Benzene***

- 0.50 PPM or less, none required
  - 0.50 to 1.0 PPM, half face air purifying
  - 1.0 to 50.0 PPM, full face air purifying
  - 50.0 PPM or greater, pressure demand SCBA
- The Incident Commander is responsible for industrial hygiene monitoring in the post discovery period.

### 3.6.3 Decontamination

Through training programs, Facility personnel know and understand the importance of the removal of hazardous substances from their person if they are contaminated. Eyewash stations and safety showers provide a means to quickly remove gross contamination of harmful agents, including gasoline. Personnel must immediately shower and remove any clothing which is wet or otherwise contaminated. Showers in the change room are to be used for thorough cleansing. Persons should inspect themselves thoroughly before donning a fresh change of clothing. Employees who become saturated with gasoline should supply a urine sample (for the benzene standard's phenol test) at the end of their shift.

Contaminated clothing should be allowed to dry, protected from an ignition source, then laundered before wearing again. Contaminated personal protective equipment must be washed and sanitized before re-using. The washing of contaminated equipment is performed in a "contained area" to assure that the disposal of the wash water can be handled properly.

Establishing "Exclusion - Hot", "Decontamination - Decon", and "Support - Safe" zones are required to prevent the removal of contaminants from the containment area as well as unauthorized entry into contaminated areas.

- Regardless of the decontamination facilities available, all efforts to minimize personnel exposure should be taken.
- Decontamination facilities should be positioned prior to employee/contractor entrance to areas where the potential for exposure to contamination exists. The appropriate Material Safety Data Sheets (MSDS) are available to aid health professionals treating the injured parties. MSDS are separately maintained at the Facility.
- Decontamination facilities should be designed to prevent further contamination of the environment and should have a temporary storage area for items that will be reused in the contaminated area.
- Particular attention should be paid to personal hygiene prior to eating, drinking, or smoking.

### 3.6 SAFETY AWARENESS (Cont'd)

#### 3.6.4 Personal Protective Equipment (PPE)

The following represents OSHA/EPA designated PPE levels for responding to emergencies, post emergency cleanup sites, and/or Temporary Storage and Disposal (TSD) sites. The responder's PPE should be chosen based on his/her level of training and assigned job duties.

Personal Protective Equipment (PPE)	
<b><u>LEVEL A</u></b> <ul style="list-style-type: none"> <li>Self Contained Breathing Apparatus (SCBA) (worn inside suit)</li> <li>Encapsulated Chemical Protective Suit</li> <li>Chemical Protective Gloves</li> <li>Chemical Protective Boots</li> <li>Hard Hat</li> </ul>	<b><u>LEVEL B</u></b> <ul style="list-style-type: none"> <li>SCBA (worn outside suit)</li> <li>Chemical Protective Suit w/Hood</li> <li>Chemical Protective Boots</li> <li>Chemical Protective Gloves</li> <li>Hard Hat</li> </ul>
<b><u>LEVEL C</u></b> <ul style="list-style-type: none"> <li>Air Purifying Respirator (APR)</li> <li>APR ½ Face / Full Face</li> <li>Hard Hat</li> <li>Glasses (worn with ½ face APR)</li> <li>Chemical Protective Boots</li> <li>Chemical Protective Gloves</li> <li>Chemical Protective Suit/Tyvek</li> </ul>	<b><u>LEVEL D</u></b> <ul style="list-style-type: none"> <li>Hard Hat</li> <li>Safety Glasses</li> <li>Work Uniform / Clothes</li> <li>Leather Gloves</li> <li>Safety Boots</li> <li>Nomex</li> </ul>
<b><u>MODIFIED LEVEL D</u></b> Same as Level D with additional protective outer garments.	

### 3.7 EMERGENCY MEDICAL TREATMENT AND FIRST AID

On-site emergency medical response requires the same rapid assessment of the patient as any other situation, but requires the responders to be aware of other considerations that may affect the way they handle the patient. These considerations include the following:

- The potential for contamination of the patient, responders, and equipment should be addressed. Responders should arrange to treat all patients **AFTER** the injured party has been decontaminated according to the Site Safety and Health Plan.
- Site personnel should make the initial assessment of the patient and determine the severity of the injury/illness.
- If the treatment needed is critical care or "life saving" treatment, rapid decontamination of the injured/ill party should be started. Refer to the Site Safety and Health Plan for steps to be taken in an "abbreviated" decontamination for medical treatment.
- **The need for full decontamination should be carefully weighed against the need for prompt medical treatment.**

### 3.7 EMERGENCY MEDICAL TREATMENT AND FIRST AID (Cont'd)

- The ambulance responding to medical emergencies shall be contacted as soon as possible and instructed exactly where to respond when needed and the nature of the contaminant. Telephone reference is provided in Figure 2.5.
- MSDS information will be available from the Incident Commander and should be provided to medical personnel to alert them of decontamination requirements.
- If emergency medical treatment is needed, the Incident Commander, or his designated representatives, will request assistance from trained medical personnel.

### 3.8 THIRD PARTY VESSEL OWNERS/OPERATORS

It is the responsibility of third party vessel owners/operators to have spill contingency plans developed and in place. In the event of a spill involving a third party vessel at the Facility, it is the responsibility of the vessel owner/operator to immediately respond and mitigate the spill and to coordinate response efforts with the Local Response Team.

If a spill occurs when the vessel (carrying Company cargo is underway and within the area of the Facility, the Local Response Team will initiate first Company response to assist the vessel in containment and clean up.

### 3.9 OIL SPILLS IN THE HARBOR

#### 3.9.1 General Procedures

Any party witnessing an oil discharge into the Texas City Ship Channel/Harbor is required to immediately contact the USCG and other concerned parties. The following procedures shall be adhered to with regards to oil spill cleanup:

- Establish a command post at the Harbormaster's Building, TC Seawall.
- The responsible party's supervisor will take charge of the control and cleanup of spill.
- The Coast Guard on-site commander will advise and assist area operations.
- Garner Environmental will go to or will be directed to threatened points.
- The Coast Guard monitors will go to or will be directed to mobile unit assembly sites.
- Communications will be established as follows:
  - To area industries by phone and walkie-talkie channels where available
  - To mobile units via Coast Guard monitors on Channel 81
  - To outside agencies by phone



### 3.9 OIL SPILLS IN THE HARBOR (Cont'd)

#### 3.9.1 General Procedures (Cont'd)

- Industry dock personnel will go to or be directed to designated mobile unit assembly points.
- Inter-industry equipment back-up will be mobilized as needed.
- Garner Environmental will furnish men and equipment for cleanup, will stretch booms and commence picking up pollutant, and will request outside assistance as needed.
- Access to the dock area, at the foot of 6th Street and at the Seawall levee entrance, Loop 197 South, will be controlled.
- The responsible party, with the aid of the USCG on-site commander, will designate a party to meet the press and media representatives.
- The USCG on-site commander will decide if the port is to be closed and will notify VTS and pilots.
- The responsible party will establish an Operations Control Center at its own facility to back-up the command post, provide additional communications, handle public relations and information releases, and to receive incoming personnel from outside agencies.

#### 3.9.2 Composition of Response Units at Docks

- | <u>CODE NAME</u>        | <u>COMPOSITION</u>  |
|-------------------------|---|
| ■ Unit 1                | Texas City Fire Department, Texas City Police Department, Texas City Civil Defense Director |
| ■ Assembly point -      | Command Post  |
| ■ Unit 2                | CG 32 Patrol Boat on Channel 81 (when available)  |
| ■ Unit 15               | Houston Ship Repair, Inc.   |
| ■ Sterling Chemicals    |   |
| ■ Assembly point -      | Dock 14   |
| ■ Area covered -        | Docks 1-16, north end of harbor   |
| ■ CG monitor with radio | Channel 81  |

### 3.9 OIL SPILLS IN THE HARBOR (Cont'd)

#### 3.9.2 Composition of Response Units at Docks (Cont'd)

- Unit 30                      BP Refinery Texas City Site.
  - Valero
  - Marathon Ashland
  - Assembly point - Dock 30
  - Area covered - Docks 18-41
  - CG monitor with radio Channel 81
  
- Unit 50                      BP Chemical Texas City Site
  - Assembly point - Dock 50
  - Area covered - Docks 50-66
  - CG monitor with radio Channel 81
  
- Unit 66                      DOW, Boat and/or "Billy Boy" with boom
  - Move up to Dock 50
  
- Base                        Command post - Dock supervisor, responsible party, Harbormaster's Building on dike overlooking harbor
  - Officer in Charge, USCG Harbormaster
  - CG monitor with radio on Channel 81
  
- Control                    Operations Control - located at office of responsible party
  - Observers meet here
  - Monitor with radio on Channel 81
  - Participants check in here for information and assignment
  - Representatives of media meet here
  
- Police                      At entrances to regulate traffic and access to port; to handle
  - those who need to enter and obtain suitable identification.

#### 3.9.3 Boom Deployment

All boom deployment will be performed by the OSRO identified in Appendix C.

## 4.0 RESPONSE TEAMS

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### 4.1 INTRODUCTION

This section describes organizational features and duties of the Local Response Team and the Spill Management Team.

The key to an effective emergency response is a rapid, coordinated, tiered response by the affected facility, and the Spill Management Team, consistent with the magnitude of an incident.

First response to an incident at the Facility will be provided by the Local Response Team (LRT). The Spill Management Team will respond, to the degree necessary, to incidents exceeding local capability. If a response exceeds the Local Response Team's capabilities, the Facility Incident Commander will activate the Spill Management Team.

The Spill Management Team will use the NIIMS Incident Command System (ICS) to manage emergency response activities. Because ICS is a management tool that is readily adaptable to incidents of varying magnitude, it will be used for all emergency incidents, and staffing levels will be adjusted to meet specific response team needs, based on incident size, severity, and type of emergency.

An explanation of ICS and the roles and responsibilities for primary members of the Local Response Team is provided in Appendix B.

### 4.2 QUALIFIED INDIVIDUAL

It is the responsibility of the Qualified Individual (QI) to coordinate with the Federal On-Scene Coordinator (FOSC) throughout the response.

Vital duties of the Qualified Individual (QI) include:

- Activate internal alarms and hazard communication systems to notify all Facility personnel.
- Notify all response personnel, as needed.
- Identify the character, exact source, amount, and extent of the release, as well as the other items needed for notification.
- Notify and provide necessary information to the appropriate Federal, state, and Local authorities with designated response roles, including the National Response Center (NRC), State Emergency Response Commission (SERC), and local response agencies.
- Assess the interaction of the spilled substance with water and/or other substances stored at the Facility and notify response personnel at the scene of that assessment.

## 4.2 QUALIFIED INDIVIDUAL (Cont'd)

- Assess the possible hazards to human health and the environment due to the release. This assessment must consider both the direct and indirect effects of the release (i.e., the effects of any toxic, irritating, or asphyxiating gases that may be generated, or the effects of any hazardous surface water runoffs from water or chemical agents used to control fire and heat-induced explosion).
- Assess and implement prompt removal actions to contain and remove the substance released.
- Coordinate rescue and response actions as previously arranged with all response personnel.
- Activate and engage in contracting with oil spill removal organizations.
- Use authority to immediately access company funding to initiate cleanup activities.
- Direct cleanup activities until properly relieved of this responsibility.

The Terminal Manager serves as Qualified Individual (QI) and other Terminal Management personnel (see Figure 2.2) serve as the Alternate Qualified Individuals (AQI). Arrangements will be made to ensure that either one or the other is available on a 24-hour basis and is able to arrive at the Facility in a reasonable time. The AQI shall replace the QI in the event of his/her absence and have the same responsibilities and authority.

## 4.3 LOCAL RESPONSE TEAM

The first Company person on scene will function as the Incident Commander and person-in-charge until relieved by an authorized supervisor who will then assume the position of Incident Commander (IC). Transfer of command will take place as more senior management respond to the incident. For response operations within the control of the Local Response Team, the role of IC will typically be assumed and retained by Terminal Management.

The number of positions/personnel required to staff the Local Response Team will depend on the size and complexity of the incident. The duties of each position may be performed by the IC directly or delegated as the situation demands. The IC is always responsible for directing the response activities and will assume the duties of all the primary positions until the duties can be delegated to other qualified personnel.

Refer to the job descriptions detailed in Appendix B for the primary response team positions.

A complete functional ICS organization is shown in Figure 4.1. The LRT should try to fill the necessary positions and request additional support from the Spill Management Team to fill/back up all the positions as the incident may dictate. Telephone reference is provided in Figure 2.2. Detailed job descriptions of the primary response team positions are provided in Appendix B.

## 4.4 SPILL MANAGEMENT TEAM

For spill response operations outside the capabilities of the Local Response Team (LRT), the QI/AQI or IC will determine the need for mobilization of the Spill Management Team (SMT). The members of the LRT will become members of the SMT.

The Spill Management Team (SMT), once fully staffed, is designed to cover all aspects of a comprehensive and prolonged incident response. During a prolonged response, additional personnel may be cascaded in, and more than one level within the Team may be involved to sustain 24-hour operations.

Each SMT is organized according to NIIMS Incident Command System principles (Figure 4.2). Led by the Incident Commander, the team is composed of the following principal components:

- Command
- Operations
- Logistics
- Source
- Planning
- Finance

The Spill Management Team is staffed by specially-trained personnel from various facility/corporate locations, and by O'Brien's Response Management Inc.

## 4.5 RESPONSE TEAM TRAINING

The Company requires that all response personnel, including contractors and casual labor, have the appropriate training necessary to serve on a response team during an emergency. Team members will receive training in the following:

### ***Integrated Contingency Plan Review***

All Local Response Team Members should review their Integrated Contingency Plan whenever their job position or responsibilities change under the Plan. A copy of this Plan will be available at all times to Team Members.

### ***HAZWOPER (29 CFR 1910.120)***

Federal and state regulations require that response team members maintain up-to-date HAZWOPER training necessary to function in their assigned positions. At a minimum, Team members will receive "First Responder Awareness Level" training. All personnel responding to an incident must satisfy the applicable HAZWOPER training requirements of 29 CFR 1910.120.

## 4.5 RESPONSE TEAM TRAINING (Cont'd)

OSHA HAZWOPER TRAINING REQUIREMENTS		
Responder Classification	Required Training Hours	Refresher
<b>29CFR 1910.120(q) Emergency Response</b>		
First Responder - Awareness Level	2-4 hrs demonstration of competency	same
First Responder - Operations Level	8 hrs	8 hrs
Hazardous Materials Technician	24 hrs plus competency	8 hrs
Hazardous Materials Specialist	24 hrs plus competency in specialized areas	8 hrs
Incident Commander	24 hrs plus competency	8 hrs
<b>29CFR 1910.120(e) Clean Up Sites</b>		
General Site Workers	40 hrs / 3 days on the job training	8 hrs
Occasional Workers (Limited Tasks)	24 hrs / 1 day on the job training	8 hrs
General Site Workers (Low Hazard)	24 hrs / 1 day on the job training	8 hrs
Supervisors	8 hrs supervisor training	8 hrs
<b>29CFR 1910.120(p)(7)(8) RCRA TSD Sites</b>		
New Employees	24 hrs	8 hrs
Current Employees*	24 hrs	8 hrs

\* Previous work experience and/or training certified as equivalent by employer.

### ***Incident Command System***

Response team members will receive ICS training and may also receive supplemental training in other related general topics.

### ***Training Records***

Training records for local team members will be maintained at the Facility according to Federal, state, and local government requirements (three (3) years for the U.S. Coast Guard and five (5) years for the U.S. Environmental Protection Agency) and as long as team members are assigned duties under this Plan for DOT/PHMSA.

## 4.6 RESPONSE TEAM EXERCISES

Facility/Spill Management Team members, government agencies, contractors, and other resources must participate in response exercises required by Federal, state, or local regulations and as detailed in the "National Preparedness for Response Exercise Program (PREP) Guidelines." The Company (through the Environmental Compliance Coordinator) will conduct announced and unannounced drills to maintain compliance, and each plan-holder must participate in at least one exercise annually. The following table lists the triennial exercise cycle for facilities (see PREP Guidelines for full details).

## 4.6 RESPONSE TEAM EXERCISES (Cont'd)

TRIENNIAL CYCLE		
Total Number	Frequency	Exercise Type/Description
12	Quarterly	QI Notification Exercise
6	Semi-Annual	Equipment Deployment Exercise ( <i>Facility-owned equipment</i> )
3	Annual	Response Team Tabletop Exercise
3	Annual	Equipment Deployment Exercise ( <i>facilities with OSRO-owned equipment</i> )
3	Annual	Unannounced Exercise ( <i>not a separate exercise</i> ) Actual response can be considered as an unannounced exercise.
NOTE: All response plan components must be exercised at least once in the Cycle.		

### ***Quarterly QI Notification Exercise***

- **Scope:** Exercise communication between facility personnel and the QI(s) and/or designated alternate(s). At least once each year, one of the notification exercises should be conducted during non-business hours.
- **Objective:** Contact must be made with a QI or designated alternate, as identified in the Plan.
- **General:** All personnel receiving notification shall respond to the notification and verify their receipt of the notification. Personnel who do not respond should be contacted to determine whether or not they received the notification.

### ***Semi-Annual Equipment Deployment Exercise (for facilities with equipment)***

- **Scope:** Deploy and operate facility response equipment identified in the response plan. The equipment to be deployed must include the following, at a minimum:
  - 1,000 feet of representative type of boom;
  - one of each type of skimming system; or
  - the equipment necessary to respond to the facility's Small/Average Most Probable Discharge (AMPD), whichever is less.
- **Objective:** Demonstrate personnel's ability to deploy and operate response equipment. Ensure that the response equipment is in proper working order.
- **General:** The Facility may take credit for actual equipment deployment to a spill, or for training sessions, as long as the activities are properly documented.

## 4.6 RESPONSE TEAM EXERCISES (Cont'd)

### ***Annual Equipment Deployment Exercise (OSRO-owned equipment)***

- **Review:** The Facility should verify that the OSRO(s) has completed the equipment deployment exercise requirements and has maintained the necessary documentation. The OSRO may deploy equipment at any location, so long as it occurs within an operating environment similar to the Facility's.
- **Scope:** OSRO must deploy and operate response equipment identified in the response plan. The equipment to be deployed must include the following, at a minimum:
  - 1,000 feet of representative type of boom.
  - One of each type of skimming system.
- **Objective:** OSRO must demonstrate the ability of the personnel (OSRO) to deploy and operate response equipment (OSRO). Ensure that the response equipment (OSRO) is in proper working order.

### ***Annual Response Team Tabletop Exercise***

- **Scope:** Exercise the response team's organization, communication, and decision-making in managing a spill response. Each team identified within the plan must conduct an annual Response Team Tabletop Exercise.
- **Objective:** Exercise the response team in a review of the following:
  - Knowledge of the Plan.
  - Proper notifications.
  - Communications system.
  - Ability to access an OSRO.
  - Coordination of internal spill response personnel.
  - Review of the transition from a local team to a regional team.
  - Ability to effectively coordinate response activity with the National Response System (NRS) Infrastructure.
  - Ability to access information in the Area Contingency Plan.
- **General:** A minimum of one Response Team Tabletop Exercise in a triennial cycle will involve a Worst-Case Discharge scenario.

### ***Government-Initiated Unannounced Exercise***

- **Scope:** The Facility is required to participate in only one unannounced exercise every 36 months from the date of the last government-initiated unannounced exercise.
  - Exercises are limited to approximately four hours in duration.
  - Exercises would involve response to a Small/Average Most Probable Discharge scenario.
  - Exercise would involve equipment deployment to respond to a spill scenario.



## 4.6 RESPONSE TEAM EXERCISES (Cont'd)

- **Objective:** Conduct proper notifications to respond to unannounced scenario of a Small/Average Most Provable Discharge.
  - Demonstrate that the response is timely, conducted with an adequate amount of equipment for the scenario, and properly conducted.
- **General:** This exercise is only applicable to those facilities which are randomly chosen.

### ***Exercise Documentation***

- All exercises should be documented and maintained at the facility; documentation should specify:
  - The type of exercise;
  - Date and time of the exercise;
  - A description of the exercise;
  - The objectives met in the exercise;
  - The components of the response plan exercised; and
  - Lessons learned.
- Exercise documentation should be kept on file for the required length of time depending on the regulating agency (three (3) years for the U.S. Coast Guard and five (5) years for the U.S. Environmental Protection Agency).

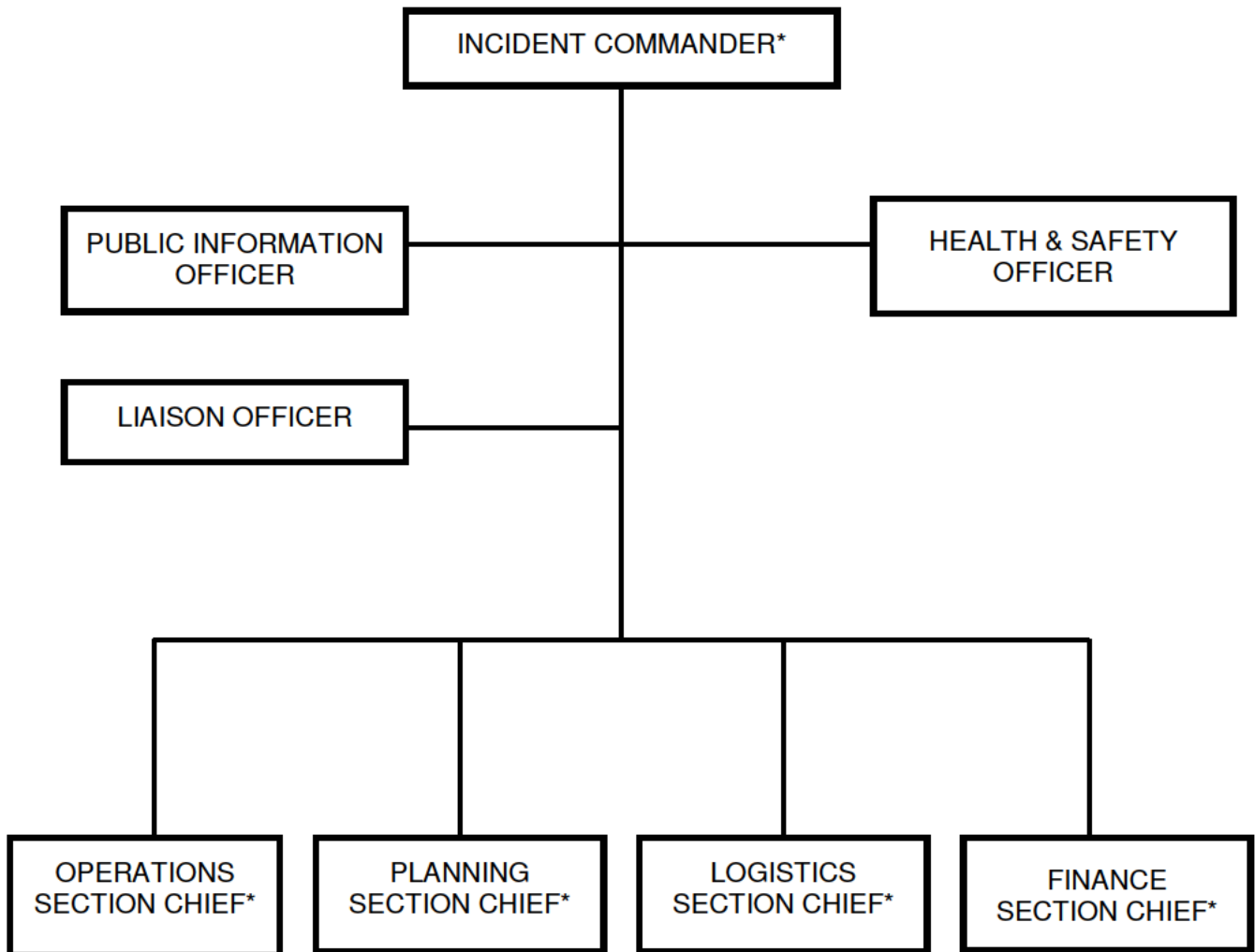
## 4.7 SITE SAFETY AND HEALTH PLAN(S) DEVELOPMENT

The Incident Commander or Safety Representative is responsible for preparing a Site Safety and Health Plan that establishes site-specific policies, practices, and procedures to protect workers and the public from coming into contact with potential chemical and/or physical hazards. A Site Safety and Health Plan will contain the following information:

- Guidance on who is responsible for monitoring site safety.
- A characterization of the risks associated with each operation that will be conducted in the area covered by the plan.
- A description of known chemical and physical hazards, and the measures that have been instituted to eliminate the hazards or reduce them to acceptable levels.
- Guidance on the level of HAZWOPER training required for workers commensurate with their job responsibilities.
- A definition of site control measures, including a site map.
- A description of decontamination procedures for personnel and equipment.

A sample Site Safety and Health Plan format is presented in Appendix K.

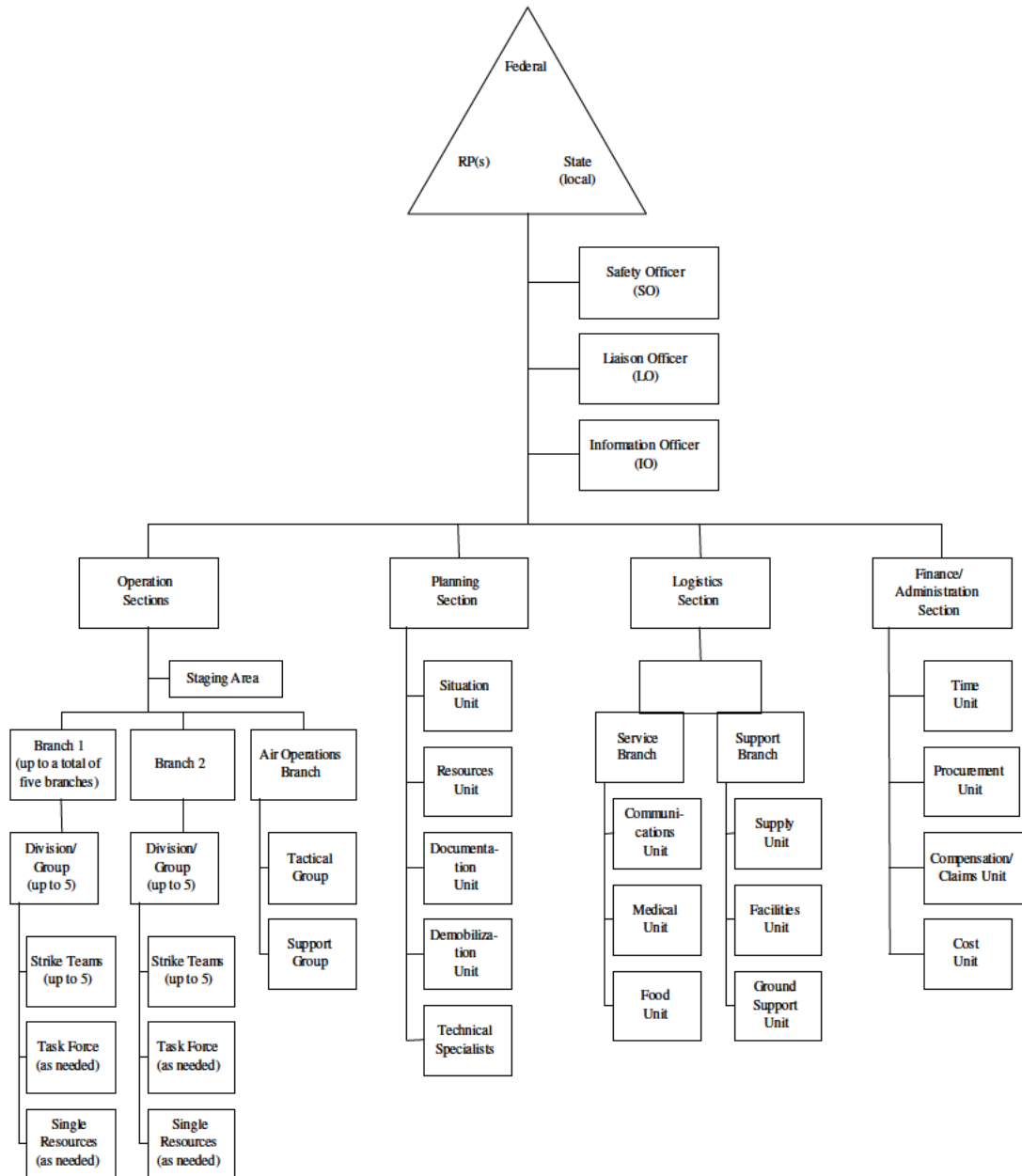
**FIGURE 4.1**  
**LOCAL RESPONSE TEAM**  
(For Initial Response and Class I & II Incidents)



\* NOTE: Spill Management Team (SMT) personnel can assume any of these positions as necessary.

## FIGURE 4.2 SPILL MANAGEMENT TEAM

(For incidents beyond the response capability of the Local Response Team)



**Corporate Support and RMA to provide staff in a manner commensurate with required spill cleanup operations.**

## 5.0 RESPONSE EQUIPMENT/RESOURCES

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The following sections outline the various response equipment/resources available from the Facility, other Company facilities, Oil Spill Removal Organizations, and other outside resources.

### 5.1 FACILITY RESPONSE EQUIPMENT

The Facility is not equipped with spill response equipment. The Facility maintains only a minimal supply of cleanup resources. These materials and equipment are used during routine maintenance and housekeeping procedures at the Facility. Examples of this kind of usage include, but is not limited to, valve replacements and usage of paints and solvents. All spill response will be done by qualified contractors who maintain their own equipment. The Facility also has contracts in place with Oil Spill Removal Organizations. Figure 5.1 lists the contracted Oil Spill Removal Organizations

### 5.2 OTHER COMPANY RESOURCES

Additional Company spill response equipment and manpower resources may be available to supplement the response operation.

### 5.3 CONTRACT RESOURCES

In the event of a discharge which is beyond the initial response capabilities of the Local Response Team, contract manpower and equipment resources can be obtained through Oil Spill Removal Organization(s) (OSRO). These OSROs can provide manpower and containment/clean-up equipment for the response operation on land, water, or adjacent shorelines. The resources will be secured from an approved Company contractor. Notification/implementation of these resources will typically be handled by Facility Management. Figure 5.1 provides a quick reference to the Oil Spill Removal Organizations and details their response capability and estimated response times. Additional OSRO data, including equipment inventories and/or USCG certification data, is provided in Appendix C. **Telephone reference is provided in Figure 2.5.** *(Note: The Company will ensure that each OSRO has a comprehensive maintenance program and applicable training / drills programs in place at contract renewal.*

### 5.4 COOPERATIVE/MUTUAL AID RESOURCES

Texas City Industrial Mutual Aid System (IMAS) resources are currently available to the Facility. IMAS can respond within 1 hour of notification.

### 5.5 EXPERTS AND CONSULTANTS

The Company maintains a relationship with various environmental and technical consultants that can provide support in the event of an emergency incident. These consultants can provide expertise and support in the areas of emergency response management, environmental services, site assessment, permitting, waste treatment, recycling, dewatering, hazardous waste disposal, and remediation.

## 5.6 VOLUNTEERS

Volunteers will not be utilized by the Company for responding to spills originating from the Facility. All volunteers will be referred to the State or Federal On-Scene Coordinator (EPA).

## 5.7 COMMUNICATIONS

Effective and efficient communications systems are essential for emergency response at every level. The communications system will be utilized to gather information and current status reports as well as to provide coordination and direction to widely separated work groups involved in search, containment/ diversion, repair, traffic control, public control or evacuation, and restoration.

Lines of communication between the Incident Commander, Local Response Team, and the Spill Management Team members are demonstrated in the organization charts shown in Figures 4.1 and 4.2. Communication of the overall spill response operation between the Facility and the responsible government agencies in the Federal Regional Response Team (RRT) will occur between the Incident Commander and the Federal On-Scene Coordinator. Appendix J provides additional detail on the Federal Response Organization.

### 5.7.1 Central Communications System

Prearranged communication channels are of the utmost importance in dealing with Facility emergencies. The notification procedures and telephone contacts documented in Section 2.0 will be reviewed in accordance with the earlier documented updating procedures. The predetermined communications channels include the following:

- A list of emergency telephone numbers for internal management and emergency response personnel (Figures 2.2 and 2.5).
- A list of emergency telephone numbers for various external resources such as the fire and police department, medical, and regulatory agencies (Figure 2.5).
- A list of emergency telephone numbers for contract response resources (Figure 2.5).

### 5.7.2 Communications Equipment

Field communications during a spill response to a small or medium discharge will be handled via the existing Facility communications network. This network will utilize existing telephones, FAX machines, and computers and will be maintained by Facility personnel. In the event of a Worst-Case Discharge, field communications will be enhanced with contract resources as the situation demands (see Contractor Communication Equipment, Appendix C).

## 5.7 COMMUNICATIONS (Cont'd)

### 5.7.3 Communication Types

**Radios** - Handheld and vehicle mounted radio sets are the most effective means of communication for the field response operation. The units are battery operated, multi-channelled, and have a typical range that will cover the area of the response operation. Additional radio sets and battery packs/charges will be necessary in the event of a prolonged response operation.

**Telephone (Conventional)** - Conventional land line telephones are the most effective means of communication for regulatory and advisory notifications during a spill response operation. Additional telephone lines can be installed in the event of a prolonged response operation.

**Telephone (Cellular)** - Cellular telephones allow for added mobility and response effectiveness. Cellular phones are commonly maintained by certain Facility personnel. Additional cellular phones can be secured in the event of a prolonged response operation.

**Pagers** - Pagers are used for rapid notification to field personnel when radio and telephone resources are limited. Most response team members carry a pager.

**FAX Machines** - FAX machines allow for a rapid transfer of information/documentation such as status reports/updates, written notifications, and purchase orders.

**Computers** - Computers are commonly used in networks which allow access to various other locations and company personnel. Computers also speed the consolidation of information and preparation of written reports.

**FIGURE 5.1****EXTERNAL RESPONSE RESOURCES**

Houston Captain of the Port (COTP) Zone

<b>USCG Classified Oil Spill Removal Organization (OSRO)</b>							
OSRO Name	Contract Number	Environment Type	Facility Classification Level				High Volume Port
			MM	W1	W2	W3	
T&T Marine Salvage Inc. Response Time - Within 1 Hr.	(App. C)	River/Canal	X	X	X	X	Yes
		Inland	X	X			
		Open Ocean					
		Offshore					
		Nearshore					
Garner Environmental Services, Inc. Response Time - Within 1 Hr.	T-531-B (App. C)	River/Canal	X	X	X	X	Yes
		Inland	X	X	X	X	
		Open Ocean			X	X	
		Offshore			X	X	
		Nearshore			X	X	

**Note:** USCG Classification is provided in Appendix C and telephone numbers are provided in Figure 2.5.

## FIGURE 5.2 FACILITY RESPONSE EQUIPMENT

Date of Last Update:

Inspected By:

### SKIMMERS/PUMPS

Type/Model/Year	Operational Status	Quantity	Capacity gal./min.	Daily Effective Recovery Rate	Storage Location(s)	Date Fuel Last Changed
	<b>NONE</b>					

### BOOM

Type/Model/Year	Operational Status	Number	Size (Length)	Containment Area	Storage Location(s)
	<b>NONE</b>				

### CHEMICAL DISPERSANTS

Type	Operational Status	Amt.	Date Purchased	Treatment Capacity	Storage Location(s)	Date Fuel Last Changed
	<b>NONE</b>					

### DISPERSANT DISPENSING EQUIPMENT

Type/Year	Operational Status	Capacity	Storage Location(s)	Response Time
	<b>NONE</b>			



**FIGURE 5.2 (Cont'd)  
FACILITY RESPONSE EQUIPMENT**

<b>Date of Last Update:</b>				
<b>Inspected By:</b>				
<b>SORBENTS</b>				
<b>Type/Year Purchased</b>	<b>Operational Status</b>	<b>Amount</b>	<b>Absorption Capacity gal.</b>	<b>Storage Location(s)</b>
	<b>NONE</b>			
<b>HAND TOOLS</b>				
<b>Type/Year</b>	<b>Operational Status</b>	<b>Quantity</b>	<b>Storage Location(s)</b>	
Shovels/Racks	Ready	4	Maintenance Shops	
Wrenches	Ready	20	Maintenance Shops	
<b>COMMUNICATION EQUIPMENT</b>				
<b>Type/Year</b>	<b>Operational Status</b>	<b>Quantity</b>	<b>Storage Location(s)/Number</b>	
Radio/Varies	Ready	50	On-Person	
Marine Radio	Ready	2	Operations Control Room	
<b>FIRE FIGHTING AND PERSONNEL PROTECTIVE EQUIPMENT</b>				
<b>Type/Year</b>	<b>Operational Status</b>	<b>Quantity</b>	<b>Storage Location(s)</b>	
	<b>NONE</b>			
<b>OTHER EQUIPMENT</b>				
<b>Type/Year</b>	<b>Operational Status</b>	<b>Quantity</b>	<b>Storage Location(s)</b>	
	<b>NONE</b>			

\* Operating Frequency = 463.2125 (MHz), 462.3875 (MHz), 462.4375 (MHz), 463.35 (MHz)

**FIGURE 5.3**

<b>EXAMPLE RESPONSE EQUIPMENT TESTING/DEPLOYMENT LOG</b>
Date of Last Update: _____
Last Inspection or Response Equipment Test Date: *
Inspection Frequency:
Last Deployment Drill Date:
Deployment Frequency:
OSRO Certification:
* Cellular phones are used on a daily basis. Fire extinguishers are tested by Fire Marshall requirements and are documented accordingly.

## **6.0 SPILL IMPACT CONSIDERATIONS**

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### **6.1 CRITICAL AREAS TO PROTECT**

The critical areas to protect are classified as high, moderate, and low sensitivity to oil. The Federal, State, and local authorities will further clarify these categories at the time of the response. The categories are defined as follows:

#### **HIGH SENSITIVITY**

- Areas which are high in productivity, abundant in many species, extremely sensitive, difficult to rehabilitate, or inhabited by threatened/endangered species.
- Areas which consist of forested areas, brush/grassy areas, wooded lake areas, freshwater marshes, wildlife sanctuaries/refuges, and vegetated river/stream banks.

#### **MODERATE SENSITIVITY**

- Areas of moderate productivity, somewhat resistant to the effects of oiling.
- Areas which consist of degraded marsh habitat, clay/silt banks with vegetated margins, and gravel/cobble beaches.

#### **LOW SENSITIVITY**

- Areas of low productivity, man-made structures, and/or high energy.
- Areas which consist of gravel, sand, or clay material, barren/ rocky riverbanks and lake edges, man-made structures, and concrete/compacted earthen drainage ditches.

### **6.2 ENVIRONMENTAL/SOCIO-ECONOMIC SENSITIVITIES**

Environmental/Socio-economic sensitivities are of extreme importance when planning a response effort. The health and safety of the public and the environment, as well as the protection of the various socio-economic sensitivities, must be promptly addressed in order to mitigate the extent of damage and minimize the cost of the clean-up effort

## 6.2 ENVIRONMENTAL/SOCIO-ECONOMIC SENSITIVITIES (Cont'd)

All environmental/socio-economic sensitivities are worthy of protection, but must be prioritized during a response effort. When making decisions on which areas to designate as collection areas and which to protect, the following sources may be consulted:

- U.S. Fish and Wildlife Service and related state agencies
- Applicable Area Contingency Plans
- Other industry and private experts

The environmental and socio-economic sensitivities in the vicinity of the Facility can be divided into a number of categories. The following environmental/socio-economic sensitivity summary describes these categories which may be impacted by a discharge and should be addressed in the response:

### ***Wetlands or Other Sensitive Environments:***

- Environmentally sensitive areas are prevalent throughout any marine and/or terrestrial environment and may be effected by any potential discharge incident.
- Environmentally sensitive areas subjected to stress and sudden change may be severely damaged. All means of exclusion/diversion should be utilized during a response effort to minimize the impact on these areas.

### ***Historical Areas:***

- Properties listed in the National Register of Historic Places & Natural Landmarks are included in this category.
- These areas may need to be boomed off or otherwise protected to minimize impact.

### ***Major Recreational Areas:***

- A discharge effecting these areas may pose a public safety/health risk during a response effort.
- Shoreline access for personnel and equipment deployment (boats, boom, etc.) is typically available in these areas.

### ***Marinas:***

- These areas have a high degree of public exposure (personal and property) and should be boomed for protection.
- Boats and other water deployed equipment can often be deployed and/or obtained in these areas.

## 6.2 ENVIRONMENTAL/SOCIO-ECONOMIC SENSITIVITIES (Cont'd)

### ***Residential Areas:***

- These are areas with high public impact and may warrant evacuation in extreme cases.
- Cleanup must be performed with extreme caution due to extensive public exposure.

### ***Commercial Farming/Ranching Areas:***

- Commercial Farming/Ranching Areas have the potential of human and livestock impact, as well as socio-economic impact in the potential loss of crops or loss of property use.

### ***Water Intake Points:***

- Commercial, industrial, municipal, and private water intakes are subject to impact.
- These areas may need to be boomed off or otherwise protected to minimize impact.

### ***Wildlife Management Areas and Refuges:***

- These areas have a high degree of exposure to threatened/endangered species, flora and fauna.
- Protection booming and clean-up efforts are high priority in these areas.

## 6.3 WILDLIFE PROTECTION AND REHABILITATION

The Company will work with Federal, State, and local agency personnel to provide labor and transportation to retrieve, clean, and rehabilitate birds and wildlife affected by an oil spill, as necessary. Oversight of wildlife preservation activities and coordination with Federal, State, and local agencies during an oil spill is the responsibility of the Incident Commander.

Special consideration should be given to the protection and rehabilitation of endangered species and other wildlife and their habitat in the event of an oil spill and subsequent response. Jurisdictional authorities should be notified and closely worked on all response/clean-up actions related to wildlife protection and rehabilitation. Laws with significant penalties are in place to ensure appropriate protection of these species.

### **6.3.1 Endangered/Threatened Species**

The U.S. Fish and Wildlife Service (USFWS) and related state agencies classify the status of various wildlife species in the potentially effected states. A summary of critical birds, reptiles, mammals, and plant species status as related to the Facility's operating areas (area of highest oil spill potential) is presented in Figure 6.2.

## 6.3 WILDLIFE PROTECTION AND REHABILITATION (Cont'd)

### 6.3.2 Wildlife Rescue

The Company will work with Federal, State, and local agency personnel to provide labor and transportation to retrieve, clean, and rehabilitate wildlife affected by an oil spill, as the situation demands.

The following are items which should be considered for wildlife rescue and rehabilitation during a spill response:

- Bird relocation can be accomplished using a variety of deterrents, encouraging birds to avoid areas of spilled oil. Bird relocation can be accomplished by utilizing deterrent methods including:
  - Use of visual stimuli, such as inflatable bodies, owls, stationary figures, or helium balloons, etc.
  - Use of auditory stimuli, such as propane cannons, recorded sounds, or shell crackers.
  - Use of herding with aircraft, boats, vehicles, or people (as appropriate).
  - Use of capture and relocation.

### 6.3.3 Search and Rescue - Points to Consider

- **The Company's involvement in wildlife search and rescue efforts should be limited to offering assistance as needed or requested by the agencies.**
- Prior to initiating any organized search and rescue plan, **authorization must be obtained from the appropriate federal/state agency.**
- **Initial search and rescue efforts, if needed, should be left up to the appropriate agencies.** They have the personnel, equipment, and training to immediately begin capturing contaminated wildlife.
- With or without authorization it must be anticipated that volunteer citizens will aid distressed/contaminated wildlife of their own. It is important to communicate that it may be illegal to handle wildlife without express authority from appropriate agencies. Provisions should be made to support an appropriate rehabilitator; however, **no support should be given to any unauthorized volunteer rescue efforts.**
- The regulatory agencies and response personnel should be provided the name and location of a qualified rehabilitator in the event contaminated wildlife is captured.
- Resources and contacts that can assist with wildlife rescue and rehabilitation are provided in Section 2.0. This list includes:
  - Outside rehabilitation organizations
  - Local regulatory agencies
  - Other resources

## 6.4 STAGING AREAS

When establishing personnel and equipment staging areas for a response to a Facility discharge, the following criteria should be evaluated:

- Access to waterborne equipment launching facilities and/or land equipment.
- Access to open space for staging/deployment of heavy equipment and personnel.
- Access to public services utilities (electricity, potable water, public phone, restroom and washroom facilities, etc.)
- Access to the environmental and socio-economically sensitive areas which are projected for impact.

## 6.5 SPILL VOLUME ESTIMATES

Quality spill volume estimates are required in order to evaluate the equipment and manpower requirements necessary to handle the response. The primary and most accurate method of estimating the spill volume is from tank gauging and/or pump rate estimates (depending on the type of incident which caused the spill). In the event that tank or pump estimates are not available, the secondary method of visual estimation can be performed by analyzing the color and size of the slick and converting that data utilizing Figure 6.3.

## 6.6 TRAJECTORY ANALYSIS

Oil spilled on water will react primarily to the effects of wind and current. The oil will tend to spread to a thin layer under the influence of gravity (primary) and chemical (secondary) forces. The following describes the behavior of oil on water:

- Oil will move in the direction and at the rate of the current under negligible wind conditions.
- Oil will move in the direction and at approximately 3.4 % of the velocity of the wind under negligible current conditions.
- The combined effects of wind and current on the oil should be carefully analyzed. A method of vector analysis can be performed to determine the net direction of movement (wind forces can work in addition to, against, or in many other combinations with the current).
- The primary method of surveillance for the Facility will be visual. Visual surveillance is not effective however in rain, fog, darkness, or heavy cloud cover. It is difficult to observe a slick on the water from a boat, dock or land due to the angle of observation. Aerial surveillance is the preferred method of visual surveillance because of the elevated view and the ability to cover a large area in a short period.

## 6.7 CONTAINMENT AND RECOVERY OF SPILLED PRODUCT

General descriptions of various specific response techniques that may be applied during a response effort are discussed below. The Company must receive prior State or Federal approval to implement certain strategies outlined in Section 6.7. There are no pre-approved uses of chemical agents. Authorization of in-situ burning is subject to State and DOI approval. Data was obtained from reports, manuals and pamphlets prepared by the American Petroleum Institute, Environmental Protection Agency and the United States Coast Guard. The most effective cleanup of a product spill will result from an integrated combination of clean-up methods. Each operation should complement and assist related operations and not merely transfer spillage problems to areas where they could be more difficult to handle.

The spill should be assessed as soon as possible to determine the source, extent and location of travel. Terrain and other physical conditions downgradient of the spill site will determine the methods of control at a point in advance of the moving product. Often, the bulk of a spill can be contained at a single location or a few key locations in the immediate vicinity of the source point. When possible, the execution of this type of initial containment strategy helps confine a spill to a relatively limited area.

### 6.7.1 Spill on Land (Soil Surfaces)

- **Confinement Methods**

Product can be trapped in ditches and gullies by earth dams. Where excavating machinery is available, dams can be bulldozed to contain lakes of product. Dams, small and large, should be effectively employed to protect priority areas such as inlets to drains, sewers, ducts and watercourses. These can be constructed of earth, sandbags, absorbents, planks or any other effective method. If time does not permit a large dam, many small ones can be made, each one holding a portion of the spill as it advances. The terrain will dictate the placement of the dams. If the spill is minor, natural dams or earth absorption will usually stop the product before it advances a significant distance. Cleanup is the main concern in such situations.

In situations where vapors from a spill present a clear and present danger to property or life (possible ignition because of passing automobiles, nearby houses, or work vehicles approaching the area), spraying the surface of the spill with dispersant will greatly reduce the release of additional vapors from the product. This method is especially adapted to gasoline spills on soil surfaces.

### **Bedrock Habitats**

#### ***Least Adverse Habitat Impact***

- ***Natural Recovery***

- Sheltered bedrock may need cleanup because of slow natural removal rates
- Cleanup of larger spills may be needed because of the amount of oil present
- Heavy oils may persist on all but the most exposed shores



## 6.7 CONTAINMENT AND RECOVERY OF SPILLED PRODUCT (Cont'd)

### 6.7.1 Spill on Land (Soil Surfaces) (Cont'd)

#### Bedrock Habitats (Cont'd)

##### *Least Adverse Habitat Impact (Cont'd)*

- ***Debris Removal***
  - Degree of oiling that warrants debris removal and disposal depends on human and sensitive resource use of the site
- ***Sorbents***
  - Overuse generates excess waste
  - Physical removal rates of heavy oils will be slow, so less oil will be mobilized for recovery by sorbents

##### *Some Adverse Habitat Impact*

- ***Flooding and Low-Pressure, Cold-Water Flushing***
  - Most effective on fresh, fluid oils
  - Use on heavy oils is likely to leave large amounts of residual oil in the environment
  - Use on gasoline spills may transport the oil to more sensitive habitats
- ***High-Pressure, Cold-Water Flushing***
  - Primarily applicable to medium-crude oils while still fresh and liquid
  - Can be effective in removing oil from crevices and pockets of sediment on bedrock
- ***Manual Oil Removal/Cleaning***
  - Expect significant residues of diesel and medium oils with only manual removal because of their fluidity and difficulty of manual pickup
  - Useful for heavy oils in patches or crevices
- ***Vacuum***
  - Not applicable to gasoline spills because of safety concerns

## 6.7 CONTAINMENT AND RECOVERY OF SPILLED PRODUCT (Cont'd)

### 6.7.1 Spill on Land (Soil Surfaces) (Cont'd)

#### Manmade Structures

##### *Least Adverse Habitat Impact*

- ***Manual Oil Removal/Cleaning and Debris Removal***
  - Effective for removing debris and small, persistent pockets of oil
- ***High-Pressure, Cold-Water Flushing***
  - Effective for removing sticky oils from solid surfaces and flushing pooled oil from riprap crevices, even for gasoline in populated areas
  - May flush oiled sediments (if present) into nearshore bottom habitats
  - Use on heavy oils is likely to leave large amounts of residual oil in the environment
  - Use on gasoline spills may transport the oil to more sensitive habitats
- ***Sorbents***
  - Use along riprap structures to recover residual sheening oil after other cleanup methods have been conducted, even for gasoline
  - Physical removal rates of heavy oils will be slow, so less oil will be mobilized for recovery by sorbents
  - Overuse results in excess waste generation
- ***Vacuum***
  - Early use of vacuum on pooled oil in crevices can increase the oil recovery rate and minimize oil losses during flushing
  - Can only remove thick oil from accessible areas, so high residual oil likely
- ***Natural Recovery***
  - Most effective for lighter oils and more exposed settings
  - Heavier oils may necessitate removing persistent residues

## 6.7 CONTAINMENT AND RECOVERY OF SPILLED PRODUCT (Cont'd)

### 6.7.1 Spill on Land (Soil Surfaces) (Cont'd)

#### Manmade Structures (Cont'd)

##### *Some Adverse Habitat Impact*

- ***Flooding***
  - Not applicable to seawalls; on riprap, only effective when the oil is fluid
  - May be used on riprap in developed areas, even for gasoline spills, where pockets of the spilled product pose human health concerns
  - Use on heavy oils is likely to leave large amounts of residual oil in the environment
  - Use on gasoline spills may transport the oil to more sensitive habitats
- ***Low-Pressure, Cold-Water Flushing***
  - Only effective when the oil is fluid
  - Directed water spray can help remove trapped oil, even for gasoline
  - Use on heavy oils is likely to leave large amounts of residual oil in the environment
  - Use on gasoline spills may transport the oil to more sensitive habitats

#### Sand Habitats

##### *Least Adverse Habitat Impact*

- ***Debris Removal***
  - Degree of oiling that warrants debris removal and disposal depends on use by humans and sensitive resources
- ***Natural Recovery***
  - Lower impact for small spills, lighter oil types, and remote areas
- ***Flooding***
  - Only effective when the oil is fluid and on the sand surface, rather than penetrated or buried
  - Use on heavy oils is likely to leave large amounts of residual oil in the environment
  - Use on gasoline spills may transport the oil to more sensitive habitats

## 6.7 CONTAINMENT AND RECOVERY OF SPILLED PRODUCT (Cont'd)

### 6.7.1 Spill on Land (Soil Surfaces) (Cont'd)

#### Sand Habitats (Cont'd)

##### *Least Adverse Habitat Impact (Cont'd)*

- ***Sorbents***
  - Not applicable to gasoline spills because they rapidly evaporate
  - Physical removal rates of heavy oils will be slow, so less oil will be mobilized for recovery by sorbents
  - Overuse results in excess waste generation

##### *Some Adverse Habitat Impact*

- ***Manual Oil Removal/Cleaning***
  - Minimizes sediment removal and problems of erosion and waste disposal
  - Effective when oil is mostly on the surface, not buried beneath clean sand
  - Gasoline tends to quickly evaporate; therefore habitat disruption, worker safety concerns, and waste generated by manual cleanup are not balanced by benefits in removing oil
- ***Mechanical Oil Removal***
  - Tends to remove large amounts of clean sand with the oiled sand
  - Use on high-use beaches where rapid removal of oil is required and where long stretches of shoreline are heavily oiled
  - Gasoline tends to quickly evaporate; therefore habitat disruption, worker safety concerns, and waste generated from mechanical cleanup are not balanced by benefits in removing oil
- ***Low-Pressure, Cold-Water Flushing***
  - Only effective when the oil is fluid and adheres loosely to the sediments
  - Optimize pressure to minimize the amount of sand washed downslope

## 6.7 CONTAINMENT AND RECOVERY OF SPILLED PRODUCT (Cont'd)

### 6.7.1 Spill on Land (Soil Surfaces) (Cont'd)

#### Sand Habitats (Cont'd)

- ***Vacuum***
  - Early use of vacuum on pooled, liquid oil can prevent deeper penetration
  - Will minimize amount of sorbent waste when used with flushing efforts
  - Can vacuum heavy, non-sticky oil from sand substrates completely, but slowly

#### Mixed Sand and Gravel Habitats

##### ***Least Adverse Habitat Impact***

- ***Debris Removal***
  - Degree of oiling that warrants debris removal and disposal depends on amount of use by humans and sensitive resources
- ***Flooding***
  - Most effective when the oil is fluid and adheres loosely to the sediments
  - Use on heavy oils is likely to leave large amounts of residual oil in the environment
- ***Natural Recovery***
  - Least impact for small spills, lighter oil types, and remote areas
- ***Low-Pressure, Cold-Water Flushing***
  - Most effective when the oil is fluid and adheres loosely to the sediments
  - Excessive pressures can cause erosion
  - Use on heavy oils is likely to leave large amounts of residual oil in the environment
  - Use on gasoline spills may transport the oil to more sensitive habitats
- ***Sorbents***
  - Overuse generates excess waste
  - Useful for recovering sheens, even for gasoline spills
  - Physical removal rates of heavy oils will be slow, so less oil will be mobilized for recovery by sorbents

## 6.7 CONTAINMENT AND RECOVERY OF SPILLED PRODUCT (Cont'd)

### 6.7.1 Spill on Land (Soil Surfaces) (Cont'd)

#### Mixed Sand and Gravel Habitats

##### *Some Adverse Habitat Impact*

- ***Vacuum***
  - Early use of vacuum on pooled, liquid oil can prevent deeper penetration
- ***Manual Oil Removal/Cleaning***
  - Gasoline tends to evaporate quickly; therefore manual cleanup causes habitat disruption, worker safety concerns, and generates waste with no benefits due to removing oil
  - Minimizes sediment removal and problems of erosion and waste disposal
  - Preferable when oil is mostly on the surface, not deeply penetrated or buried

#### Gravel Habitats

##### *Least Adverse Habitat Impact*

- ***Debris Removal***
  - Degree of oiling that warrants debris removal and disposal depends on use by humans and sensitive resources
- ***Low-Pressure, Cold-Water Flushing***
  - Only effective when the oil is fluid and loosely adheres to the sediments
  - Usually used in conjunction with vacuum and sorbents
  - Use on heavy oils is likely to leave large amounts of residual oil in the environment
- ***Flooding***
  - Only effective when the oil is fluid and adheres loosely to the sediments
  - Usually used with various flushing techniques
  - Use on heavy oils is likely to leave large amounts of residual oil in the environment
- ***Natural Recovery***
  - Least impact for small spills, lighter oil types, remote areas, and eroding areas

## 6.7 CONTAINMENT AND RECOVERY OF SPILLED PRODUCT (Cont'd)

### 6.7.1 Spill on Land (Soil Surfaces) (Cont'd)

#### Gravel Habitats

- ***Sorbents***
  - Overuse generates excess waste
  - Useful for recovering sheens, even for gasoline spills
  - Physical removal rates of heavy oils will be slow, so less oil will be mobilized for recovery by sorbents

#### ***Some Adverse Habitat Impact***

- ***Vacuum***
  - Early use of vacuum on pooled, liquid oil can prevent deeper penetration
  -

#### Vegetated Shoreline Habitats

#### ***Least Adverse Habitat Impact***

- ***Natural Recovery***
  - Low impact for small or moderate-size spills and lighter oils
  - More impact for large spills of medium- or high-viscosity oils
- ***Flooding***
  - Operationally difficult and marginally effective for steep banks
  - Appropriate for gentle banks where persistent oil has pooled, assuming that the released oil can be directed towards recovery devices or sorbents
  - Use on heavy oils is likely to leave large amounts of residual oil in the environment
  - Use on gasoline spills may transport the oil to more sensitive habitats
- ***Low-Pressure, Cold-Water Flushing***
  - Effective for washing oil stranded on the banks into the water for recovery
  - Vegetation cover minimizes the potential for sediment erosion from flushing
  - Use on heavy oils is likely to leave large amounts of residual oil in the environment
  - Use on gasoline spills may transport the oil to more sensitive habitats

## 6.7 CONTAINMENT AND RECOVERY OF SPILLED PRODUCT (Cont'd)

### 6.7.1 Spill on Land (Soil Surfaces) (Cont'd)

#### Vegetated Shoreline Habitats (Cont'd)

##### *Some Adverse Habitat Impact*

- ***Sorbents***
  - Useful for recovering sheens, even for gasoline spills
  - Physical removal rates of medium and heavy oils will be slow, so less oil will be mobilized for recovery by sorbents
  - Overuse generates excess waste
- ***Manual Oil Removal/Cleaning***
  - Some mixing of oil into the substrate and trampling of vegetation is unavoidable with foot traffic in oiled areas
  - Gasoline tends to quickly evaporate; therefore habitat disruption, worker safety concerns, and waste generated by manual cleanup are not balanced by benefits in removing oil
- ***Debris Removal***
  - Degree of oiling that warrants debris removal and disposal depends on use by humans and sensitive resources
  - Minimal concerns where substrate is firm or work is conducted from boats
- ***Vacuum***
  - Potential damage where substrate will not support vehicular traffic
  - Most effective where access is good and substrate can support vehicles
  - Only useful when oil is pooled
- ***Vegetation Removal***
  - Usually not necessary to reduce oil impact on vegetation
  - May be required in areas used by sensitive animals



## 6.7 CONTAINMENT AND RECOVERY OF SPILLED PRODUCT (Cont'd)

### Mud Habitats

#### *Least Adverse Habitat Impact*

- ***Natural Recovery***
  - Least impact for small spills and lighter oils, to prevent disruptions associated with cleanup efforts
  - For large spills or heavy oils, expect long-term persistence in low-energy settings
- ***Flooding***
  - Effective only for fresh, fluid oils
  - Local topography may limit the ability to control where the water and released oil flow and effectiveness of recovery
  - Use on gasoline spills may transport the oil to more sensitive habitats
- ***Sorbents***
  - Useful as long as the oil is mobilized and recovered by the sorbent
  - Overuse generates excess waste
  - Careful placement and recovery is necessary to minimize substrate disruption

#### *Some Adverse Habitat Impact*

- ***Debris Removal***
  - Degree of oiling that warrants debris removal and disposal depends on use by sensitive resources
  - Extensive disruption of soft substrate likely
- ***Vacuum***
  - Not applicable to gasoline spills because of safety concerns
  - Use to remove oil pooled on the surface
  - Avoid digging trenches to collect oil because they can introduce oil deeper into the sediment
  - Disruption of soft substrates can be limited by placing boards on the surface and controlling access routes

## 6.7 CONTAINMENT AND RECOVERY OF SPILLED PRODUCT (Cont'd)

### 6.7.1 Spill on Land (Soil Surfaces) (Cont'd)

#### Wetland Habitats

##### *Least Adverse Habitat Impact*

- ***Natural Recovery***
  - Least impact for small to moderate spills and lighter oils; avoids damage often associated with cleanup activities
  - Some cleanup may be warranted where large numbers of animals are likely to become oiled during wetland use
- ***Sorbents***
  - Care is necessary during placement and recovery to minimize disturbance of substrate and vegetation
  - Overuse generates excess waste
- ***Flooding***
  - Erosion of substrate and vegetation may be a problem
  - Can be used selectively to remove localized heavy oiling
  - Can be difficult to direct water and oil flow towards recovery devices
  - Use on heavy oils is likely to leave large amounts of residual oil in the environment
  - Use on gasoline spills may transport the oil to more sensitive habitats
- ***Low-Pressure, Cold-Water Flushing***
  - If water pressures are too high, the substrate and vegetation may be disturbed
  - Use on heavy oils is likely to leave large amounts of residual oil in the environment
  - Use on gasoline spills may transport the oil to more sensitive habitats

##### *Some Adverse Habitat Impact*

- ***In-Situ Burning (Subject to state or federal approval)***
  - May be one of the least physically damaging means of heavy oil removal
  - Presence of a water layer on marsh surface can protect roots
  - Time of year (vegetation growth stage) is important consideration
  - May be appropriate for gasoline spills trapped in ice

## 6.7 CONTAINMENT AND RECOVERY OF SPILLED PRODUCT (Cont'd)

### 6.7.1 Spill on Land (Soil Surfaces) (Cont'd)

#### *Some Adverse Habitat Impact (Cont'd)*

- ***Vacuum***
  - Can be effective in removal of pooled oil from the marsh surface
  - Trampling of vegetation and substrate can be limited by placing boards on the surface and limiting traffic
- ***Debris Removal***
  - The removal of heavily oiled and mobile debris may reduce the tracking of oil off-site and contamination of wildlife
- **Removal Methods**

The recovery and removal of free product from soil surfaces is a difficult job. The best approaches at present seem to be:

- Removal with suction equipment to tank truck if concentrated in volumes large enough to be picked up. Channels can be formed to drain pools of product into storage pits. The suction equipment can then be used.
- Small pockets may have to be dipped up by hand.
- If practicable after removal of the bulk of the spill, controlled burning presents the possibility of a fast, simple, and inexpensive method of destruction of the remainder of the product. If all other options have been executed and the site is still unsafe for further activity because explosive vapors persist, the vapors may need to be intentionally ignited to prevent an accumulation sufficient to become an explosive mixture, provided the other requirements of these guidelines for controlled burning are met.

Intentional ignition to remove released product should be utilized only if all of the following conditions are met:

- Other steps and procedures have been executed and a determination has been made that this is the safest remaining method of control.
- Intentional burning will not unduly damage the pipeline, adjacent property or the environment (need state or federal approval).
- Controlled burning is permitted by government authorities. Local government authorities to be contacted may include city council, county board of commissioners, city or county fire chiefs, the county forestry commission or fire tower, and the local environmental protection agency. In seeking permission from these authorities, be prepared to convince them that adequate safety precautions have been and will be taken during the operation.

## 6.7 CONTAINMENT AND RECOVERY OF SPILLED PRODUCT (Cont'd)

### 6.7.1 Spill on Land (Soil Surfaces) (Cont'd)

- **Removal Methods**

- Controlled burning is conducted with the consent of local landowners.
- Safety must always be a prime consideration when considering controlled burning of product. Sparks and heat radiation from large fires can start secondary fires and strong winds make fire control difficult. There must be no danger of the fire spreading beyond control limits. All persons must be at a safe distance from the edge of the inflammable area. Remember that all burning must be controlled burning.

### 6.7.2 Spill on Lake or Pond (calm or slow-moving water)

- **Confinement Methods**

A lake or pond offers the best conditions for removal of product from water. Although the removal is no easy task, the lake or pond presents the favorable conditions of low or no current and low or no waves.

The movement of product on a lake or pond is influenced mainly by wind. The product will tend to concentrate on one shore, bank or inlet. Booms should be set up immediately to hold the product in the confined area in the event of a change in wind direction.

If the spill does not concentrate itself on or near a shore (no wind effect), then a sweeping action using boats and floating booms will be necessary. The essential requirement for this operation is that it be done very slowly. The booms should be moved at not more than 40 feet per minute. Once the slick is moved to a more convenient location (near shore), the normal operations of removal should begin.

If the slick is small and thin (rainbow effect) and not near the shoreline, an absorbent boom instead of a regular boom should be used to sweep the area very slowly and absorb the slick. The product may not have to be moved to the shoreline.

## Small Lake and Pond Environments

### *Least Adverse Habitat Impact*

- ***Booming***

- Use containment booms to keep oil from spreading
- Safety concerns limit the containment of gasoline spills; however, booms can be used to
- exclude or deflect the spill away from sensitive resources

## 6.7 CONTAINMENT AND RECOVERY OF SPILLED PRODUCT (Cont'd)

### 6.7.2 Spill on Lake or Pond (calm or slow-moving water) (Cont'd)

#### Small Lake and Pond Environments (Cont'd)

- ***Skimming/Vacuum***
  - Not applicable to gasoline spills because of safety concerns
  - Land-based operations need site-specific restrictions and monitoring to minimize physical destruction
- ***Sorbents***
  - Overuse results in excess waste generation
  - Inhibit the evaporation of gasoline spills

#### ***Some Adverse Habitat Impact***

- ***Natural Recovery***
  - Low impact for light oils but may have significant impact for medium crudes and heavier fuel oils because they persist and affect shoreline habitats

#### ***Least Adverse Habitat Impact***

- ***Booming***
  - Use containment booms to keep oil from spreading
  - Safety concerns limit the containment of gasoline spills; however, booms can be used to
  - exclude or deflect the spill away from sensitive resources
- ***Skimming/Vacuum***
  - Not applicable to gasoline spills because of safety concerns
  - Land-based operations need site-specific restrictions and monitoring to minimize physical destruction
- ***Sorbents***
  - Overuse results in excess waste generation
  - Inhibit the evaporation of gasoline spills
- ***Natural Recovery***
  - Low impact for light oils but may have significant impact for medium crudes and heavier fuel oils because they persist and affect shoreline habitats

## 6.7.2 Spill on Lake or Pond (calm or slow-moving water) (Cont'd)

- **Removal Methods**

If the confined slick is thick enough, regular suction equipment may be used first; however, in most instances, a floating skimmer should be removed. If judged appropriate or useful, a surface collecting agent should be applied once the slick is isolated to facilitate the removal. The surface collecting agent will concentrate the product into a smaller area and make the floating skimmer work more efficiently. If the floating skimmer starts picking up excess water (slick becomes thin), do not stop using it if it is not removing any appreciable amount of product.

Additions of more surface collecting agent from time to time may improve the skimming efficiency of the skimmer. It will continue to concentrate the slick into a smaller area, thus making the film thickness greater. Drawing the boom closer to the bank as product is removed will also keep film of product thicker. However, when the slick becomes too thin, the skimmer should be stopped and an absorbent applied (with a boat if necessary) to remove the final amounts. The floating skimmer (if speed is a must) or hand skimmers (if water is shallow enough) or both can be used to pick up the product-soaked absorbent. Before pumping the product-soaked absorbent with a floating skimmer, insure that the absorbent in question can be pumped and will not harm the pump. Several types are nonabrasive to pump internals. If the floating skimmer is used first, the product-soaked absorbent/water mixture should be pumped into a tank truck.

A better method of retrieving the product-soaked absorbent is to draw it in as close to the shore as possible with the booms used to confine the product initially. The absorbent can then be hand skimmed from the water surface and placed in drums, on plastic sheets or in lined roll-off boxes. It should then be disposed of by acceptable means.

The final rainbow on the surface can be removed with additions of more absorbent.

## 6.7 CONTAINMENT AND RECOVERY OF SPILLED PRODUCT (Cont'd)

### 6.7.3 Spill on Small to Medium Size Streams (relatively fast-flowing creeks)

- **Confinement Methods**

The techniques used for product containment on fast-flowing shallow streams are quite different from the ones used on lakes, ponds, or other still bodies of water. The containment and removal processes require a calm stretch of water to allow the product to separate onto the surface of the water. If a calm stretch of water does not exist naturally, a deep slow-moving area should be created by damming. The dam can be constructed by using sandbags, planks or earth. If a dam is required, it should be situated at an accessible point where the stream has high enough banks. The dam should be constructed soundly and reinforced to support the product and water pressure.

- Underflow dam - The underflow dam is one method that can be used, especially on small creeks. The water is released at the bottom, of the dam using a pipe or pipes which are laid during construction of the dam. The flow rate through the pipe must be sufficient to keep the dam from overflowing. One method is to lay the pipe at an angle through the dam (while dam is being constructed) so that the height of the downstream end of the pipe will determine the height the water will rise behind the dam.
- Overflow dam – Another method of containment is the overflow type dam. The dam is constructed so that water flows over the dam, but a deep pool is created which slows the surface velocity of the water. Therefore, the condition of a calm stretch of water is met. The overflow dam may be used where larger flow rates (medium size creeks) of water are involved.

With this type dam, a separate barrier (floating or stationary boom) must be placed across the pool created by the dam. The separate barrier arrests the surface layer of product. At the same time, the water is flowing under the barrier and over the top of the dam. The barrier should be placed at an angle of 45 % across the pool to decrease the effective water velocity beneath it. Also, it helps to concentrate the product at the bank and not all along the barrier. A second barrier should be placed approximately 10 to 15 feet downstream of the first one as a secondary back-up.

The stationary boom type barrier should be made of wood planks or other suitable material. The stationary boom should be soundly constructed and sealed against the bank. The ends of the planks can be buried in the banks of the stream and timber stakes driven into the stream bed for support as needed. The necessary length of the boom will be approximately 1-1/2 times the width of the waterway. The plank boom should extend six to eight inches deep into the water and about two inches or higher above the water level. If the increase in velocity under the stationary boom is causing release of trapped product, it should be moved upward slightly. At no time should barrier be immersed more than 20% of the depth of the pool at the barrier location; that is, if the pool created by damming is three feet deep, do not exceed an immersion depth of seven inches with the barrier at the position the barrier is installed.

## 6.7 CONTAINMENT AND RECOVERY OF SPILLED PRODUCT (Cont'd)

### 6.7.3 Spill on Small to Medium Size Streams (relatively fast-flowing creeks) (Cont'd)

Another method used with the underflow dam is having the pipe or pipes sized to carry only a portion of the flow needed. The pipe would be placed at the bottom of the dam and level with the creek bed. The remaining flow of the creek could be siphoned or preferably pumped around the dam from a point away from the dam and from the deepest portion of the pool. The pumping or siphoning can be controlled to maintain the desired water level at the dam. The key is the removal of water through or around the dam at the lowest point in the basin. This prevents the oil from escaping with the released water.

A floating boom can be used in place of the stationary type if the created pool's size (bank to bank) and depth will permit. Since changing the depth and/or length of a standard floating boom in a small stream is difficult, the use of the separation of product and water. The advantages of using a floating boom are the speed of deployment and the fact that there is not need for additional support as with the stationary boom.

- Multiple Impoundments – Since emergency built dams (either underflow or overflow) are seldom perfect, a series of dams is usually required. The first one or two will trap the bulk and the ones that are downstream will trap the last traces of product. Precautions should be taken to ensure that the foundations of emergency dams are not washed away by the released water. If earth is used to construct an overflow dam, a layer of earth-filled bags should be placed on top of the dam so erosion will not take place.

## Small River and Stream Environments

### *Least Adverse Habitat Impact*

- ***Booming***
  - Used primarily to divert slicks towards collection points in low-current areas
  - Safety concerns limit the containment of gasoline spills; however, booms can exclude or deflect the spill away from sensitive resources
  - Expect low effectiveness with fast currents, shallow water, and steep banks
- ***Skimming/Vacuum***
  - To protect public health and downstream resources where spreading is limited, recovery of large gasoline spills could be attempted with firefighting foam to suppress vapors and respiratory protection for workers



## 6.7 CONTAINMENT AND RECOVERY OF SPILLED PRODUCT (Cont'd)

### 6.7.3 Spill on Small to Medium Size Streams (relatively fast-flowing creeks) (Cont'd)

#### Small River and Stream Environments (Cont'd)

##### *Least Adverse Habitat Impact (Cont'd)*

- ***Sorbents***
  - Deploy in booms to recover sheens in low-current areas and along shore
  - Trampling of stream bank and bed habitats during deployment and recovery of sorbents can disrupt streamside vegetation and drive oil into the sediment
  - Overuse results in excess waste generation
- ***Barriers/Berms***
  - Potential for physical disruption and sediment contamination in immediate area of the barrier/berm
  - If all or most of the flow is diverted, may need to monitor water requirements to habitats downstream of the barrier to mitigate potential impacts
  - Safety concerns limit actions at gasoline spills, although berms built ahead of the slick could be used to exclude oil from sensitive areas, such as side channels

##### *Some Adverse Habitat Impact*

- ***Natural Recovery***
  - For small gasoline and diesel-like oil spills, evaporation and natural dispersion would rapidly remove surface slicks
  - For all other types and sizes of spills, recovery of free or pooled oil and/or protection of sensitive resources should be attempted
- ***Debris Removal***
  - Will release trapped oil and speed natural flushing rates
- ***Vegetation Removal***
  - May be needed to remove oil trapped in floating and fringing vegetation
  - Remove oiled vegetation to prevent chronic sheening in sensitive areas or secondary oiling of wildlife
  - Monitor crews to minimize physical disturbance, which can be severe

## 6.7 CONTAINMENT AND RECOVERY OF SPILLED PRODUCT (Cont'd)

### 6.7.3 Spill on Small to Medium Size Streams (relatively fast-flowing creeks) (Cont'd)

- **Removal Methods**

Once the containment dams are constructed, the problem of removal of the product from the water surface should be the prime consideration. The removal must be continuous or else build-up of product behind the dams or booms might lead to product escaping the traps.

The type of removal procedures used depends largely on the amount of product being trapped in a given span of time, if the amount of product moving down the stream is of sufficient quantity, the first dam or fixed boom would quite possibly trap enough for the floating skimmer to work efficiently. The skimmer will pump the product and possibly some water to a tank truck or other holding tank. Separated water may be released from the bottom of the tank truck if it becomes necessary. The absorbents (straw, ground corncobs, or other stocked absorbent) could then be used at downstream dams or booms. It is inadvisable to place an absorbent in the stream prior to or at the first dam in anticipation of the arriving product. Let the product accumulate at the first dam and use the floating skimmer to recover the product.

Disposal of gross amount of product-soaked absorbent would not then be a problem. Follow directions on use of each absorbent. Some are designed to be placed on water before product arrives (straw and other new types); others are intended only to be placed on the product after it accumulates on the water (ground corncobs and others). Plastic sheets should be used to place the product-soaked absorbent on as it is hand skimmed from the water. Alternatively, the material may be placed in drums or lined roll-off boxes.

If the amount of product in the stream is minor, a straw-bale may be constructed to filter out the product. The slowing of the water would not be necessary, but several dams might be necessary to ensure complete removal. The downstream dams would also offer protection when the upstream bales are removed, releasing traces of product. Straw-bale dams can also be used downstream from underflow and overflow dams for added protection.

Thus, the containment and removal of spilled product on small to medium fast-flowing streams might require a combination of underflow or overflow dams, fixed booms, skimmers, absorbents, and straw-bale dams to ensure a complete cleanup.

## 6.7 CONTAINMENT AND RECOVERY OF SPILLED PRODUCT (Cont'd)

### 6.7.4 Spill on Large Streams and Rivers

- **Confinement Methods**

The containment techniques differ considerably on large streams and rivers versus small streams. First, the smooth calm area of water necessary for product-water separation must be found along the stream or river rather than making one as with small streams. Floating booms (rather than fixed booms or dams) must be used to trap the surfaced product.

Local conditions of current and wind must be considered when selecting the site for the boom. A point with a low water velocity near the bank, sufficient depth to operate the product removal equipment, and good access are required. The fact that wind may tend to concentrate the product against one bank must be considered. A smooth, undisturbed area of water is required immediately upstream of the boom to ensure that the product has opportunity to separate out onto the surface. The boom should be positioned where the current is at a minimum. It is more effective to boom at a wide, slow position than on a narrow, fast stretch of water.

If the boom are positioned straight across a river or stream, at right angles to the flow, surface water tends to dive beneath the barrier (boom) when current velocities exceed about  $\frac{1}{2}$  knot (0.8 ft./sec.). However, if the current of the entire river is  $\frac{1}{2}$  knot or less, then a boom can be positioned straight across the river or large stream, but angled slightly in relation of the banks. By placing the boom at an angle to the banks, product on the surface is diverted along the boom to the side of the river.

The current velocity is usually much slower near the river bank than in the center and the product will move along the boom toward the bank for removal. A water-tight seal between the bank and the boom is essential. A secondary boom should be set up immediately downstream of the first one to capture the amounts that escape the upstream boom. A boom can be employed parallel to the river flow at the bank to form the seal with the booms used to trap the product.

Where the current velocity of the chosen site exceeds  $\frac{1}{2}$  knot, the boom should be positioned in two smooth curves from a point of maximum velocity (usually the center of the river) to both banks. However, this double-boom required product to be removed from both sides of the river. To determine the appropriate angle of boom placement and support (mooring) needed to hold the booms in position, the current velocity should be measured by timing a floating object which is 80% submerged over a distance of 100 feet. A time of 60 seconds over this distance indicates a water current of approximately 1 knot. For currents from 1 to 2.5 knots (1.7 to 4.2 ft./sec.), the more the boom will have to be angled acute to the bank. The length of the boom will have to be such to reach the center of the river. For currents between  $\frac{1}{2}$  and 1 knot (0.8 and 1.7 ft./sec.), the angle of employment can be enlarged.

## 6.7 CONTAINMENT AND RECOVERY OF SPILLED PRODUCT (Cont'd)

### 6.7.4 Spill on Large Streams and Rivers (Cont'd)

- **Confinement Methods (Cont'd)**

The major load on the boom is taken by the terminal moorings, particularly the one in the center of the river. However, intermediate moorings are also required both to maintain the smooth curve of the boom to prevent breaking of the boom and to assist with preventing skirt deflection. The intermediate moorings are preferably positioned every 25 feet and must be adjusted to avoid the formation of indentations in the boom profile. These trap product in pockets, prevent its deflection to the bank, and also encourage diving currents. The moorings' ropes should be five times the water depth.

In certain situations, it might be advantageous to position booms to deflect the approaching spilled product to a slower moving area. Naturally, additional booms would have to be positioned around this slower moving area prior to deflecting the product to the area. This approach has been used along rivers that have lagoons, etc., with a very low current action. The recovery would take place in the lagoons and not along the river bank.

### Large River Environments

#### *Least Adverse Habitat Impact*

- ***Booming***

- Used primarily for diverting slicks towards collection points in low-current areas
- Safety concerns limit the containment of gasoline spills; however, booms can be used to exclude or deflect the spill away from sensitive resources

- ***Skimming/Vacuum***

- Not applicable to gasoline spills because of safety concerns

#### *Some Adverse Habitat Impact*

- ***Natural Recovery***

- For small gasoline and diesel-like spills, evaporation and natural dispersion would rapidly remove surface slicks
- For all other types and sizes of spills, oil recovery and/or protection of sensitive resources should be attempted

## 6.7 CONTAINMENT AND RECOVERY OF SPILLED PRODUCT (Cont'd)

### 6.7.4 Spill on Large Streams and Rivers (Cont'd)

#### Large River Environments (Cont'd)

##### *Some Adverse Habitat Impact (Cont'd)*

- ***Sorbents***
  - Not applicable to gasoline spills because of safety concerns and inhibition of evaporation
  - May not be practical for large rivers because oil will spread and drift rapidly
  - Overuse results in excess waste generation

#### Open Water Environments

##### *Least Adverse Habitat Impact*

- ***Booming***
  - Most effective in low-wave conditions and slow currents
  - Safety concerns limit the containment of gasoline spills; however, booms can be used to exclude or deflect the spill away from sensitive resources
- ***Skimming/Vacuum***
  - Effectiveness limited by current velocities and widely spread, thin sheens
  - Not applicable to gasoline spills because of safety concerns
- ***Natural Recovery***
  - Low impact except for medium- to heavy-category oils, which are persistent and would eventually strand on shorelines

##### *Some Adverse Habitat Impact*

- ***Sorbents***
  - Not a stand-alone technique except for very small spills
  - Inhibit the evaporation of gasoline spills

#### 6.7.4 Spill on Large Streams and Rivers (Cont'd)

- **Removal Methods**

The product collected upstream of the floating booms in a large stream or river should be removed from the water surface as it accumulates. Regular suction equipment, a floating skimmer, and/or absorbents (including absorbent booms) should be used to remove the product as appropriate to the quantity being trapped in a given span of time. If the amount moving down the stream is of sufficient quantity, the primary floating boom would possibly trap enough for the floating skimmer to work efficiently. The skimmer will pump the product and some water to a tank truck or other holing tank.

The absorbents (type that can be placed on water before product arrival straw is an example) would then be used upstream of the secondary boom to absorb the underflow from the primary boom. An absorbent boom (Sea-Serpent) or other stocked absorbent boom can also be placed between the primary and secondary booms to help the other absorbents control the underflow from the primary boom. If the underflow from the primary boom is significant, then the type absorbent which can be placed on the water only after product is collected may be used. An example of this type of absorbent is ground corncobs. It is best to hand skim the saturated absorbents and place on plastic sheets. However, if the absorbent used can be pumped after product absorption and speed of removal is a necessity, the floating skimmer can be used to remove the product-soaked absorbent.

The disadvantage of pumping the product-soaked absorbent to a truck is the volume that will accumulate (skimmer will pump excess water) and the disposal problems associated with the large water/product-soaked absorbent mixture.

If the volume of product moving toward the boomed area is expected to be small, an absorbent (straw) should be placed in the river upstream of the primary and secondary booms. If regular booms are not necessary, a screen filter could be stretched across the river to contain the straw, or an absorbent boom could be constructed by tightly fastening hay bales together, forming a chain. Boats (either rented or furnished by contractors) would be necessary to retrieve the product-soaked absorbents.

#### **Spill on Stream which Flows into Lake or Pond**

There are certain locations where streams (small and large ones) flow into lakes or ponds at relatively short distances. It is conceivable that a spill that reached the streams in question could reach or almost reach the lakes before containment and recovery operations could be set up. If time permits for containment operations to be set up on the stream in question, it then would be handled as described above depending upon the stream size involved.

However, if product in the stream is near the lake site or if product is flowing into the lake with a significant amount yet to arrive, a different containment should be employed.

## 6.7 CONTAINMENT AND RECOVERY OF SPILLED PRODUCT (Cont'd)

### 6.7.4 Spill on Large Streams and Rivers (Cont'd)

- **Removal Methods (Cont'd)**

#### **Spill on Stream which Flows into Lake or Pond (Cont'd)**

- **Confinement Methods**

Product on a stream flowing into a lake should be boomed as close to the entrance as possible. The boom should be positioned on the lake at an angle to the residential stream current so as to direct the surface water to a slower moving area. The area where the product is being deflected should be enclosed by booms to contain it. An additional boom for sweeping the product to the bank will be required. This area of containment should not have a current velocity of more than 1/2 knot (0.8 ft./sec.), preferably less.

- **Removal Methods**

The removal of product from the lake or pond's surface would be handled as described earlier.

For sizable releases, collected product will usually be pumped into tank trucks and transported to a storage facility. Tank trucks are available at several locations throughout.

### 6.7.5 Spill in Urban Areas

Oil spills in urban areas can greatly impact recreational use, human health, wildlife habitat(s), and potential beach or park closures. Manmade structures along waterways require unique protection strategies. Manmade structures could include vertical shore protection structures such as seawalls, piers, and bulkheads, as well as riprap revetments and groins, breakwaters, and jetties. Vertical structures can be constructed of concrete, wood, and corrugated metal. They usually extend below the water surface, although seawalls can have beaches or riprap in front of them. These structures are very common along developed shores, particularly in harbors, marinas, and residential areas. The range in degree of exposure to waves and currents varies widely, from very low in dead-end canals, to very high on offshore breakwaters. Boat wakes can generate wave energy in otherwise sheltered areas.

Maintaining shipping or other kinds of vessel traffic through navigation channels or waterways during a spill response is a difficult consideration because there is usually economic and political pressure to re-establish normal operations as soon as possible. This consideration extends to vehicular traffic through urban areas. Deploying booms and skimmers or constructing recovery sites can conflict with such traffic for several days. Also, passage of deep-draft vessels through the waterway can suddenly change water level and flow or create wakes, causing booms to fail. For these reasons, recovery efforts must be coordinated through the Unified Command to ensure the cooperation of all parties involved.

## **6.8 ALTERNATIVE RESPONSE STRATEGIES**

There are no pre-approved response options for inland spills within the United States. Any plans to use dispersants or in situ burn by the Company will be submitted to the Federal On-Scene Coordinator for Regional Response Team approval prior to such action being taken.

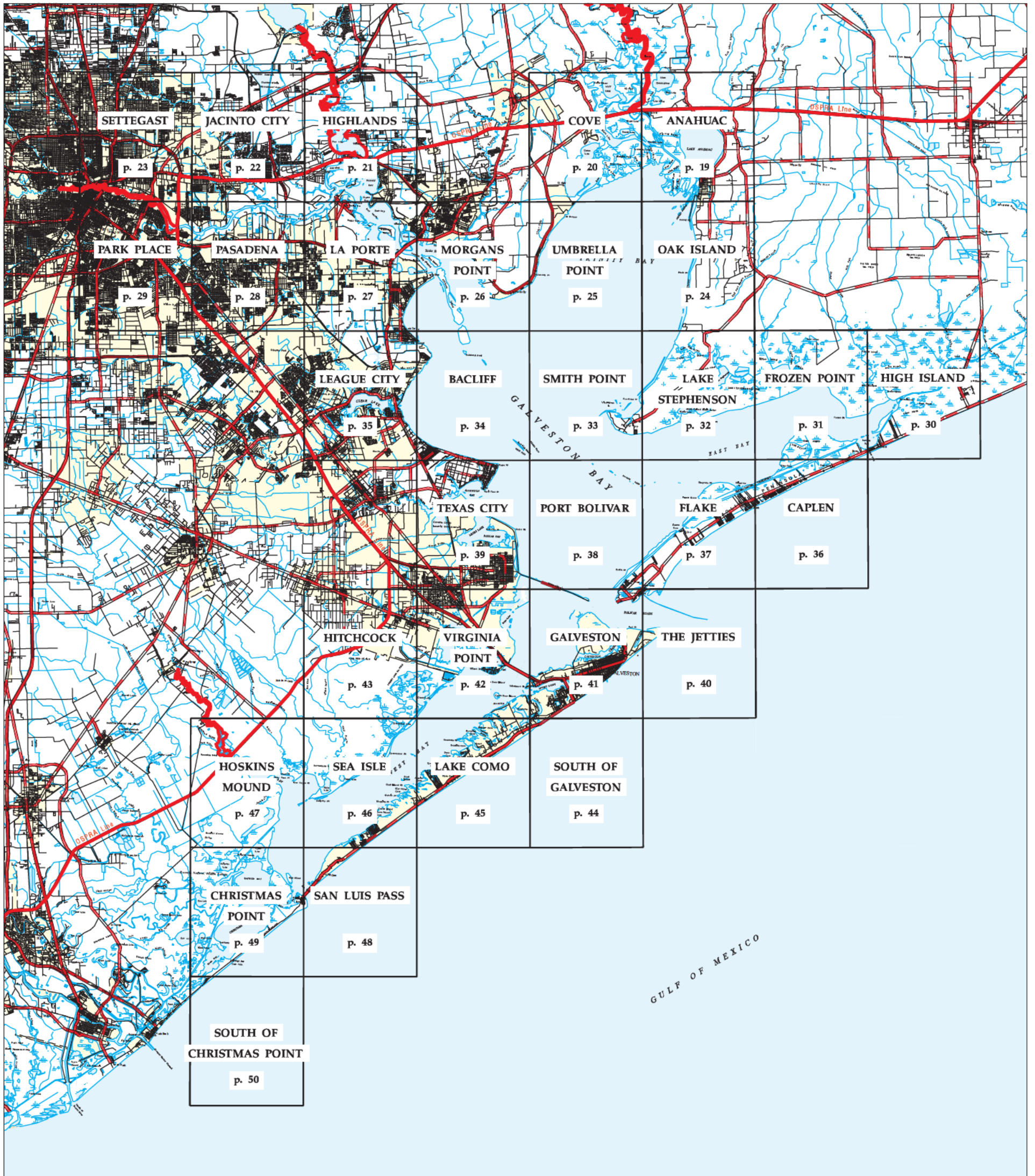


**FIGURE 6.1****ENVIRONMENTAL SENSITIVITY MAPS**

The following Environmental Sensitivity Maps have been prepared utilizing U.S. Geological Survey 7.5 Minute Quadrangle Maps as the base.

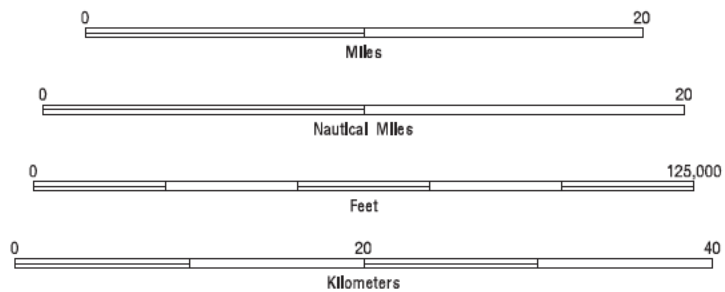
Remember these maps are to be utilized as guidelines only. During a real response effort Federal, State, and Local agencies should be contacted to provide further assistance in the proper identification and protection of the various environmental and socio-economic sensitive areas.

# Galveston Bay System Index Map



SCALE 1:436,444

One Inch represents 6.89 miles



Maps and figures have been redacted in accordance with the FOIA Exemption 7(F).



**FIGURE 6.2****ENDANGERED/THREATENED SPECIES LISTING**

The following is a complete listing of endangered/threatened species with known or possible occurrence for the State of Texas.

<b>ANIMALS</b>	
<b>Common Name</b>	<b>Scientific Name</b>
Greater Long-nosed Bat	<i>Leptonycteris nivalis</i>
Southern Yellow Bat	<i>Lasiurus ega</i>
Spotted Bat	<i>Euderma maculatum</i>
Rafinesque's Big-eared Bat	<i>Corynorhinus rafinesquii</i>
Texas Kangaroo Rat	<i>Dipodomys elator</i>
Coues' Rice Rat	<i>Oryzomys couesi</i>
Palo Duro Mouse	<i>Peromyscus truei comanche</i>
Gervais' Beaked Whale	<i>Mesoplodon europaeus</i>
Goose-beaked Whale	<i>Ziphius cavirostris</i>
Pygmy Sperm Whale	<i>Kogia breviceps</i>
Dwarf Sperm Whale	<i>Kogia simus</i>
Sperm Whale	<i>Physeter macrocephalus</i>
Atlantic Spotted Dolphin	<i>Stenella frontalis</i>
Rough-toothed Dolphin	<i>Steno bredanensis</i>
Killer Whale	<i>Orcinus orca</i>
False Killer Whale	<i>Pseudorca crassidens</i>
Short-finned Pilot Whale	<i>Globicephala macrorhynchus</i>
Pygmy Killer Whale	<i>Feresa attenuata</i>
Finback Whale	<i>Balaenoptera physalus</i>
Blue Whale	<i>Balaenoptera musculus</i>
Black Right Whale	<i>Eubalaena glacialis</i>
West Indian Manatee	<i>Trichechus manatus</i>
Red Wolf	<i>Canis rufus</i>
Grey Wolf	<i>Canis lupus</i>
Black Bear	<i>Ursus americanus</i>
Louisiana Black Bear	<i>Ursus americanus luteolus</i>
Grizzly Bear	<i>Ursus arctos</i>
White-nosed Coati	<i>Nasua narica</i>
Black-footed Ferret	<i>Mustela nigripes</i>
Ocelot	<i>Felis pardalis</i>
Margay	<i>Felis wiedii</i>
Jaguarundi	<i>Felis yaguarondi</i>
Jaguar	<i>Panthera onca</i>
Shovelnose Sturgeon	<i>Scaphirhynchus platyrhynchus</i>
Paddlefish	<i>Polyodon spathula</i>
Mexican Stoneroller	<i>Campostoma ornatum</i>
Devils River Minnow	<i>Dionda diaboli</i>
Rio Grande Chub	<i>Gila pandora</i>
Rio Grande Silvery Minnow	<i>Hybognathus amarus</i>
Chihuahua Shiner	<i>Notropis chihuahua</i>
Arkansas River Shiner	<i>Notropis girardi</i>
Bluehead Shiner	<i>Notropis hubbsi</i>
Bluntnose Shiner	<i>Notropis simus</i>
Proserpine Shiner	<i>Cyprinella proserpina</i>

## FIGURE 6.2

## ENDANGERED/THREATENED SPECIES LISTING (Cont'd)

ANIMALS (Cont'd)	
Common Name	Scientific Name
Blue Sucker	<i>Cycleptus elongatus</i>
Creek Chubsucker	<i>Erimyzon oblongus</i>
Widemouth Blindcat	<i>Satan eurystomus</i>
Toothless Blindcat	<i>Trogloglanis pattersoni</i>
Leon Springs Pupfish	<i>Cyprinodon bovinus</i>
Comanche Springs Pupfish	<i>Cyprinodon elegans</i>
Conchos Pupfish	<i>Cyprinodon eximius</i>
Pecos Pupfish	<i>Cyprinodon pecosensis</i>
Big Bend Gambusia	<i>Gambusia gaigei</i>
San Marcos Gambusia	<i>Gambusia georgei</i>
Clear Creek Gambusia	<i>Gambusia heterochir</i>
Pecos Gambusia	<i>Gambusia nobilis</i>
Blotched Gambusia	<i>Gambusia senilis</i>
Fountain Darter	<i>Etheostoma fonticola</i>
Rio Grande Darter	<i>Etheostoma grahami</i>
Blackside Darter	<i>Percina maculata</i>
Opossum Pipefish	<i>Microphis brachyurus</i>
River Goby	<i>Awaous tajasica</i>
Blackfin Goby	<i>Gobionellus atripinnis</i>
Loggerhead Sea Turtle	<i>Caretta caretta</i>
Green Sea Turtle	<i>Chelonia mydas</i>
Atlantic Hawksbill Sea Turtle	<i>Eretmochelys imbricata</i>
Kemp's Ridley Sea Turtle	<i>Lepidochelys kempii</i>
Alligator Snapping Turtle	<i>Macroclmys temminckii</i>
Leatherback Sea Turtle	<i>Dermochelys coriacea</i>
Chihuahuan Mud Turtle	<i>Kinosternon hirtipes</i>
Texas Tortoise	<i>Gopherus berlandieri</i>
Reticulated Gecko	<i>Coleonyx reticulatus</i>
Reticulate Collared Lizard	<i>Crotaphytus reticulatus</i>
Texas Horned Lizard	<i>Phrynosoma cornutum</i>
Mountain Short-horned Lizard	<i>Phrynosoma hernandesi</i>
Scarlet Snake	<i>Cemophora coccinea</i>
Black-Striped Snake	<i>Coniophanes imperialis</i>
Indigo Snake	<i>Drymarchon corais</i>
Speckled Racer	<i>Drymobius margaritiferus</i>
Northern Cat-Eyed Snake	<i>Leptodeira septentrionalis</i>
Brazos Water Snake	<i>Nerodia harteri</i>
Concho Water Snake	<i>Nerodia paucimaculata</i>
Smooth Green Snake	<i>Liophorophis vernalis</i>
Louisiana Pine Snake	<i>Pituophis melanoleucus ruthveni</i>
Big Bend Blackhead Snake	<i>Tantilla rubra</i>
Texas Lyre Snake	<i>Trimorphodon biscutatus</i>
Timber (Canebrake) Rattlesnake	<i>Crotalus horridus</i>
Cascade Caverns Salamander	<i>Eurycea latitans</i>
San Marcos Salamander	<i>Eurycea nana</i>
Comal Blind Salamander	<i>Eurycea tridentifera</i>

## FIGURE 6.2

## ENDANGERED/THREATENED SPECIES LISTING (Cont'd)

ANIMALS (Cont'd)	
Common Name	Scientific Name
Barton Springs Salamander	<i>Eurycea sosorum</i>
Texas Blind Salamander	<i>Eurycea rathbuni</i>
Blanco Blind Salamander	<i>Eurycea robusta</i>
Black-Spotted Newt	<i>Notophthalmus meridionalis</i>
South Texas Siren (large form)	<i>Siren</i>
Houston Toad	<i>Bufo houstonensis</i>
Mexican Treefrog	<i>Smilisca baudinii</i>
White-Lipped Frog	<i>Leptodactylus labialis</i>
Sheep Frog	<i>Hypopachus variolosus</i>
Mexican Burrowing Toad	<i>Rhinophrynus dorsalis</i>
"Eastern" Brown Pelican	<i>Pelecanus occidentalis</i>
Reddish Egret	<i>Egretta rufescens</i>
White-faced Ibis	<i>Plegadis chihi</i>
Wood Stork	<i>Mycteria americana</i>
Whooping Crane	<i>Grus americana</i>
Swallow-Tailed Kite	<i>Elanoides forficatus</i>
Bald Eagle	<i>Haliaeetus leucocephalus</i>
Common Black-hawk	<i>Buteogallus anthracinus</i>
Gray Hawk	<i>Asturina nitida</i>
White-tailed Hawk	<i>Buteo albicaudatus</i>
Zone-tailed Hawk	<i>Buteo albonotatus</i>
Northern Aplomado Falcon	<i>Falco femoralis septentrionalis</i>
Peregrine Falcon	<i>Falco peregrinus</i>
American Peregrine Falcon	<i>Falco peregrinus anatum</i>
Arctic Peregrine Falcon	<i>Falco peregrinus tundrius</i>
Cactus Ferruginous Pygmy-Owl	<i>Glaucidium brasilianum cactorum</i>
"Mexican" Spotted Owl	<i>Strix occidentalis lucida</i>
"Attwater's" Greater Prairie Chicken	<i>Tympanuchus cupido attwateri</i>
Piping Plover	<i>Charadrius melodus</i>
Mountain Plover	<i>Charadrius montanus</i>
Eskimo Curlew	<i>Numenius borealis</i>
"Interior" Least Tern	<i>Sterna antillarum athalassos</i>
Sooty Tern	<i>Sterna fuscata</i>
Red-cockaded Woodpecker	<i>Picoides borealis</i>
Ivory-billed Woodpecker	<i>Campephilus principalis</i>
"Northern" Beardless-tyrannulet	<i>Camptostoma imberbe</i>
"Southwestern" Willow Flycatcher	<i>Empidonax traillii extimus</i>
Rose-throated Becard	<i>Pachyramphus aglaiae</i>
Black-capped Vireo	<i>Vireo atricapillus</i>
Bachman's Warbler	<i>Vermivora bachmanii</i>
Tropical Parula	<i>Parula pitayumi</i>
Golden-checked Warbler	<i>Dendroica chrysoparia</i>
Bachman's Sparrow	<i>Aimophila aestivalis</i>
"Texas" Botteri's Sparrow	<i>Aimophila botterii texana</i>
"Arizona" Botteri's Sparrow	<i>Aimophila botterii arizonae</i>
Peck's Cave Amphipod	<i>Stygobromus pecki</i>

## FIGURE 6.2

## ENDANGERED/THREATENED SPECIES LISTING (Cont'd)

ANIMALS (Cont'd)	
Common Name	Scientific Name
American Burying Beetle	<i>Nicrophorus americanus</i>
Comal Springs Riffle Beetle	<i>Heterelmis comalensis</i>
Tooth Cave Ground Beetle	<i>Rhadine persephone</i>
A Ground Beetle	<i>Rhadine exilis</i>
A Ground Beetle	<i>Rhadine infernalis</i>
Kretschmarr Cave Mold Beetle	<i>Texamaurops reddelli</i>
Coffin Cave Mold Beetle	<i>Batrisodes texanus</i>
Helotes Mold Beetle	<i>Batrisodes venyivi</i>
Comal Springs Dryopid Beetle	<i>Stygoparnus comalensis</i>
Tooth Cave Spider	<i>Neoleptoneta myopica</i>
Government Canyon Cave Spider	<i>Neoleptoneta microps</i>
Bee Creek Cave Harvestman	<i>Texella reddelli</i>
Bone Cave Harvestman	<i>Texella reyesi</i>
Robber Baron Cave Harvestman	<i>Texella cokendolpheri</i>
Tooth Cave Pseudoscorpion	<i>Tartarocreagris texana</i>
Madla's Cave Spider	<i>Cicurina madla</i>
Robber Baron Cave Spider	<i>Cicurina baronia</i>
Veni's Cave Spider	<i>Cicurina venii</i>
Vesper Cave Spider	<i>Cicurina vespera</i>
Ouachita Rock-Pocketbook Mussel	<i>Arkansia wheeleri</i>

PLANTS	
Common Name	Scientific Name
Tobusch Fishhook Cactus	<i>Ancistrocactus tobuschii</i>
Bunched Cory Cactus	<i>Coryphantha ramillosa</i>
Lloyd's Hedgehog Cactus	<i>Echinocereus lloydii</i>
Black Lace Cactus	<i>Echinocereus reichenbachii</i> var. <i>albertii</i>
Davis' Green Pitaya	<i>Echinocereus viridiflorus</i> var. <i>davisii</i>
Chisos Mountains Hedgehog Cactus	<i>Echinocereus chisoensis</i> var. <i>chisoensis</i>
Lloyd's Mariposa Cactus	<i>Neolloydia mariposensis</i>
Nellie Cory Cactus	<i>Coryphantha minima</i>
Sneed Pincushion Cactus	<i>Coryphantha sneedii</i> var. <i>sneedii</i>
Star Cactus	<i>Astrophytum asterias</i>
Hinckley's Oak	<i>Quercus hinckleyi</i>
Johnston's Frankenia	<i>Frankenia johnstonii</i>
Texas Ayenia	<i>Ayenia limitaris</i>
Texas Snowbells	<i>Styrax texanus</i>
Walker's Manioc	<i>Manihot walkerae</i>
South Texas Ambrosia	<i>Ambroisa cheiranthifolia</i>
Puzzle Sunflower, Pecos Sunflower	<i>Helianthus paradoxus</i>
Texas Prairie Dawn	<i>Hymenoxys texana</i>
Ashy Dogweed	<i>Thymophylla tephroleuca</i>
Terlingua Creek Cat's eye	<i>Cryptantha crassipes</i>
Zapata Bladderpod	<i>Lesquerella thamnophila</i>
White Bladderpod	<i>Lesuerella pallida</i>

**FIGURE 6.2****ENDANGERED/THREATENED SPECIES LISTING (Cont'd)**

<b>PLANTS (Cont'd)</b>	
<b>Common Name</b>	<b>Scientific Name</b>
Slender Rush-pea	<i>Hoffmannseggia tenella</i>
McKittrick Pennyroyal	<i>Hedeoma apiculatum</i>
Texas Poppy-mallow	<i>Callirhoe scabriuscula</i>
Large-Fruited Sand Verbena	<i>Abronia macrocarpa</i>
Texas Trailing Phlox	<i>Phlox nivalis ssp. texensis</i>
American Chaffseed	<i>Schwalbea americana</i>
Navasota Ladies' Tresses	<i>Spiranthes parksii</i>
Texas Wild-Rice	<i>Zizania texana</i>
Little Aguja Pondweed	<i>Potamogeton clystocarpus</i>



# Oil Slick Volume Estimator Barrels

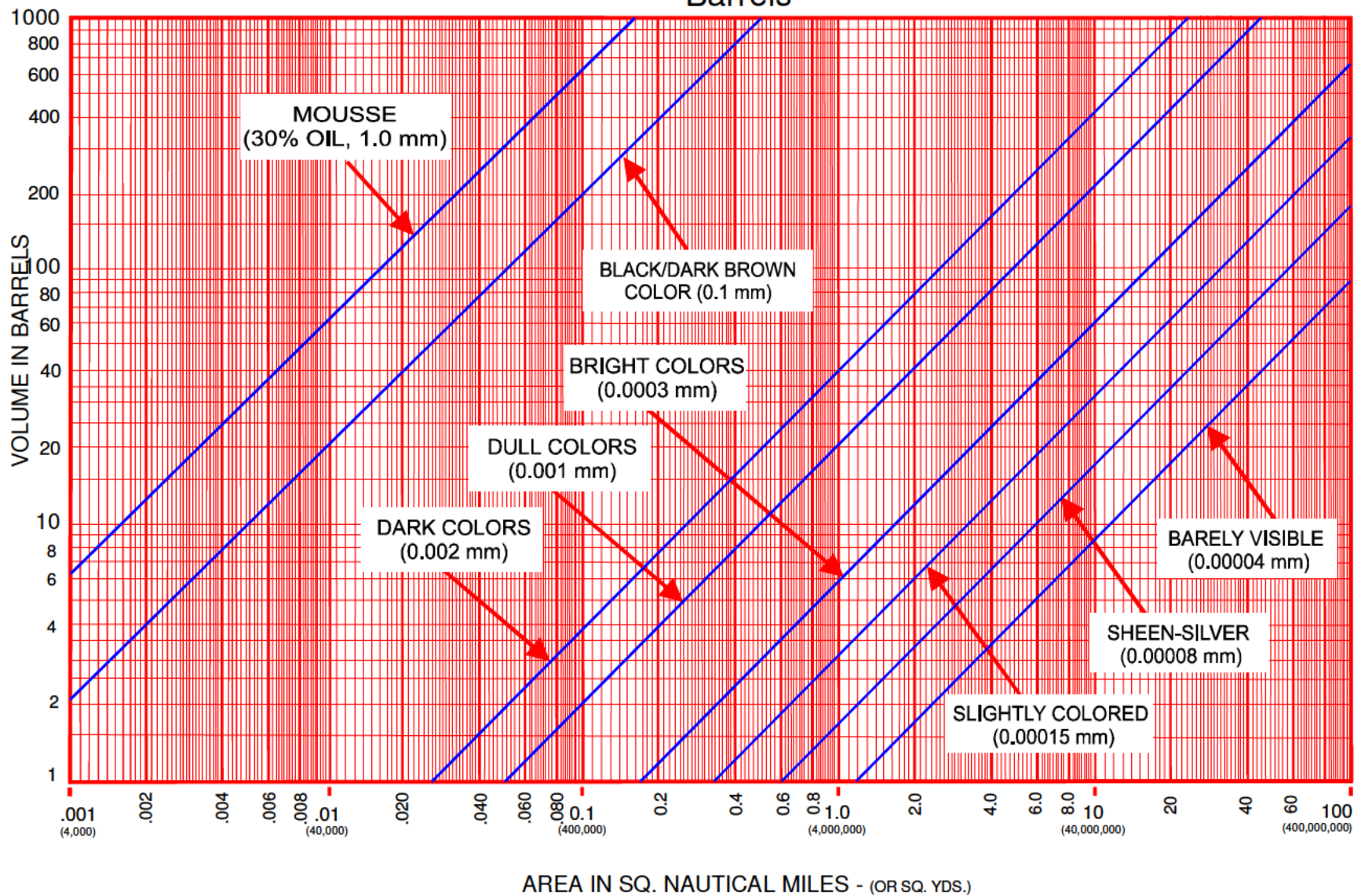


FIGURE 6.3

**FIGURE 6.4**  
**BOOMING STRATEGY**

**17. LEAGUE CITY**

W Galveston Bay and Clear Lake

CHART(s): Nautical Chart (11326 & 11327)  
Upper Coast Atlas Page 35STAGING AREA: Kemah/Seabrook Boat Ramps (2)  
Located under 146 bridge Clear Lake Ch.

ACCESS ROAD: 146 south to Kemah bridge, follow signs to ramp locations

**DESCRIPTION:**W Galveston Bay

Note: 4+ knot currents can be expected at peak Ebb/Flood.

17-A Boom entrance to Clear Lake Channel by placing cascading diversion boom to prevent migration of product into Clear Lake.

17-B Boom north entrance to Clear Lake off Todville Rd (260' wide)

17-C Boom to protect Lower Armond Bayou

17-D Boom entrance to small creek at Bay Vista Subdivision (20' wide)

Bayport Ship Channel

17-E Boom spill site to prevent migration.

17-F Boom entrance to Boggy Bayou (100' wide)

17-G Boom north shore of Bayport Turning Basin

**CAUTION:**

Numerous submerged pilings have been noted along shoreline. Swift currents can be expected in Clear Lake Entrance Channel. Shallow water north of Clear Lake Entrance near shoreline.

**NATURAL COLLECTION AREA:**

Debris has been noted along the shoreline south of the Clear Lake Entrance Channel, also product tends to collect near the bulkheads and points. Product tends to linger near the entrance of Clear Lake Channel along any trash lines due to Ebb current flow.

Central Texas Coastal Geographic Response Plan  
July 2001**Site Specific Information**

Site # 17-A TGLO Polygon # N/A Quad Name LEAGUE CITY

**Site information:**

Site Description: Galveston Bay entrance to Clear Lake Channel

Clear Lake Channel leads from Galveston Bay to environmentally sensitive Clear Lake.

(b) (7)(F)

Map # 35

NOAA chart # 11326

County: Harris

Date last visited: 5 April 2001

**Access:**

Closest Boat Ramp: Kemah/Seabrook Boat Ramps

Distance: 5 minutes

Boat type recommended: Shallow, aluminum hull

Closest Airport: Houston Gulf Airport, Kemah (SPX)

Closest Helicopter Landing: Houston Gulf Airport, 29-30-30N 095-03-04W

**From MSO Houston-Galveston:**

South on I-610 to Hwy 225. East on Hwy 225 to Hwy 146. South on Hwy 146 to Seabrook, TX. There are ramps under the Kemah/Seabrook bridge on both the north and south sides.

**Trustees/ Contact Numbers:**

U.S.C.G. via NRC (800) 424-8802

TXGLO via Hotline (800) 832-8224

TNRCC (512) 463-7727

**Resources at Risk:**

Atlas Priority: N/A

Environmental: Black drum, Sheepshead, American oyster

Economic: N/A

**Booming strategy recommendations:****Recommendations:** Place cascading diversion boom to prevent migration into Clear Lake. Product tends to linger near the entrance along any trash lines due to Ebb current flow.**Number of personnel:** 4-8 **Width of inlet:** 150 ft**Current:** Medium-High **Water depth at mouth:** 16 ft**Safety / Cautionary notes:** 4+ knot currents can be expected during peak Ebb/Flood. Numerous submerged pilings have been noted along shoreline. Shallow water north of the entrance near shoreline.

Central Texas Coastal Geographic Response Plan  
July 2001**Site Specific Information****Site # 17-B TGLO Polygon # 1 Quad Name LEAGUE CITY****Site information:**

Site Description: Lakeside entrance to Clear Lake Channel

Clear Lake Channel leads from Galveston Bay to environmentally sensitive Clear Lake.

**(b) (7)(F)****Map # 35****NOAA chart #** 11326**County:** Harris**Date last visited:** 5 April 2001**Access:****Closest Boat Ramp:**

Kemah/Seabrook Boat Ramps

**Distance:**

10 minutes

**Boat type recommended:**

Shallow, aluminum hull

**Closest Airport:**

Houston Gulf Airport, Kemah (SPX)

**Closest Helicopter Landing:**

Houston Gulf Airport, 29-30-30N 095-03-04W

**From MSO Houston-Galveston:**

South on I-610 to Hwy 225 East on Hwy 225 to Hwy 146. South on Hwy 146 to Seabrook, TX. There are ramps under the Kemah/Seabrook bridge on both the north and south sides.

**Trustees/ Contact Numbers:**

U.S.C.G. via NRC (800) 424-8802

TXGLO via Hotline (800) 832-8224

TNRCC (512) 463-7727

**Resources at Risk:**

Atlas Priority:

**LOW**

Environmental:

Several species of fish including Bay anchovy and Catfish, White shrimp, Brown shrimp, Blue crab.

Economic:

N/A

**Booming strategy recommendations:****Recommendations:**

Place cascading diversion boom to prevent migration into Clear Lake.

**Number of personnel:**

4-8

**Width of inlet:**

600 ft

**Current:**

Medium-High

**Water depth at mouth:**

15 ft

**Safety / Cautionary notes:**

4+ knot currents can be expected during peak

Ebb/Flood.

**Site Specific Information**

Site # 17-C TGLO Polygon # 6 Quad Name LEAGUE CITY

**Site information:**

Site Description: Lower Armand Bayou

Armand Bayou is a Nature Park and is separated from Mud Lake at its southern end by a barrier of "No gasoline motors beyond this point" signs posted at approximate 300' apart.

(b) (7)(F)

Map # 35

NOAA chart # 11326

County: Harris

Date last visited: 24 April 2001

**Access:**

Closest Boat Ramp: Clear Lake Park Ramps

Distance: 20 minutes

Boat type recommended: Shallow, aluminum hull

Closest Airport: Houston Gulf Airport, Kemah (SPX)

Closest Helicopter Landing: Houston Gulf Airport, 29-30-30N 095-03-04W

**From MSO Houston-Galveston:**

South on I-610 to Hwy 225. East on Hwy 225 to Hwy 146. South on Hwy 146 to NASA Road 1. Turn right on NASA Road 1, the ramps are on the left after a couple of miles.

**Trustees/ Contact Numbers:**

U.S.C.G. via NRC (800) 424-8802

TXGLO via Hotline (800) 832-8224

TNRCC (512) 463-7727

**Resources at Risk:**Atlas Priority: **HIGH**

Environmental: Waterfowl, Osprey, Wood duck, Wading birds, Red drum.

Economic: N/A

**Booming strategy recommendations:**

**Recommendations:** Boom across barrier to prevent migration from Mud Lake into Armand Bayou. Boom across NASA Road 1 bridge (600') to prevent migration from Clear Lake into Mud Lake.

**Number of personnel:** 4-8**Width of inlet:** 3000 ft**Current:** Slow**Water depth at mouth:** 4 ft**Safety / Cautionary notes:**

Central Texas Coastal Geographic Response Plan  
July 2001**Site Specific Information**

Site # 17-D TGLO Polygon # N/A

Quad Name LEAGUE CITY

**Site information:**

Site Description: Entrance to Creek at Bay Vista Subdivision  
The creek at Bay Vista leads from Galveston Bay into Laporte.

(b) (7)(F)

Map # 35

NOAA chart # 11326,11327 County: Harris  
Date last visited: 5 April 2001

**Access:**

Closest Boat Ramp: Kemah/Seabrook Boat Ramps  
Distance: 25 minutes  
Boat type recommended: Shallow, aluminum hull  
Closest Airport: Houston Gulf Airport, Kemah (SPX)  
Closest Helicopter Landing: Houston Gulf Airport, 29-30-30N 095-03-04W

**From MSO Houston-Galveston:**

South on I-610 to Hwy 225 East on Hwy 225 to Hwy 146. South on Hwy 146 to Seabrook, TX. There are ramps under the Kemah/Seabrook bridge on both the north and south sides

**Trustees/ Contact Numbers:** U.S.C.G. via NRC (800) 424-8802  
TXGLO via Hotline (800) 832-8224  
TNRCC (512) 463-7727

**Resources at Risk:**

Atlas Priority: N/A  
Environmental: Texas diamondback terrapin.  
Economic: N/A

**Booming strategy recommendations:**

Recommendations: Boom entrance to prevent migration inland  
Number of personnel: 2-4 Width of inlet: 20 ft  
Current: Slow Water depth at mouth: 2.5 ft

**Safety / Cautionary notes:** Numerous submerged pilings have been noted along shoreline. Shallow water north of the entrance near shoreline.



Central Texas Coastal Geographic Response Plan  
July 2001**Site Specific Information**

Site # 17-E TGLO Polygon # N/A

Quad Name LEAGUE CITY

**Site information:**

Site Description: Facilities at Bayport Turning Basin

Bayport Turning Basin has several petrochemical plants on it's western and southern shores.

(b) (7)(F)

Map # 35

NOAA chart # 11326,11327 County: Harris  
Date last visited: 16 March 2001

**Access:**

**Closest Boat Ramp:** Sylvan Beach Ramps, Laporte  
**Distance:** 15 minutes  
**Boat type recommended:** Shallow, aluminum hull  
**Closest Airport:** Laporte Municipal Airport, Laporte (T41)  
**Closest Helicopter Landing:** Laporte Municipal Airport, 29-40-09N 095-03-51W

**From MSO Houston-Galveston:**

Take I-610 south to Hwy 225. Take Hwy 225 east until it ends at Hwy 146. Take Hwy 146 south to the Fairmont Parkway. Turn left on Fairmont Parkway to it ends. Turn right on Bayshore Drive and the third driveway on the left is the boat ramp entrance.

**Trustees/ Contact Numbers:** U.S.C.G. via NRC (800) 424-8802  
TXGLO via Hotline (800) 832-8224  
TNRCC (512) 463-7727

**Resources at Risk:**

Atlas Priority: N/A  
Environmental: N/A  
Economic: N/A

**Booming strategy recommendations:**

**Recommendations:** Boom near spill to prevent migration.  
**Number of personnel:** 4-8 **Width of inlet:** N/A  
**Current:** Slow **Water depth at mouth:** 44 ft

**Safety / Cautionary notes:**



Central Texas Coastal Geographic Response Plan  
July 2001**Site Specific Information**

Site # 17-F TGLO Polygon # N/A

Quad Name LEAGUE CITY

**Site information:**

Site Description: Entrance to Boggy Bayou

Boggy Bayou leads into the housing area of Shoreacres.

(b) (7)(F)

Map # 35

NOAA chart # 11326, 11327

County: Harris

Date last visited: 16 March 2001

**Access:**

Closest Boat Ramp: Sylvan Beach Ramps, Laporte

Distance: 15 minutes

Boat type recommended: Shallow, aluminum hull

Closest Airport: Laporte Municipal Airport, Laporte (T41)

Closest Helicopter Landing: Laporte Municipal Airport, 29-40-09N 095-03-51W

**From MSO Houston-Galveston:**

Take I-610 south to Hwy 225. Take Hwy 225 east until it ends at Hwy 146. Take Hwy 146 south to the Fairmont Parkway. Turn left on Fairmont Parkway to it ends. Turn right on Bayshore Drive and the third driveway on the left is the boat ramp entrance.

**Trustees/ Contact Numbers:**

U.S.C.G. via NRC (800) 424-8802

TXGLO via Hotline (800) 832-8224

TNRCC (512) 463-7727

**Resources at Risk:**

Atlas Priority: N/A

Environmental: N/A

Economic: N/A

**Booming strategy recommendations:**

Recommendations: Boom across entrance to prevent migration inland.

Number of personnel: 2-4 Width of inlet: 30 ft

Current: Slow Water depth at mouth: 1 ft

**Safety / Cautionary notes:**

**Site Specific Information**

Site # 17-G TGLO Polygon # N/A Quad Name LEAGUE CITY

**Site information:**

Site Description: North Shore of Bayport Turning Basin

The north shore of the Bayport Turning basin and Entrance Channel was a steep mud bank, which is in the process getting a rock erosion prevention barricade.

(b) (7)(F)

Map # 35

NOAA chart # 11326,11327 County: Harris  
Date last visited: 16 March 2001

**Access:**

**Closest Boat Ramp:** Sylvan Beach Ramps, Laporte  
**Distance:** 15 minutes  
**Boat type recommended:** Shallow, aluminum hull  
**Closest Airport:** Laporte Municipal Airport, Laporte (T41)  
**Closest Helicopter Landing:** Laporte Municipal Airport, 29-40-09N 095-03-51W

**From MSO Houston-Galveston:**

Take I-610 south to Hwy 225. Take Hwy 225 east until it ends at Hwy 146. Take Hwy 146 south to the Fairmont Parkway. Turn left on Fairmont Parkway to it ends. Turn right on Bayshore Drive and the third driveway on the left is the boat ramp entrance.

**Trustees/ Contact Numbers:** U.S.C.G. via NRC (800) 424-8802  
TXGLO via Hotline (800) 832-8224  
TNRCC (512) 463-7727

**Resources at Risk:**

Atlas Priority: N/A  
Environmental: N/A  
Economic: N/A

**Booming strategy recommendations:****Recommendations:**

**Number of personnel:** 2-4 **Width of inlet:** N/A  
**Current:** Slow **Water depth at mouth:** 44 ft

**Safety / Cautionary notes:**

**16. BAYCLIFF**  
W Galveston Bay

CHART(S): Nautical Chart (11326 & 11327)  
Upper Coast Atlas Page 34

STAGING AREAS: 1. Spillway Park boat ramp (2)  
(b) (7)(F) Note: Swift water, caution is advised.

2. El Jardin Boat Ramp (1)  
(b) (7)(F) Note: shallow water ramp

ACCESS ROADS: 1. Hwy 146 South to FM 646, turn left, road will bend right,  
proceed past HL&P outfall bridge, turn left on first road to ramp.

2. Hwy 146 south exit Port Rd. proceed east road turns into Todville  
Rd, turn left on El Jardin, road ends at boat ramp.

**DESCRIPTION:**

- 16-A Boom to protect Clifton Beach
- 16-B Boom entrance to Clifton Channel
- 16-C Boom entrance to Pine Gully (450' wide)
- 16-D Boom to protect marsh south of El Jardin Rd.
- 16-E Boom to protect East side of Island north of Five mile Pass
- 16-F Boom entrance to Bayport Ship Channel (960' wide)
- 16-G Boom to protect Houston Yacht Club
- 16-H Boom to protect Red Fish Island

**CAUTION:**

Numerous submerged pilings have been noted along shoreline. Avoid running aground on Red Fish Island (submerged).

**NATURAL COLLECTION AREA:**

Debris has been noted north of Red Bluff, product tends to collect near the Five mile Pass area.

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## Central Texas Coastal Geographic Response Plan

July 2001

**Site Specific Information**

Site # 16-A      TGLO Polygon # 1      Quad Name Baycliff

**Site information:**

Site Description: Shoreline of Clifton Beach at end of Highway 646.

(b) (7)(F)

Map# 34

NOAA chart # 11326, 11327

County: Harris

Nearest ICW Marker: N/A

Date last visited: 05 Mar 01

**Access:****Closest Boat Ramp:**

Clifton Beach

**Distance:**

1 minute

**Boat type recommended:**

Shallow aluminum hull

**Closest Airport:**

William Hobby Airport HOU

**Closest Helicopter Landing:**

William Hobby Airport, 29°38'43.50"N

095°16'44.00"W

**From MSO Houston-Galveston:**

Take Hwy 610 South, exit onto Hwy 225 east, exit onto Hwy 146 south, turn left onto Grand Ave., following it out to Galveston Bay, and turn left onto Bayshore

**Trustees/ Contact Numbers:**

U.S.C.G. via NRC

(800) 424-8802

TXGLO via Hotline

(800) 832-8224

TNRCC

(512) 463-7727

**Resources at Risk:**

Atlas Priority:

High

Environmental:

Habitat for turtles

Economic:

N/A

**Booming strategy recommendations:****Recommendations:**

Boom to protect sensitive marshes.

**Number of personnel:**

2-4

**Width of inlet:**

N/A

**Current:**

Medium

**Water depth at mouth:**

N/A ft

**Safety / Cautionary notes:**

Numerous submerged pilings have been noted along the shoreline.

Central Texas Coastal Geographic Response Plan  
July 2001**Site Specific Information****Site # 16-B TGLO Polygon # 2 Quad Name Baycliff****Site information:**

Site Description: Entrance to Clifton Channel near Bayshore Park.

**(b) (7)(F)****Map# 34**

NOAA chart # 11326, 11327

County: Harris

Nearest ICW Marker: N/A

Date last visited: 05 Mar 01

**Access:****Closest Boat Ramp:**

Clifton Channel

**Distance:**

1 minute

**Boat type recommended:**

Shallow Aluminum hull

**Closest Airport:**

William Hobby Airport HOU

**Closest Helicopter Landing:**

William Hobby Airport. 29°38'43 50"N

095°16'44.00"W

**From MSO Houston-Galveston:**

Take Hwy 610 south, exit onto Hwy 225 east, exit onto Hwy 146 south, turn left onto Grand Ave., following it out to Galveston Bay, turn right onto Bayshore.

**Trustees/ Contact Numbers:**

U.S.C.G. via NRC

(800) 424-8802

TXGLO via Hotline

(800) 832-8224

TNRCC

(512) 463-7727

**Resources at Risk:**

Atlas Priority: Low

Environmental: N/A

Economic: N/A

**Booming strategy recommendations:****Recommendations:**

Boom to protect sensitive marshes.

**Number of personnel:**

2-4

**Width of inlet:**

N/A

**Current:**

Medium

**Water depth at mouth:**

N/A

**Safety / Cautionary notes:**  
shoreline.

Numerous submerged pilings have been noted along

Central Texas Coastal Geographic Response Plan  
July 2001**Site Specific Information****Site # 16-C TGLO Polygon # 3 Quad Name: Baycliff****Site information:**

Site Description: Seabrook shoreline and lower Pine Gully.

**(b) (7)(F)****Map# 34**

NOAA chart # 11326, 11327

County: Harris

Nearest ICW Marker: N/A

Date last visited: 05 Mar 01

**Access:****Closest Boat Ramp:**

Red Bluff

**Distance:**

5 minutes

**Boat type recommended:**

Shallow Aluminum hull

**Closest Airport:**

William Hobby Airport HOU

**Closest Helicopter Landing:**

William Hobby Airport, 29°38'43.50"N

095°16'44.00"W

**From MSO Houston-Galveston:**

Take Hwy 610 south, exit onto Hwy 225 east, exit onto Hwy 146 south, turn left onto Red Bluff, following it out to Galveston Bay. Pine Gully will be on the left.

**Trustees/ Contact Numbers:**

U.S.C.G. via NRC

(800) 424-8802

TXGLO via Hotline

(800) 832-8224

TNRCC

(512) 463-7727

**Resources at Risk:**

Atlas Priority: Low

Environmental: N/A

Economic: N/A

**Booming strategy recommendations:****Recommendations:**

Boom to protect sensitive marshes.

**Number of personnel:**

2-4

**Width of inlet:**

450 ft

**Current:**

Medium

**Water depth at mouth:**

N/A ft

**Safety / Cautionary notes:**  
shoreline.

Numerous submerged pilings have been noted along



Central Texas Coastal Geographic Response Plan  
July 2001**Site Specific Information****Site # 16-H TGLO Polygon # 4 Quad Name Baycliff****Site information:**

Site Description: Red Fish Island near the Houston Ship Channel.

**(b) (7)(F)****Map# 34****NOAA chart #** 11326, 11327**County:** Harris**Nearest ICW Marker:** N/A**Date last visited:** 05 Mar 01**Access:****Closest Boat Ramp:**

Clifton Channel

**Distance:**

10-15 minutes

**Boat type recommended:**

Shallow hull

**Closest Airport:**

William Hobby Airport HOU

**Closest Helicopter Landing:**

William Hobby Airport, 29°38'43.50"N

095°16'44.00"W

**From MSO Houston-Galveston:**

Red Fish Island can be reached by boat only.

**Trustees/ Contact Numbers:**

U.S.C.G. via NRC (800) 424-8802

TXGLO via Hotline (800) 832-8224

TNRCC (512) 463-7727

**Resources at Risk:**

Atlas Priority: Low

Environmental: Habitat for bivalves.

Economic: N/A

**Booming strategy recommendations:****Recommendations:**

Boom to protect sensitive marshes.

**Number of personnel:**

2-6

**Width of inlet:**

N/A

**Current:**

Medium

**Water depth at mouth:**

N/A

**Safety / Cautionary notes:**

Avoid running aground on Red Fish Island, it may be submerged. Red Fish Island is transient and may or may not be emergent from year to year.

Central Texas Coastal Geographic Response Plan  
July 2001**Site Specific Information****Site # 16-G TGLO Polygon # 5 Quad Name Baycliff****Site information:**

Site Description: Houston Yacht Club

(b) (7)(F)

Map# 34

NOAA chart # 11326, 11327

County: Harris

Nearest ICW Marker: N/A

Date last visited: 05 Mar 01

**Access:****Closest Boat Ramp:** Sylvan Beach**Distance:** 5 minutes**Boat type recommended:** Shallow hull**Closest Airport:** William Hobby Airport HOU**Closest Helicopter Landing:** William Hobby Airport, 29°38'43.50"N  
095°16'44.00"W**From MSO Houston-Galveston:**

Take Hwy 610 south, exit onto Hwy 225 east, exit onto Hwy 146 south, turn left onto Shoreacres, following it out to Galveston Bay, turn right onto Miramar Houston Yacht Club will be on the left.

**Trustees/ Contact Numbers:**

U.S.C.G. via NRC (800) 424-8802

TXGLO via Hotline (800) 832-8224

TNRCC (512) 463-7727

**Resources at Risk:**

Atlas Priority: N/A

Environmental: Habitat for crabs

Economic: Yacht club

**Booming strategy recommendations:****Recommendations:** Boom to protect sensitive marshes.**Number of personnel:** 4-6 **Width of inlet:** 960 ft**Current:** Medium **Water depth at mouth:** N/A ft**Safety / Cautionary notes:** Watch for recreational vessel traffic.



## Central Texas Coastal Geographic Response Plan

July 2001

**Site Specific Information****Site # 16-E      TGLO Polygon # 6 Quad Name Baycliff****Site information:**

Site Description: South end of Atkinson Island

(b) (7)(F)

Map# 34

NOAA chart # 11326, 11327

County: Harris

Nearest ICW Marker: N/A

Date last visited: 05 Mar 01

**Access:****Closest Boat Ramp:**

Spillway Park and El Jardin

**Distance:**

5-10 minutes

**Boat type recommended:**

Shallow hull

**Closest Airport:**

William Hobby Airport HOU

**Closest Helicopter Landing:**

William Hobby Airport, 29°38'43.50"N

095°16'44.00"W

**From MSO Houston-Galveston:**

Atkinson Island can be reached by boat only.

**Trustees/ Contact Numbers:**

U.S.C.G. via NRC

(800) 424-8802

TXGLO via Hotline

(800) 832-8224

TNRCC

(512) 463-7727

**Resources at Risk:**

Atlas Priority: N/A

Environmental: Habitat for fish, bivalves, shrimp, crabs

Economic: N/A

**Booming strategy recommendations:****Recommendations:**

Boom to protect sensitive marshes

**Number of personnel:**

2-4

**Width of inlet:**

N/A

**Current:**

Medium

**Water depth at mouth:**

N/A

**Safety / Cautionary notes:**

Central Texas Coastal Geographic Response Plan  
July 2001**Site Specific Information****Site # 16-F TGLO Polygon # 7 Quad Name Bacliff****Site information:**

Site Description: Entrance to Bayport Inner Harbor. 1<sup>st</sup> view (south end) facing south of entrance to Bayport Inner Harbor. 2<sup>nd</sup> view (north end) facing southeast of entrance to Bayport Inner Harbor.

(b) (7)(F)

Map# 34

NOAA chart #	11326, 11327	County:	Harris
Nearest ICW Marker:	N/A	Date last visited:	23 Mar 01

**Access:**

<b>Closest Boat Ramp:</b>	Spillway Park and El Jardin
<b>Distance:</b>	5-10 minutes
<b>Boat type recommended:</b>	Shallow hull
<b>Closest Airport:</b>	William Hobby Airport HOU
<b>Closest Helicopter Landing:</b>	William Hobby Airport, 29°38'43.50"N 095°16'44.00"W

**From MSO Houston-Galveston:**

Take Hwy 610 south, exit onto Hwy 225 east, exit onto Hwy 146 south, turn left onto Todville Road.

<b><u>Trustees/ Contact Numbers:</u></b>	U.S.C.G. via NRC	(800) 424-8802
	TXGLO via Hotline	(800) 832-8224
	TNRCC	(512) 463-7727

**Resources at Risk:**

Atlas Priority:	N/A
Environmental:	Habitat for crabs
Economic:	Petrochemical facilities

**Booming strategy recommendations:**

<b>Recommendations:</b>	Boom to protect the entrance to the Bayport Ship Channel.		
<b>Number of personnel:</b>	2-4	<b>Width of inlet:</b>	960 ft
<b>Current:</b>	Medium	<b>Water depth at mouth:</b>	N/A ft

**Safety / Cautionary notes:** Watch for large vessel traffic. Shallow water ramp at the El Jardin boat ramp. Swift water at the Spillway Park boat ramp, caution is advised.

**Map #33 - SMITH POINT**

NW East Bay, SE Trinity Bay and Galveston Bay

CHART(S): Nautical Chart (11326)  
Upper Coast Atlas Page 33

STAGING AREAS: Smith Point public boat ramp (1)

ACCESS ROADS: Smith Point: East on I-10 from Houston to Hwy 61. Turn right on Hwy 61 and proceed south to junction of Hwy 61 and FM 562. Follow FM 562 south all the way to the tip of Smith Point. Robbins Park is located along the Trinity River Channel at the end of FM 562.

**DESCRIPTION:**

Smith Point is very environmentally sensitive, most of the shoreline is salt and brackish water marshes.

Boom to protect Smith Point Marsh

Boom entrance to unnamed inlet 2NM south of Lone Oak Bayou

Boom to protect Frankland Point marsh

**NOTIFY:**

Candy Cain Abshier WMA Manager (409) 736-2551

Texas Parks & Wildlife Dept. (281) 461-4071 Houston

US Fish & Wildlife Service (281) 286-8282 Houston

**CAUTION:**

Very shallow water near the shore line, shallow draft boats, or airboats may be required to respond American Alligators have been sighted in this area.

**NATURAL COLLECTION AREA:**

Due to the extensive marshland and shallow water located in this area, there are not any good collection sites noted. Seagrass beds along eastern shore of Trinity bay should be avoided during response activities to prevent physical damage to vegetation.

Central Texas Coastal Geographic Response Plan  
July 2002

**21. TEXAS CITY**

Texas City Ship Channel, W Galveston Bay and Dickinson Bay

CHART(S): Nautical Chart (11324 & 11326)  
Upper Coast Atlas Page 39

STAGING AREA: 1. Dickinson Bridge public boat ramp on the north side of the Dickinson Bridge on Hwy 146 (under the bridge).

ACCESS ROAD: 1. East on Hwy 225 from Houston to Hwy 146. Turn right on Hwy 146, proceed south to the Dickinson Bridge. Exit onto the feeder before the bridge and proceed under the bridge to the public boat ramp.

**DESCRIPTION:**

- 21-A Texas City Ship Channel
- 21-B Boom two cuts leading to Shell Island Bird Rookery Southwest of marker "17"(620'wide)
- 21-C Boom cut to marsh area West End of Shell Island (162'wide)
- 21-D Boom to protect marsh area south of marker "27"
- 21-E Boom to protect Marsh Island north of marker "31"
- 21-F Boom cut to marsh area at 29-28-05N 094-57-31W (138' wide)
- 21-G Boom entrance to Salt Bayou leading to HL&P (810'wide)
- 21-H Boom Fishing Boat harbor at 29-28-46N 094-56-22W (200'wide)
- 21-I Boom Fishing Boat harbor at 29-28-53N 094-56-12W (100'wide).
- 21-J Boom entrance to Factory Bayou (530' wide).
- 21-K Boom to protect Marina at April Fool Point
- 21-L Close Tide Gate to Moses Lake.

**NOTIFY:**

HL&P to boom off the water intake at Dickinson Bay (281) 316-4340.

Moses Lake Tide Gate Manager (409) 948-4231 or (409) 948-3408 Pager # (409) 943-0286

Nature Conservancy at (409) 945-4677

Texas Parks & Wildlife Dept. (281) 461-4071 Houston

U.S. Fish & Wildlife Service (281) 286-8282 Houston

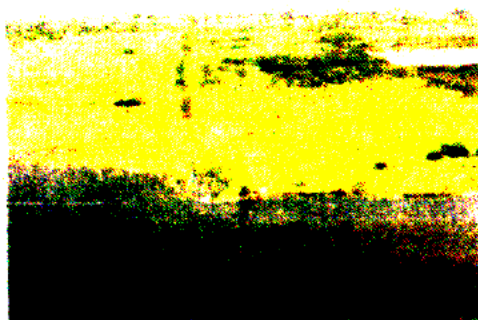
**NATURAL COLLECTION AREA:**

Oil would probably tend to pool along the West Side of Dickinson Bay near the Dickinson Bayou entrance.

Central Texas Coastal Geographic Response Plan  
July 2002

**Site Specific Information**

**Site # 21- TGLO Polygon # 8 Quad Name Texas City**

**Site information:**

Site Description: South of Dollar Bay, wetlands.

(b) (7)(F)

Map# 39

NOAA chart # 11324, 11326

County: Galveston

Nearest ICW Marker: N/A

Date last visited: 12APR01

**Access:**

**Closest Boat Ramp:**

Under Hwy 146 Bridge

**Distance:**

2 minutes

**Boat type recommended:**

Shallow water draft

**Closest Airport:**

Scholes Field Airport GLS

**Closest Helicopter Landing:**

Scholes Field Airport, 29°15'55.16"N

094°51'37.46"W

**From MSO Houston-Galveston:****Trustees/ Contact Numbers:**

U.S.C.G. via NRC (800) 424-8802

TXGLO via Hotline (800) 832-8224

TNRCC (512) 463-7727

**Resources at Risk:**

Atlas Priority: Medium

Environmental: Wetlands, Habitat for wading birds, gulls, terns, waterfowl, fish, upland/wetland plants

Economic: N/A

**Booming strategy recommendations:**

**Recommendations:** Boom to protect sensitive marshes.

**Number of personnel:**

2-4

**Width of inlet:**

N/A ft

**Current:**

Minimal

**Water depth at mouth:**

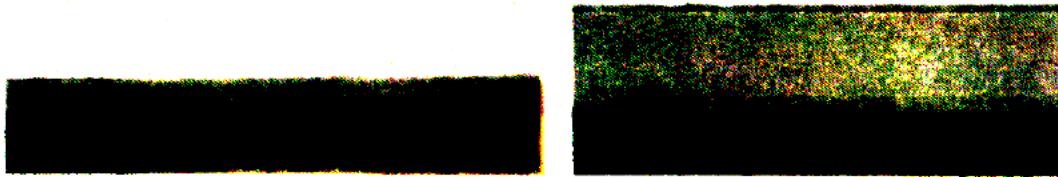
N/A ft

**Safety / Cautionary notes:**

Central Texas Coastal Geographic Response Plan  
July 2002

**Site Specific Information**

Site # 21-K TGLO Polygon # 2 Quad Name Texas City

**Site information:**

Site Description: Mouth of Dickinson Bay. Area is in open water

(b) (7)(F)

Map# 39

NOAA chart # 11324, 11326

County: Galveston

Nearest ICW Marker: N/A

Date last visited: 12APR01

**Access:**

Closest Boat Ramp: Under 146 bridge

Distance: 5 minutes

Boat type recommended: Any

Closest Airport: Scholes Field Airport GLS

Closest Helicopter Landing: Scholes Field Airport, 29°15'55.16"N  
094°51'37.46"W

**From MSO Houston-Galveston:****Trustees/ Contact Numbers:**

U.S.C.G. via NRC (800) 424-8802

TXGLO via Hotline (800) 832-8224

TNRCC (512) 463-7727

**Resources at Risk:**

Atlas Priority: Low

Environmental: N/A

Economic: N/A

**Booming strategy recommendations:**

Recommendations: Boom to protect sensitive marshes.

Number of personnel: 4-6 Width of inlet: N/A ft

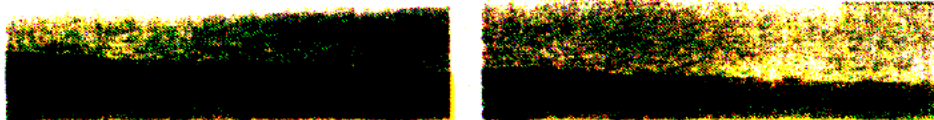
Current: Medium Water depth at mouth: N/A ft

**Safety / Cautionary notes:**

Central Texas Coastal Geographic Response Plan  
July 2002

**Site Specific Information**

Site # 21- TGLO Polygon # 3 Quad Name Texas City

**Site information:**

Site Description: Shore line of Moses Lake and Shell Island. Grassy shorelines on Southern side and wetlands on northern side. Best access is through the Texas Prairie Preserve.

(b) (7)(F)

Map# 39

NOAA chart # 11324, 11326

County: Galveston

Nearest ICW Marker: N/A

Date last visited: 12APR01

**Access:**

Closest Boat Ramp: "The Fish Spot" Texas City

Distance: 10 minutes

Boat type recommended: Shallow water draft

Closest Airport: Scholes Field Airport GLS

Closest Helicopter Landing: Scholes Field Airport, 29°15'55.16"N  
094°51'37.46"W

**From MSO Houston-Galveston:**

<b><u>Trustees/ Contact Numbers:</u></b>	U.S.C.G. via NRC	(800) 424-8802
	TXGLO via Hotline	(800) 832-8224
	TNRCC	(512) 463-7727

**Resources at Risk:**

Atlas Priority:	High
Environmental:	Habitat for birds
Economic:	N/A

**Booming strategy recommendations:**

<b>Recommendations:</b>	Boom to protect sensitive marshes		
<b>Number of personnel:</b>	2-4	<b>Width of inlet:</b>	N/A ft
<b>Current:</b>	Slow	<b>Water depth at mouth:</b>	N/A ft

**Safety / Cautionary notes:**



Central Texas Coastal Geographic Response Plan  
July 2002**Site Specific Information**

Site # 21- TGLO Polygon # 4 Quad Name Texas City

**Site information:**

Site Description: Islands in Moses Lake. Submerged at time of survey.

(b) (7)(F)

Map# 39

NOAA chart # 11324, 11326

County: Galveston

Nearest ICW Marker: N/A

Date last visited: 12APR01

**Access:**

Closest Boat Ramp: "The Fish Spot" Texas City

Distance: 5 minutes

Boat type recommended: Shallow water draft

Closest Airport: Scholes Field Airport GLS

Closest Helicopter Landing: Scholes Field Airport, 29°15'55.16"N  
094°51'37.46"W**From MSO Houston-Galveston:****Trustees/ Contact Numbers:**

U.S.C.G. via NRC	(800) 424-8802
TXGLO via Hotline	(800) 832-8224
TNRCC	(512) 463-7727

**Resources at Risk:**

Atlas Priority: High

Environmental: Habitat for birds and oysters

Economic: N/A

**Booming strategy recommendations:**

Recommendations: Boom to protect sensitive marshes

Number of personnel: 2-4 Width of inlet: N/A ft

Current: Slow Water depth at mouth: N/A ft

Safety / Cautionary notes:



Central Texas Coastal Geographic Response Plan  
July 2002

**Site Specific Information**

Site # 21- TGLO Polygon # 5 Quad Name Texas City

**Site information:**

Site Description: Edwards Point Area. At end of Skyline Road by floodgate.

(b) (7)(F)

Map# 39

NOAA chart # 11324, 11326

County: Galveston

Nearest ICW Marker: N/A

Date last visited: 12APR01

**Access:**

Closest Boat Ramp: "The Fish Spot" Texas City

Distance: 5 minutes

Boat type recommended: Shallow water draft

Closest Airport: Scholes Field Airport GLS

Closest Helicopter Landing: Scholes Field Airport, 29°15'55.16"N

094°51'37.46"W

**From MSO Houston-Galveston:****Trustees/ Contact Numbers:**

U.S.C.G. via NRC (800) 424-8802

TXGLO via Hotline (800) 832-8224

TNRCC (512) 463-7727

**Resources at Risk:**

Atlas Priority: High

Environmental: Habitat for birds

Economic: N/A

**Booming strategy recommendations:**

Recommendations: Boom to protect sensitive marshes

Number of personnel: 2-4 Width of inlet: N/A ft

Current: Slow Water depth at mouth: N/A ft

Safety / Cautionary notes: Very strong currents around flood gate.

Central Texas Coastal Geographic Response Plan  
July 2002

**Site Specific Information**

Site # 21- TGLO Polygon # 6 Quad Name Texas City

**Site information:**

Site Description: Moses Lake, Dollar Bay, Ray's Marina, and wetlands

(b) (7)(F)

Map# 39

NOAA chart # 11324, 11326

County: Galveston

Nearest ICW Marker: N/A

Date last visited: 12APR01

**Access:**

**Closest Boat Ramp:** Ray's Marina TX City

**Distance:** 0 minutes

**Boat type recommended:** Shallow water draft

**Closest Airport:** Scholes Field Airport GLS

**Closest Helicopter Landing:** Scholes Field Airport, 29°15'55.16"N  
094°51'37.46"W

**From MSO Houston-Galveston:****Trustees/ Contact Numbers:**

U.S.C.G. via NRC (800) 424-8802  
TXGLO via Hotline (800) 832-8224  
TNRCC (512) 463-7727

**Resources at Risk:**

Atlas Priority: Medium  
Environmental: Habitat for birds  
Economic: Several Fish houses

**Booming strategy recommendations:**

**Recommendations:** Boom to protect sensitive marshes  
**Number of personnel:** 2-4 **Width of inlet:** N/A ft  
**Current:** Slow **Water depth at mouth:** N/A ft

Safety / Cautionary notes:

Central Texas Coastal Geographic Response Plan  
July 2002

**Site Specific Information**

Site # 21- TGLO Polygon # 7 Quad Name Texas City

**Site information:**

Site Description: East of Dollar Bay behind the TX City Protective Berm.

(b) (7)(F)

Map# 39

NOAA chart # 11324, 11326

County: Galveston

Nearest ICW Marker: N/A

Date last visited: 12APR01

**Access:**

Closest Boat Ramp: "The Fish Spot" TX City

Distance: 5 minutes

Boat type recommended: Shallow water draft

Closest Airport: Scholes Field Airport GLS

Closest Helicopter Landing: Scholes Field Airport, 29°15'55.16"N  
094°51'37.46"W

From MSO Houston-Galveston:

<b><u>Trustees/ Contact Numbers:</u></b>	U.S.C.G. via NRC	(800) 424-8802
	TXGLO via Hotline	(800) 832-8224
	TNRCC	(512) 463-7727

**Resources at Risk:**

Atlas Priority:	High
Environmental:	Habitat for birds
Economic:	N/A

**Booming strategy recommendations:**

<b>Recommendations:</b>	Boom to protect sensitive marshes		
<b>Number of personnel:</b>	2-4	<b>Width of inlet:</b>	N/A ft
<b>Current:</b>	Slow	<b>Water depth at mouth:</b>	N/A ft

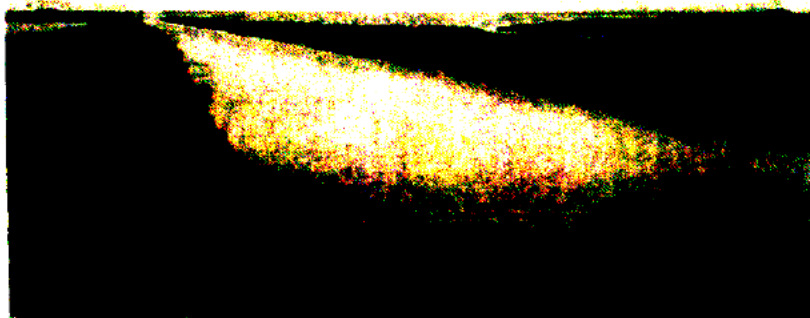
**Safety / Cautionary notes:**

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Central Texas Coastal Geographic Response Plan  
July 2002

**Site Specific Information**

Site # 21-      TGLO Polygon # 8 Quad Name Texas City

**Site information:**

Site Description: Southern shore of Dollar Bay.

(b) (7)(F)

Map# 39

NOAA chart #      11324, 11326

County:      Galveston

Nearest ICW Marker:      N/A

Date last visited:      12APR01

**Access:**

Closest Boat Ramp:      "The Fish Spot" TX City

Distance:      5 minutes

Boat type recommended:      Shallow water draft

Closest Airport:      Scholes Field Airport GLS

Closest Helicopter Landing:      Scholes Field Airport, 29°15'55.16"N

094°51'37.46"W

**From MSO Houston-Galveston:****Trustees/ Contact Numbers:**

U.S.C.G. via NRC      (800) 424-8802

TXGLO via Hotline      (800) 832-8224

TNRCC      (512) 463-7727

**Resources at Risk:**

Atlas Priority:      Medium

Environmental:      Habitat for birds

Economic:      N/A

**Booming strategy recommendations:**

Recommendations:      Boom to protect sensitive marshes

Number of personnel:      2-4      Width of inlet:      N/A ft

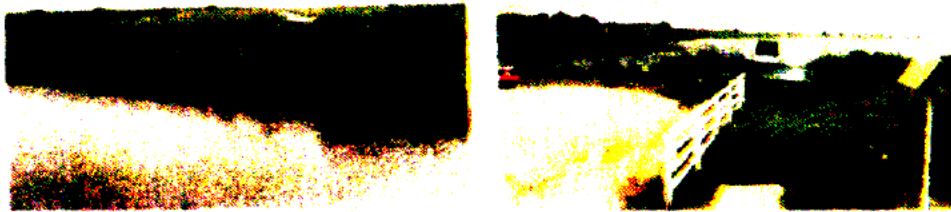
Current:      Slow      Water depth at mouth:      N/A ft

Safety / Cautionary notes:      Very strong currents around floodgate.

Central Texas Coastal Geographic Response Plan  
July 2002

**Site Specific Information**

Site # 21- TGLO Polygon # 9 Quad Name Texas City

**Site information:**

Site Description: South of Dollar Bay, wetlands.

(b) (7)(F)

Map# 39

NOAA chart # 11324, 11326

County: Galveston

Nearest ICW Marker: N/A

Date last visited: 12APR01

**Access:**

Closest Boat Ramp:

"The Fish Spot" TX City

Distance:

5 minutes

Boat type recommended:

Shallow water draft

Closest Airport:

Scholes Field Airport GLS

Closest Helicopter Landing:

Scholes Field Airport, 29°15'55.16"N

094°51'37.46"W

From MSO Houston-Galveston:

**Trustees/ Contact Numbers:**

U.S.C.G. via NRC (800) 424-8802

TXGLO via Hotline (800) 832-8224

TNRCC (512) 463-7727

**Resources at Risk:**

Atlas Priority: Low

Environmental: Wetlands

Economic: N/A

**Booming strategy recommendations:**

Recommendations: Boom to protect sensitive marshes

Number of personnel:

2-4

Width of inlet:

N/A ft

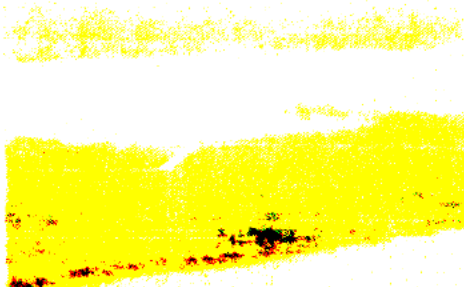
Current:

Slow

Water depth at mouth:

N/A ft

Safety / Cautionary notes:

Central Texas Coastal Geographic Response Plan  
July 2002**Site Specific Information****Site # 21-L-3 TGLO Polygon # 10 Quad Name Texas City****Site information:**

Site Description: Upper Moses Lake.

(b) (7)(F)

Map# 39

NOAA chart # 11324, 11326  
Nearest ICW Marker: N/ACounty: Galveston  
Date last visited: 12APR01**Access:**

**Closest Boat Ramp:** "The Fish Spot" TX City  
**Distance:** 5 minutes  
**Boat type recommended:** Shallow water draft  
**Closest Airport:** Scholes Field Airport GLS  
**Closest Helicopter Landing:** Scholes Field Airport, 29°15'55.16"N  
 094°51'37.46"W

**From MSO Houston-Galveston:**

**Trustees/ Contact Numbers:** U.S.C.G. via NRC (800) 424-8802  
 TXGLO via Hotline (800) 832-8224  
 TNRCC (512) 463-7727

**Resources at Risk:**

Atlas Priority: High  
 Environmental: Wetlands, Nursery, and Bird Habitat  
 Economic: N/A

**Booming strategy recommendations:**

**Recommendations:** Boom to protect sensitive marshes  
**Number of personnel:** 2-4 **Width of inlet:** N/A ft  
**Current:** Slow **Water depth at mouth:** N/A ft

**Safety / Cautionary notes:**

Central Texas Coastal Geographic Response Plan  
July 2002

**Site Specific Information****Site # 21-L TGLO Polygon # 12****Quad Name Texas City****Site information:**

Site Description: Moses Bayou.

(b) (7)(F)

**Map# 39**

NOAA chart # 11324, 11326

**County:** Galveston

Nearest ICW Marker: N/A

**Date last visited:** 12APR01**Access:****Closest Boat Ramp:**

"The Fish Spot" TX City

**Distance:**

10 minutes

**Boat type recommended:**

Shallow water draft

**Closest Airport:**

Scholes Field Airport GLS

**Closest Helicopter Landing:**

Scholes Field Airport, 29°15'55 16"N

094°51'37.46"W

**From MSO Houston-Galveston:****Trustees/ Contact Numbers:**

U.S.C.G. via NRC

(800) 424-8802

TXGLO via Hotline

(800) 832-8224

TNRCC

(512) 463-7727

**Resources at Risk:**

Atlas Priority: Medium

Environmental: Wetlands

Economic: N/A

**Booming strategy recommendations:****Recommendations:**

Boom to protect sensitive marshes

**Number of personnel:**

2-4

**Width of inlet:**

N/A ft

**Current:**

Slow

**Water depth at mouth:**

N/A ft

**Safety / Cautionary notes:**

Central Texas Coastal Geographic Response Plan  
July 2002

**Site Specific Information**

Site # 21-L-2 TGLO Polygon # 11 Quad Name Texas City

**Site information:**

Site Description: Mouth of Moses Bayou. On the Texas Prairie Preserve.

(b) (7)(F)

Map# 39

NOAA chart # 11324, 11326 County: Galveston  
Nearest ICW Marker: N/A Date last visited: 12APR01

**Access:**

Closest Boat Ramp: "The Fish Spot" TX City  
Distance: 10 minutes  
Boat type recommended: Shallow water draft  
Closest Airport: Scholes Field Airport GLS  
Closest Helicopter Landing: Scholes Field Airport, 29°15'55.16"N  
094°51'37.46"W

**From MSO Houston-Galveston:**

**Trustees/ Contact Numbers:** U.S.C.G. via NRC (800) 424-8802  
TXGLO via Hotline (800) 832-8224  
TNRCC (512) 463-7727

**Resources at Risk:**

Atlas Priority: High  
Environmental: Habitat for birds  
Economic: N/A

**Booming strategy recommendations:**

Recommendations: Boom to protect sensitive marshes  
Number of personnel: 2-4 Width of inlet: N/A ft  
Current: Slow Water depth at mouth: N/A ft

Safety / Cautionary notes: Very strong currents around flood gate.



Central Texas Coastal Geographic Response Plan  
July 2002

**Site Specific Information**

Site # 21- TGLO Polygon # 13 Quad Name Texas City

**Site information:**

Site Description: Dickinson Bay, mouth of Moses Lake.

(b) (7)(F)

Map# 39

NOAA chart # 11324, 11326

County: Galveston

Nearest ICW Marker: N/A

Date last visited: 12APR01

**Access:**

Closest Boat Ramp: Marge's Bait Camp, San Leon

Distance: 5 minutes

Boat type recommended: Shallow water draft

Closest Airport: Scholes Field Airport GLS

Closest Helicopter Landing: Scholes Field Airport, 29°15'55.16"N  
094°51'37.46"W

**From MSO Houston-Galveston:****Trustees/ Contact Numbers:**

U.S.C.G. via NRC (800) 424-8802  
TXGLO via Hotline (800) 832-8224  
TNRCC (512) 463-7727

**Resources at Risk:**

Atlas Priority: High

Environmental: Habitat for birds

Economic: N/A

**Booming strategy recommendations:**

Recommendations: Boom to protect sensitive marshes

Number of personnel: 2-4 Width of inlet: N/A ft

Current: Slow Water depth at mouth: N/A ft

Safety / Cautionary notes: Very strong currents around floodgate.

Central Texas Coastal Geographic Response Plan  
July 2001

**14. LAKE STEPHENSON**

NW East Bay and SE Trinity Bay

CHART(S): Nautical Chart (11326)  
Upper Coast Atlas Page 32

STAGING AREAS: (See Smith Point for ramp information)

ACCESS ROADS: N/A

**DESCRIPTION:**East Bay

14-A East Bay is very environmentally sensitive; most of the shoreline is salt and brackish water marshes.

Trinity Bay

14-B Boom entrance to Lone Oak Bayou.

14-C Boom entrance to unnamed inlet 2NM south of Lone Oak Bayou.

14-D Boom to protect Frankland Point.

**NOTIFY:**

Moody National Wildlife Refuge Manager

(409) 267-3337

Texas Parks & Wildlife Dept.

(281) 461-4071 Houston

U.S. Fish & Wildlife Service

(281) 286-8282 Houston

**CAUTION:**

Very shallow water near the shoreline, shallow draft boats, or airboats may be required to respond. American Alligators have been sighted in this area.

**NATURAL COLLECTION AREA:**

Due to the extensive marshland and shallow water located in this area, there are not any good collection sites noted. Seagrass beds along Eastern shore of Trinity bay should be avoided during response activities to prevent physical damage to vegetation.

## Central Texas Coastal Geographic Response Plan

July 2001

**Site Specific Information****Site # 14-A TGLO Polygon # 7/8 Quad Name Lake Stephenson****Site information:**

Site Description: East Bay entrance to marsh at Wallis Lake

**(b) (7)(F)****Map # 32**

**NOAA chart #** 11326 **County:** Chambers  
**Nearest ICW Marker:** N/A **Date last visited:** 25APR01

**Access:**

**Closest Boat Ramp:** James H. Robbins Memorial Park, Smith Point  
**Distance:** 20 minutes  
**Boat type recommended:** Airboat  
**Closest Airport:** Chambers County Airport (TOO)  
**Closest Helicopter Landing:** Chambers County Airport, 29-46-12N 094-39-49W

**From MSO Houston-Galveston:**

East on I-10 to Hwy 61. South on Hwy 61 and when it turns right towards Anahuac, continue straight on Hwy 562. Stay on Hwy 562 to Smith Point area. In the Smith Point area follow the "Boat ramp" signs and turn right on Hawkins Camp Rd. and left on Old Dutchman Rd. until it ends.

**Trustees/ Contact Numbers:** U.S.C.G. via NRC (800) 424-8802  
 TXGLO via Hotline (800) 832-8224  
 TNRCC (512) 463-7727

**Resources at Risk:**

**Atlas Priority:** High  
**Environmental:** Wetlands, Bird habitat  
**Economic:** N/A

**Booming strategy recommendations:**

**Recommendations:** Boom across entrance to cut to prevent migration inland. Cascade boom along shore line to prevent migration along shore.

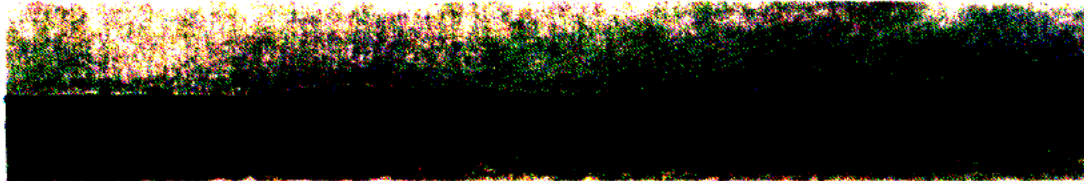
**Number of personnel:** 4-8 **Width of inlet:** 50 ft  
**Current:** Slow **Water depth at mouth:** 1 ft

**Safety / Cautionary notes:** Very shallow water near the shoreline, shallow draft boats, or airboats may be required to respond American Alligators have been sighted in this area.

Central Texas Coastal Geographic Response Plan  
July 2001

**Site Specific Information**

**Site # 14-B TGLO Polygon # 11 Quad Name LAKE STEPHENSON**

**Site information:**

**Site Description:** East Frankland Point

East Frankland Point is a cut from Trinity Bay above Smith Point.

(b) (7)(F)

**Map # 32**

**NOAA chart #** 11326, 11331 **County:** Chambers  
**Date last visited:** 19 April 2001

**Access:**

**Closest Boat Ramp:** James H. Robbins Memorial Park, Smith Point  
**Distance:** 15 minutes  
**Boat type recommended:** Shallow, aluminum hull  
**Closest Airport:** Chambers County Airport (TOO)  
**Closest Helicopter Landing:** Chambers County Airport . 29-46-12N 094-39-49W

**From MSO Houston-Galveston:**

East on I-10 to Hwy 61. South on Hwy 61 and when it turns right towards Anahuac, continue straight on Hwy 562. Stay on Hwy 562 to Smith Point area. In the Smith Point area follow the "Boat ramp" signs and turn right on Hawkins Camp Rd. and left on Old Dutchman Rd. until it ends.

**Trustees/ Contact Numbers:** U.S.C.G. via NRC (800) 424-8802  
TXGLO via Hotline (800) 832-8224  
TNRCC (512) 463-7727

**Resources at Risk:**

**Atlas Priority:** **High**  
**Environmental:** Diamondback terrapin, Sand seatrout, Southern flounder, White shrimp, Grass shrimp, Smooth cordgrass.  
**Economic:** N/A

**Booming strategy recommendations:**

**Recommendations:** Boom to protect sensitive marshes.  
**Number of personnel:** 4-6 **Width of inlet:** 1500 ft  
**Current:** Minimal **Water depth at mouth:** 2 ft

**Safety / Cautionary notes:** Very shallow water near the shoreline. shallow draft boats or airboats may be required. Seagrass beds along eastern shore of Trinity Bay should be avoided during response activities to prevent physical damage to vegetation.

Central Texas Coastal Geographic Response Plan  
July 2001

Site # 14-C TGLO Polygon # 2 Quad Name LAKE STEPHENSON

**Site information:**

Site Description: Entrance to Gordy Marsh

The entrance to Gordy Marsh is a shallow cut with grassy banks. The banks are grassy.

(b) (7)(F)

Map # 32

NOAA chart # 11326, 11331 County: Chambers  
Date last visited: 19 April 2001

**Access:**

Closest Boat Ramp: James H. Robbins Memorial Park, Smith Point  
Distance: 20 minutes  
Boat type recommended: Shallow, aluminum hull  
Closest Airport: Chambers County Airport (TOO)  
Closest Helicopter Landing: Chambers County Airport, 29-46-12N 094-39-49W

**From MSO Houston-Galveston:**

East on I-10 to Hwy 61. South on Hwy 61 and when it turns right towards Anahuac, continue straight on Hwy 562. Stay on Hwy 562 to Smith Point area. In the Smith Point area follow the "Boat ramp" signs and turn right on Hawkins Camp Rd. and left on Old Dutchman Rd. until it ends.

**Trustees/ Contact Numbers:** U.S.C.G. via NRC (800) 424-8802  
TXGLO via Hotline (800) 832-8224  
TNRCC (512) 463-7727

**Resources at Risk:**

Atlas Priority: **Medium**  
Environmental: Rails, Wading birds, Waterfowl, Gulf killifish, Sheepshead minnow, Brown shrimp, Grass shrimp.  
Economic: N/A

**Booming strategy recommendations:**

**Recommendations:** Boom across entrance to prevent migration into marsh.  
**Number of personnel:** 2-4 **Width of inlet:** 50 ft  
**Current:** Slow **Water depth at mouth:** 1 ft

**Safety / Cautionary notes:** Very shallow water near the shoreline, shallow draft boats or airboats may be required. Seagrass beds along eastern shore of Trinity Bay should be avoided during response activities to prevent physical damage to vegetation.

## Central Texas Coastal Geographic Response Plan

July 2001

Site # 14-D TGLO Polygon # 3 Quad Name LAKE STEPHENSON

**Site information:**

Site Description: Entrance to Lone Oak Bayou

Lone Oak Bayou goes from Trinity Bay above Smith Point into the northern portion of Gordy Marsh.. The White Hero Road bridge supports at the entrance should help anchor containment boom.

(b) (7)(F)

Map # 32

NOAA chart # 11326

County: Chambers

Date last visited: 19 April 2001

**Access:****Closest Boat Ramp:**

James H. Robbins Memorial Park, Smith Point

**Distance:**

25 minutes

**Boat type recommended:**

Shallow, aluminum hull

**Closest Airport:**

Chambers County Airport (TOO)

**Closest Helicopter Landing:**

Chambers County Airport , 29-46-12N 094-39-49W

**From MSO Houston-Galveston:**

East on I-10 to Hwy 61. South on Hwy 61 and when it turns right towards Anahuac, continue straight on Hwy 562. Stay on Hwy 562 to Smith Point area. In the Smith Point area follow the "Boat ramp" signs and turn right on Hawkins Camp Rd. and left on Old Dutchman Rd until it ends.

**Trustees/ Contact Numbers:**

U.S.C.G. via NRC (800) 424-8802

TXGLO via Hotline (800) 832-8224

INRCC (512) 463-7727

**Resources at Risk:**

Atlas Priority:

**Medium**

Environmental:

Rails, Wading birds, Waterfowl, Gulf killifish, Sheepshead minnow, Brown shrimp, Grass shrimp

Economic:

N/A

**Booming strategy recommendations:****Recommendations:**

Boom across entrance to prevent migration into marsh.

**Number of personnel:**

2-4

**Width of inlet:**

50 ft

**Current:**

Slow

**Water depth at mouth:**

2 ft

**Safety / Cautionary notes:**

Very shallow water near the shoreline, shallow draft boats or airboats may be required. Seagrass beds along eastern shore of Trinity Bay should be avoided during response activities to prevent physical damage to vegetation

**20. PORT BOLIVAR**

S Galveston Bay

CHART(S): Nautical Chart (11324, 11326 & 11331)  
Upper Coast Atlas Page 38

STAGING AREAS: 1. Hornbeck's Bait Camp (2)(GIWW)  
(b) (7)(F)

2. Texas City Dike Ramps

ACCESS ROADS: 1. Hwy 87 east from ferry landing, turn left on 7<sup>th</sup> Street, proceed to Broadway Ave, turn right and proceed to 23<sup>rd</sup>. Street, turn left, ramp located at the end of the road.

2. Hwy 146 south to Hwy 197, turn left and proceed to 2<sup>nd</sup>. Ave., turn right on and proceed to Bay St., turn left and proceed to Texas City Dike Road, turn right and follow signs to boat ramps.

**DESCRIPTION:**

- 20-A Boom to entrance to Horseshoe Lake
- 20-B Boom Texas City Dike
- 20-C Boom Hanna Reef
- 20-D Boom entrance to GIWW
- 20-E Staging area Erman Pilsner boat ramp Bolivar

**CAUTION:**

Large swells may develop near deep draft vessel movement, extra caution is recommended while operating near the Texas City Dike. Very shallow water near the shoreline and near Hanna Reef, shallow draft boats, or airboats may be required to respond.

**NATURAL COLLECTION AREA:**

Deploy boom off the tip of Goat Island to guide oil into the GIWW between Bolivar Peninsula and the Island. Product tends to linger just off Goat Island.



**Site Specific Information**

Site # 20-A TGLO Polygon # 10 Quad Name Port Bolivar

**Site information:**

Site Description: Boom to entrance to Horseshoe Lake from shore.

(b) (7)(F)

Map# 38

NOAA chart # 11324,11326,11331 County: Galveston  
 Nearest ICW Marker: 350 Date last visited: April 04, 2000

**Access:**

Closest Boat Ramp: Erman Pilsner  
 Distance: 10 minutes  
 Boat type recommended: V-hull  
 Closest Airport: Scholes Field Airport GLS  
 Closest Helicopter Landing: Danny Nasser

**From MSU Galveston:**Cross ferry, take 87 east to first left onto French Town Rd entrance is 1<sup>st</sup> small bridge.

**Trustees/ Contact Numbers:** U.S.C.G. via NRC (800) 424-8802  
 TXGLO via Hotline (800) 832-8224  
 INRCC (512) 463-7727

**Resources at Risk:**

Atlas Priority: low  
 Environmental: turtle  
 Economic: N A

**Booming strategy recommendations:**

**Recommendations:** Boom to protect sensitive marshes.  
**Number of personnel:** 2-4 **Width of inlet:** 75 ft  
**Current:** Medium **Water depth at mouth:** \_\_\_\_ ft

**Safety / Cautionary notes:** Strong tidal current

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**Site Specific Information**

Site # 20-B TGLO Polygon #N/A Quad Name Port Bolivar

**Site information:**

Site Description: Texas City Dike

(b) (7)(F)

Map# 38

NOAA chart # 11324,11326,11331 County: Galveston  
 Nearest ICW Marker: 351 Date last visited: May 2002

**Access:**

**Closest Boat Ramp:** Curls boat ramp  
**Distance:** 20 minutes  
**Boat type recommended:** V-hull  
**Closest Airport:** Scholes Field Airport GLS  
**Closest Helicopter Landing:** B/P Amoco

**From MSU Galveston:**

45 north to Texas City, exit FM 1764, go east about 15 min. make right on 9<sup>th</sup> Ave till you come to the Texas City Dike.

**Trustees/ Contact Numbers:**

U.S.C.G via NRC (800) 424-8802  
 TXGLO via Hotline (800) 832-8224  
 TNRCC (512) 463-7727

**Resources at Risk:**

Atlas Priority: High  
 Environmental: Wildlife  
 Economic: N A

**Booming strategy recommendations:**

**Recommendations:** Boom to protect sensitive marshes.  
**Number of personnel:** 4-6 **Width of inlet:** \_\_\_\_\_ ft  
**Current:** Medium **Water depth at mouth:** \_\_\_\_\_ ft

**Safety / Cautionary notes:** \_\_\_\_\_

**Site Specific Information**

Site # 20-C TGLO Polygon # 3

Quad Name Port Bolivar

**Site information:**

Site Description: Hanna Reef

(b) (7)(F)

Map# 39

NOAA chart # 11324,11326,11331

County: Galveston

Nearest ICW Marker: 348

Date last visited: April 04, 2001

**Access:**

Closest Boat Ramp:

GYB

Distance:

10 minutes

Boat type recommended:

V-Hull

Closest Airport:

Scholes Field Airport GLS

Closest Helicopter Landing:

Baffle Point

From MSU Galveston:

Launch boat from GYB head northeast.

**Trustees/ Contact Numbers:**

U.S.C.G. via NRC

(800) 424-8802

TXGLO via Hotline

(800) 832-8224

TNRCC

(512) 463-7727

**Resources at Risk:**

Atlas Priority: Caution

Environmental: Wildlife

Economic: N/A

**Booming strategy recommendations:**

Recommendations:

Boom to protect sensitive marshes.

Number of personnel:

2-4

Width of inlet:

ft

Current:

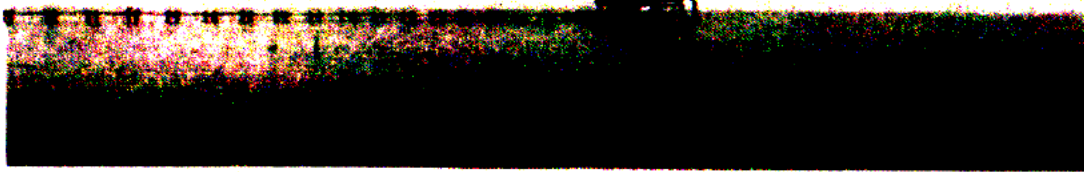
Medium

Water depth at mouth:

Safety / Cautionary notes:

## Site Specific Information

Site # 20-D TGLO Polygon # 14 Quad Name Port Bolivar



### Site information:

Site Description: Boom entrance to GIWW.

(b) (7)(F)

Map# 58

NOAA chart # 11324,11326,11331 County: Galveston  
Nearest ICW Marker: 350.5 Date last visited: April 04, 2001

### Access:

Closest Boat Ramp: Erman Pilsner  
Distance: 10 minutes  
Boat type recommended: V-hull  
Closest Airport: Scholes Field Airport GLS  
Closest Helicopter Landing: Danny Nasser

### From MSU Galveston:

Access by boat

Trustees/ Contact Numbers: U.S.C.G. via NRC (800) 424-8802  
TXGLO via Hotline (800) 832-8224  
TNRCC (512) 463-7727

### Resources at Risk:

Atlas Priority: Low  
Environmental: Wildlife  
Economic: N/A

### Booming strategy recommendations:

Recommendations: Boom to protect sensitive marshes  
Number of personnel: 2-6 Width of inlet: \_\_\_\_\_ ft  
Current: High Water depth at mouth: \_\_\_\_\_ ft

Safety / Cautionary notes: \_\_\_\_\_

**Site Specific Information**

Site # 20-E TGLO Polygon # 16

Quad Name Port Bolivar

**Site information:**

Site Description: Staging area; 20ft wide boat ramp Erman Pilsner boat ramp 16<sup>th</sup> st. Bolivar.

(b) (7)(F)

Map# 38

NOAA chart # 11324,11326,11331

County: Galveston

Nearest ICW Marker: 348

Date last visited: April 04, 2001

**Access:**

Closest Boat Ramp:

GYB

Distance:

10 minutes

Boat type recommended:

V-Hull

Closest Airport:

Scholes Field Airport GLS

Closest Helicopter Landing:

Danny Nasser

**From MSO Houston-Galveston:**

Cross ferry, take Hwy 87 east, go to 16<sup>th</sup> St., turn right following down to the beach dead ends into ramp on the southside of North Jetty in Bolivar.

**Trustees/ Contact Numbers:**

U.S.C.G. via NRC

(800) 424-8802

TXGLO via Hotline

(800) 832-8224

TNRCC

(512) 463-7727

**Resources at Risk:**

Atlas Priority: low

Environmental: N/A

Economic: N/A

**Booming strategy recommendations:**

Recommendations:

Boom to protect sensitive marshes.

Number of personnel:

2-4

Width of inlet:

\_\_\_\_\_ ft

Current:

Medium

Water depth at mouth:

\_\_\_\_\_ ft

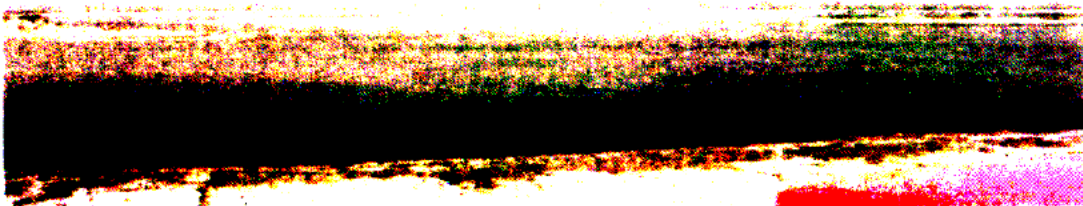
Safety / Cautionary notes:

**Site Specific Information**

Site # 20-A-2

TGLO Polygon # 2

Quad Name Port Bolivar

**Site information:**

Site Description: Horseshoe Lake-Oyster lake area.

**(b) (7)(F)****Map# 38**

NOAA chart # 11324,11326,11331 County: Galveston

Nearest ICW Marker: 350 Date last visited: April 04, 2001

**Access:****Closest Boat Ramp:** Erman Pilsner boat ramp**Distance:** 10 minutes**Boat type recommended:** Shallow flat boat**Closest Airport:** Scholes Field Airport GLS**Closest Helicopter Landing:** Danny Nasser**From MSO Houston-Galveston:**Cross ferry take 87 east take 1<sup>st</sup> left onto Frenchtown Rd. lake on right.**Trustees/ Contact Numbers:**

U.S.C.G. via NRC (800) 424-8802

TXGLO via Hotline (800) 832-8224

TNRCC (512) 463-7727

**Resources at Risk:**

Atlas Priority: Low

Environmental: Turtles

Economic: N/A

**Booming strategy recommendations:****Recommendations:** Boom to protect sensitive marshes.**Number of personnel:** 2-4 **Width of inlet:** \_\_\_\_\_ ft**Current:** Medium **Water depth at mouth:** \_\_\_\_\_ ft**Safety / Cautionary notes:** \_\_\_\_\_

**Site Specific Information**

Site # 20-A-3      TGLO Polygon # 11      Quad Name Port Bolivar

**Site information:**

Site Description: Horseshoe Lake area

**(b) (7)(F)****Map# 38**NOAA chart #      11324,11326,11331      **County:**      GalvestonNearest ICW Marker:      350      **Date last visited:**      April 04, 2001**Access:**

**Closest Boat Ramp:**      Erman Pilsner  
**Distance:**      10 minutes  
**Boat type recommended:**      Shallow flat bottom  
**Closest Airport:**      Scholes Field Airport GLS  
**Closest Helicopter Landing:**      Danny Nasser

**From MSO Houston-Galveston:**Cross ferry take Hwy 87 east, taking 1<sup>st</sup> left onto Frenchtown Rd the lake is on the right

**Trustees/ Contact Numbers:**      U.S.C.G. via NRC      (800) 424-8802  
    TXGLO via Hotline      (800) 832-8224  
    INRCC      (512) 463-7727

**Resources at Risk:**

Atlas Priority:      Medium  
 Environmental:      Turtle  
 Economic:      N/A

**Booming strategy recommendations:**

**Recommendations:**      Boom to protect sensitive marshes.  
**Number of personnel:**      2-4      **Width of inlet:**      \_\_\_\_\_ ft  
**Current:**      Medium      **Water depth at mouth:**      \_\_\_\_\_

**Safety / Cautionary notes:** \_\_\_\_\_

**Site Specific Information**

Site # 20-A-4

TGLO Polygon # 3

Quad Name Port Bolivar

**Site information:**

Site Description: Hanna Reef Area

(b) (7)(F)

Map# 38

NOAA chart # 11324, 11326, 11331 County: Galveston

Nearest ICW Marker: 348 Date last visited: April 04, 2001

**Access:**

Closest Boat Ramp: Hornbeck's Bait Camp  
 Distance: 10 minutes  
 Boat type recommended: V-Hull  
 Closest Airport: Scholes Field Airport GLS  
 Closest Helicopter Landing: Danny Nasser

**From MSU Galveston:**

No land access

**Trustees/ Contact Numbers:**

U.S.C.G. via NRC (800) 424-8802  
 TXGLO via Hotline (800) 832-8224  
 TNRCC (512) 463-7727

**Resources at Risk:**

Atlas Priority: Caution  
 Environmental: Isolated oyster reef; diamond back terrapin  
 Economic: N/A

**Booming strategy recommendations:**

Recommendations: Boom to protect sensitive marshes  
 Number of personnel: 2-4 Width of inlet: N/A ft  
 Current: Medium Water depth at mouth: N/A

**Safety / Cautionary notes:**



Central Texas Coastal Geographic Response Plan  
July 2001

**19. FLAKE**

Gulf of Mexico, GIWW, SW East Bay and Galveston Bay

CHART(S): Nautical Chart (11326 & 11331)  
Upper Coast Atlas Page 37

STAGING AREA: Shirley's Bait Camp (2)

(b) (7)(F)

ACCESS ROADS: Hwy 87 east from ferry landing to Boyt Road, turn left and follow signs to boat ramp.

**DESCRIPTION:**Gulf of Mexico

Beach washout may form in this area, booming may be required.

- 19-A Boom Freshwater Bayou at (b) (7)(F) (20' wide)
- 19-B Boom or fill beach washout at (b) (7)(F) (20' wide)
- 19-C Boom or fill beach washout at (b) (7)(F) (20' wide)
- 19-D Boom or fill beach washout at (b) (7)(F) (20' wide)

GIWW

- 19-E Boom close to spill site to prevent migration.
- 19-F Boom to protect numerous marshes from Mile 337 to Mile 346
- 19-G Boom entrance to housing area canals
- 19-H Boom entrance to Dredgeboat Slough
- 19-I Boom entrance to East Bay at Sievers Cove (3,600' wide)

East Bay

- 19-J Boom to protect Stingaree Cove
- 19-K Boom entrance to Big Elmgrove Bayou
- 19-L Boom entrance to Little Elmgrove Bayou
- 19-M Boom entrance to Pepper Grove Cove Bayou

**NOTIFY:**

Texas Parks & Wildlife Dept. (281) 461-4071 Houston  
U.S. Fish & Wildlife Service (281) 286-8282 Houston

**CAUTION:**

Very shallow water near the shoreline and near Hanna Reef of East Bay, shallow draft boats, or airboats may be required to respond.

Note: Piping plover have been spotted along west Bolivar Peninsula beachfront.

**NATURAL COLLECTION AREA:**

Due to the extensive marshland and shallow water located in this area, there are not any good collection sites noted.



Central Texas Coastal Geographic Response Plan  
July 2001**Site Specific Information**

Site # 19-K TGLO Polygon # 1 Quad Name Flake

**Site information:**

Site Description: Big Elmgrove Bayou, view of left photo facing east, view of right photo facing southeast

(b) (7)(F)

Map# 37

NOAA chart # 11331

County:

Galveston

Nearest ICW Marker: 340

Date last visited:

3-22-01

By Jay Veselka (TGLO)

**Access:**

Closest Boat Ramp:

Sievers Cove

Distance:

1-6 minutes

Boat type recommended:

Shallow, aluminum hull or airboat

Closest Airport:

Scholes Field Airport GLS

Closest Helicopter Landing:

Scholes Field Airport, 29°15'55.16"N

094°51'37.46"W

**From MSU Galveston:**

Follow Hwy 87 across the Bolivar Ferry crossing landing on the Bolivar side.

**Trustees/ Contact Numbers:**

U.S.C.G. via NRC

(800) 424-8802

TXGLO via Hotline

(800) 832-8224

TNRCC

(512) 463-7727

**Resources at Risk:**

Atlas Priority:

**High**

Environmental:

Habitat for Passerine birds, fish, shrimp, crabs, shorebirds,  
upland wetlands plants

Economic:

Along the Gulf Intracoastal Waterway

**Booming strategy recommendations:****Recommendations:**

Boom to protect sensitive marshes

**Number of personnel:**

4-8

**Width of inlet:**

90 ft

**Current:**

Minimal

**Water depth at mouth:**

3 ft

**Safety / Cautionary notes:**Very shallow water near the shoreline. Piping  
plover have been spotted along the west Bolivar Peninsula beachfront.

Central Texas Coastal Geographic Response Plan  
July 2001**Site Specific Information**

Site # 19-J TGLO Polygon # 1 Quad Name Flake

**Site information:**

Site Description: Stingaree Cove view facing southeast.

(b) (7)(F)

Map# 37

NOAA chart # 11331

County: Galveston

Nearest ICW Marker: 340

Date last visited: 3-22-01

By Jay Veselka (TGLO)

**Access:**

Closest Boat Ramp:

Blue Beacon Bait Camp

Distance:

minutes

Boat type recommended:

Shallow, aluminum hull or airboat

Closest Airport:

Scholes Field Airport GLS

Closest Helicopter Landing:

Scholes Field Airport, 29°15'55.16"N

094°51'37.46"W

**From MSU Galveston:**

Follow Hwy 87 across the Bolivar Ferry crossing landing on the Bolivar side

**Trustees/ Contact Numbers:**

U.S.C.G via NRC

(800) 424-8802

TXGLO via Hotline

(800) 832-8224

TNRCC

(512) 463-7727

**Resources at Risk:**

Atlas Priority:

**High**

Environmental:

Habitat for Passerine birds, fish, shrimp, crabs, shorebirds,  
upland/wetlands plants

Economic:

Along the Gulf Intracoastal Waterway

**Booming strategy recommendations:****Recommendations:**

Boom to protect sensitive marshes

**Number of personnel:**

4-8

**Width of inlet:**

90 ft

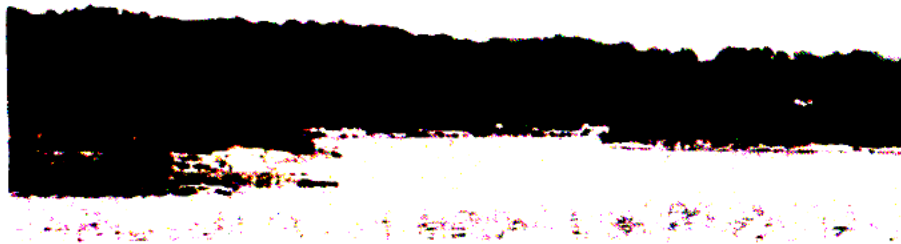
**Current:**

Minimal

**Water depth at mouth:**

3 ft

**Safety / Cautionary notes:**Very shallow water near the shoreline. Piping  
plover have been spotted along the west Bolivar Peninsula beachfront.

Central Texas Coastal Geographic Response Plan  
July 2001**Site Specific Information****Site # 19-L TGLO Polygon # 1 Quad Name Flake****Site information:**

Site Description: Little ElmGrove Bayou, view facing east.

**(b) (7)(F)****Map# 37**

NOAA chart # 11326

County: Galveston

Nearest ICW Marker: 340

Date last visited: 3-22-01

By Jay Veselka (TGLO)

**Access:****Closest Boat Ramp:**

Blue Beacon Bait Camp

**Distance:**

\_\_\_ minutes

**Boat type recommended:**

Shallow, aluminum hull or airboat

**Closest Airport:**

Scholes Field Airport GLS

**Closest Helicopter Landing:**

Scholes Field Airport, 29°15'55"16"N

094°51'37.46"W

**From MSU Galveston:**

Follow Hwy 87 across the Bolivar Ferry crossing landing on the Bolivar side.

**Trustees/ Contact Numbers:**

U.S.C.G. via NRC

(800) 424-8802

TXGLO via Hotline

(800) 832-8224

TNRCC

(512) 463-7727

**Resources at Risk:**

Atlas Priority:

High

Environmental:

Shallow, aluminum hull or airboat

Economic:

Along Gulf Intracoastal Waterway

**Booming strategy recommendations:****Recommendations:**

Boom to protect sensitive marshes.

**Number of personnel:**

4-6

**Width of inlet:**

40 ft

**Current:**

Minimal

**Water depth at mouth:**

3 ft

**Safety / Cautionary notes:**

Very shallow water near the shoreline. Piping plover have been spotted along the west Bolivar Peninsula.

Central Texas Coastal Geographic Response Plan  
July 2001**Site Specific Information****Site # 19-M TGLO Polygon # 1 Quad Name Flake****Site information:**

Site Description: West edge of entrance to Pepper Grove Cove, top photo - view facing southwest, middle photo - view facing east, bottom photo - view facing east.

West End

(b) (7)(F)

Map# 37

East End

(b) (7)(F)

NOAA chart # 11326

County: Galveston

Nearest ICW Marker: 340

Date last visited: 3-22-01

By Jay Veselka (TGLO)

**Access:**

Closest Boat Ramp:

Blue Beacon Bait Camp

Distance:

\_\_\_ minutes

Boat type recommended:

Shallow, aluminum hull or airboat

Closest Airport:

Scholes Field Airport GLS

Closest Helicopter Landing:

Scholes Field Airport, 29°15'55.16"N

094°51'37.46"W

**From MSU Galveston:**

Follow Hwy 87 across the Bolivar Ferry crossing landing on the Bolivar side

**Trustees/ Contact Numbers:**

U.S.C.G. via NRC

(800) 424-8802

## Central Texas Coastal Geographic Response Plan

July 2001

TXGLO via Hotline

(800) 832-8224

TNRCC

(512) 463-7727

**Resources at Risk:**

Atlas Priority: High

Environmental: Habitat for Passerine birds, fish, shrimp, crabs, shorebirds,  
upland/wetlands plants

Economic: Along the Gulf Intracoastal Waterway

**Booming strategy recommendations:**

Recommendations: Boom to protect sensitive marshes

Number of personnel: 4-6 Width of inlet: N/A ft

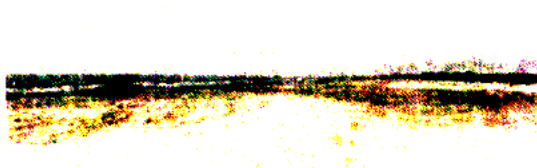
Current: Minimal Water depth at mouth: 2 ft

Safety / Cautionary notes: Very shallow water near the shoreline. Piping  
plover have been spotted along the west Bolivar Peninsula beachfront.

Central Texas Coastal Geographic Response Plan  
July 2001**Site Specific Information**

Site # 19- TGLO Polygon # N/A

Quad Name Flake

**Site information:**

Site Description: Example of a beach wash-over area, right photo view facing west, left photo view facing south

(b) (7)(F)

Map# 37

NOAA chart # 11326, 11334

County: Galveston

Nearest ICW Marker: 340

Date last visited: 3-22-01

By Jay Veselka (TGLO)

**Access:**

Closest Boat Ramp:

Sievers Cove

Distance:

1-6 minutes

Boat type recommended:

Shallow, aluminum hull or airboat

Closest Airport:

Scholes Field Airport GLS

Closest Helicopter Landing:

Scholes Field Airport. 29°15'55 16"N

094°51'37.46"W

**From MSU Galveston:**

Follow Hwy 87 across the Bolivar Ferry crossing landing on the Bolivar side.

**Trustees/ Contact Numbers:**

U.S.C.G. via NRC

(800) 424-8802

TXGLO via Hotline

(800) 832-8224

TNRCC

(512) 463-7727

**Resources at Risk:**

Atlas Priority: N/A

Environmental: N/A

Economic: N/A

**Booming strategy recommendations:**

Recommendations:

Boom to protect sensitive marshes

Number of personnel:

4-6

Width of inlet:

12 ft

Current:

Minimal

Water depth at mouth:

0.5 ft

**Safety / Cautionary notes:**

Very shallow water near the shoreline. Piping plover have been spotted along the west Bolivar Peninsula beachfront.

Central Texas Coastal Geographic Response Plan  
July 2001

**Site Specific Information**

Site # 19-G TGLO Polygon # 3, 4, & 6 Quad Name Flake

**Site information:**

Site Description: Example of an entrance to a housing area canal.

(b) (7)(F)

Map# 37

NOAA chart # 11326, 11331 County: Galveston  
Nearest ICW Marker: MM 340 & 345 Date last visited: 3-22-01  
By Jay Veselka (TGLO)

**Access:**

Closest Boat Ramp: Blue Beacon Bait Camp  
Distance: \_\_\_ minutes  
Boat type recommended: Shallow, aluminum hull or airboat  
Closest Airport: Scholes Field Airport GLS  
Closest Helicopter Landing: Scholes Field Airport. 29°15'55.16"N  
094°51'37.46"W

**From MSU Galveston:**

Follow Hwy 87 across the Bolivar Ferry crossing landing on the Bolivar side.

**Trustees/ Contact Numbers:** U.S.C.G. via NRC (800) 424-8802  
TXGLO via Hotline (800) 832-8224  
TNRCC (512) 463-7727

**Resources at Risk:**

Atlas Priority: Polygon 3 - Low, Polygon 4 - Medium, Polygon 6 - High  
Environmental: Habitat for shorebirds, wading birds, gulls, terns, diving birds  
Economic: Along the Gulf Intracoastal Waterway

**Booming strategy recommendations:**

**Recommendations:** Boom to protect sensitive marshes.  
**Number of personnel:** 4-6 **Width of inlet:** 150 ft  
**Current:** Minimal **Water depth at mouth:** 6 ft

**Safety / Cautionary notes:** Very shallow water near the shoreline. Piping plover have been spotted along the west Bolivar Peninsula beachfront.

Central Texas Coastal Geographic Response Plan  
July 2001**Site Specific Information****Site # 19-F TGLO Polygon # 3, 4, & 6 Quad Name Flake****Site information:**

Site Description: Example of a Marsh between Mile Markers 337-346.

**(b) (7)(F)****Map# 37**

NOAA chart # 11326, 11331 County: Galveston  
 Nearest ICW Marker: MM 337 - 346 Date last visited: 3-22-01  
 By Jay Veselka (TGLO)

**Access:**

Closest Boat Ramp: Blue Beacon Bait Camp  
 Distance: minutes  
 Boat type recommended: Shallow, aluminum hull or airboat  
 Closest Airport: Scholes Field Airport GLS  
 Closest Helicopter Landing: Scholes Field Airport, 29°15'55.16"N  
 094°51'37.46"W

**From MSU Galveston:**

Follow Hwy 87 across the Bolivar Ferry crossing landing on the Bolivar side.

**Trustees/ Contact Numbers:** U.S.C.G. via NRC (800) 424-8802  
 TXGLO via Hotline (800) 832-8224  
 TNRCC (512) 463-7727

**Resources at Risk:**

Atlas Priority: Polygon 3 - Low, Polygon 4 - Medium, Polygon 6 - High  
 Environmental: Habitat for shorebirds, wading birds, gulls, terns, diving birds  
 Economic: Along the Gulf Intracoastal Waterway

**Booming strategy recommendations:**

Recommendations: Boom to protect sensitive marshes.  
 Number of personnel: 4-6 Width of inlet: 40 ft  
 Current: Minimal Water depth at mouth: 1.5 ft

**Safety / Cautionary notes:** Very shallow water near the shoreline. Piping  
 plover have been spotted along the west Bolivar Peninsula beachfront.



Central Texas Coastal Geographic Response Plan  
July 2001**Site Specific Information**

Site # 19-H TGLO Polygon # 4 &amp; 5

Quad Name Flake

**Site information:**

Site Description: Entrance to Dredgeboat Slough facing southeast.

(b) (7)(F)

Map# 37

NOAA chart # 11326

County: Galveston

Nearest ICW Marker: 335

Date last visited: 3-22-01

By Jay Veselka (TGLO)

**Access:**

Closest Boat Ramp:

Sievers Cove

Distance:

1-6 minutes

Boat type recommended:

Shallow, aluminum hull or airboat

Closest Airport:

Scholes Field Airport GLS

Closest Helicopter Landing:

Scholes Field Airport, 29°15'55.16"N

094°51'37.46"W

**From MSU Galveston:**

Follow Hwy 87 across the Bolivar Ferry crossing landing on the Bolivar side

**Trustees/ Contact Numbers:**

U.S.C.G. via NRC

(800) 424-8802

TXGLO via Hotline

(800) 832-8224

TNRCC

(512) 463-7727

**Resources at Risk:**

Atlas Priority: Polygon 4 - Medium, Polygon 5 - High

Environmental: Habitat for Passerine birds, raptors, wading birds

Economic: Along the Gulf Intracoastal Waterway

**Booming strategy recommendations:**

Recommendations:

Boom to protect sensitive marshes

Number of personnel:

4-6

Width of inlet:

350 ft

Current:

Minimal

Water depth at mouth:

2.5 ft

**Safety / Cautionary notes:**

Very shallow water near the shoreline. Piping plover have been spotted along the west Bolivar Peninsula beachfront.

Central Texas Coastal Geographic Response Plan  
July 2001

**Site Specific Information**

Site # 19-H-1 TGLO Polygon # 5 Quad Name Flake

**Site information:**

Site Description: Slough # 1 west of dredgeboat slough

(b) (7)(F)

Map# 37

NOAA chart # 11326, 11331

County: Galveston

Nearest ICW Marker: 340

Date last visited: 4-5-01

**Access:**

Closest Boat Ramp:

Shirely's Blue Beacon

Distance:

minutes

Boat type recommended:

Shallow, aluminum hull or airboat

Closest Airport:

Scholes Field Airport GLS

Closest Helicopter Landing:

Scholes Field Airport, 29°15'55.16"N

094°51'37.46"W

**From MSU Galveston:**

Follow Hwy 87 across the Bolivar Ferry crossing landing on the Bolivar side.

**Trustees/ Contact Numbers:**

U.S.C.G. via NRC

(800) 424-8802

TXGLO via Hotline

(800) 832-8224

TNRCC

(512) 463-7727

**Resources at Risk:**

Atlas Priority: High

Environmental: Habitat for passerine birds, wading birds, raptors

Economic: Along the Gulf Intracoastal Waterway.

**Booming strategy recommendations:**

Recommendations:

Boom to protect sensitive marshes.

Number of personnel:

4-6

Width of inlet:

400 ft

Current:

Minimal

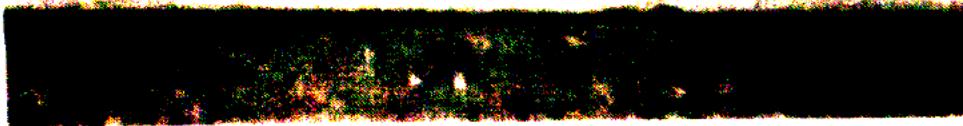
Water depth at mouth:

3 ft

Central Texas Coastal Geographic Response Plan  
July 2001

**Safety / Cautionary notes:** Very shallow water near the shoreline. Piping  
plover have been spotted along the west Bolivar Peninsula beachfront.

---

Central Texas Coastal Geographic Response Plan  
July 2001**Site Specific Information****Site # 19-H-2 TGLO Polygon # 5 Quad Name Flake****Site information:**

Site Description: Slough # 2 west of dredgeboat slough.

(b) (7)(F)

**Map# 37**

NOAA chart # 11326, 11331

**County:** Galveston

Nearest ICW Marker: 340

**Date last visited:** 4-05-01**Access:****Closest Boat Ramp:**

Shirely's Blue Beacon

**Distance:**

\_\_\_ minutes

**Boat type recommended:**

Shallow, aluminum hull or airboat

**Closest Airport:**

Scholes Field Airport GLS

**Closest Helicopter Landing:**

Scholes Field Airport, 29°15'55.16"N

094°51'37.46"W

**From MSU Galveston:**

Follow Hwy 87 across the Bolivar Ferry crossing landing on the Bolivar side.

**Trustees/ Contact Numbers:**

U.S.C.G. via NRC (800) 424-8802

TXGLO via Hotline (800) 832-8224

INRCC (512) 463-7727

**Resources at Risk:**

Atlas Priority: High

Environmental: Habitat for passerine birds, wading birds, raptors

Economic: Along the Gulf Intracoastal Waterway.

**Booming strategy recommendations:****Recommendations:** Boom to protect sensitive marshes.**Number of personnel:**

4-6

**Width of inlet:**

300 ft

**Current:**

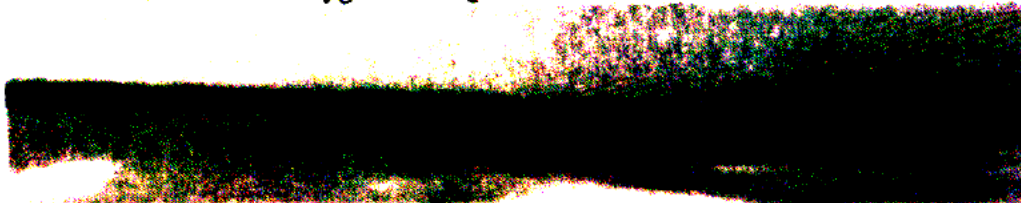
Minimal

**Water depth at mouth:**

3 ft

**Safety / Cautionary notes:**

Very shallow water near the shoreline. Piping plover have been spotted along the west Bolivar Peninsula beachfront.

Central Texas Coastal Geographic Response Plan  
July 2001**Site Specific Information****Site # 19-H-3 TGLO Polygon # 5 Quad Name Flake****Site information:**

Site Description: Slough # 3 west of dredgeboat.

**(b) (7)(F)****Map# 37**NOAA chart # 11326, 11331  
Nearest ICW Marker: 340County: Galveston  
Date last visited: 4-05-01**Access:**

**Closest Boat Ramp:** Shirely's Blue Beacon  
**Distance:** \_\_\_\_\_ minutes  
**Boat type recommended:** Shallow, Aluminum hull or airboat  
**Closest Airport:** Scholes Field Airport GLS  
**Closest Helicopter Landing:** Scholes Field Airport, 29°15'55.16"N  
 094°51'37.46W

**From MSU Galveston:**

Follow Hwy 87 across the Bolivar Ferry crossing landing on the Bolivar side.

**Trustees/ Contact Numbers:**

U.S.C.G. via NRC (800) 424-8802  
 TXGLO via Hotline (800) 832-8224  
 TNRCC (512) 463-7727

**Resources at Risk:****Resources at Risk:**

Atlas Priority: High  
 Environmental: Habitat for passerine birds, wading birds, raptors  
 Economic: Along the Gulf Intracoastal Waterway.

**Booming strategy recommendations:**

**Recommendations:** Boom to protect sensitive marshes.  
**Number of personnel:** 4-6 **Width of inlet:** 500 ft  
**Current:** Minimal **Water depth at mouth:** 3 ft

**Safety / Cautionary notes:** Very shallow water near the shoreline. Piping plover have been spotted along the west Bolivar Peninsula beachfront.

Central Texas Coastal Geographic Response Plan  
July 2001

**Site Specific Information**

**Site # 19-I TGLO Polygon # 8 Quad Name Flake**



**Site information:**

Site Description: East Bay at Sievers Cove, top photo is a view of the west end of Sievers Cove facing west, middle photo is a view of the east end of Sievers Cove facing west, bottom photo is a view of the Center of Sievers Cove facing southwest.

West end at ICWW Marker # 4

(b) (7)(F)

Map# 37

East end at ICWW Marker # 2

(b) (7)(F)

NOAA chart # 11326

County: Galveston

Nearest ICW Marker: 340

Date last visited: 3-22-01

By Jay Veselka (TGLO)

**Access:**

**Closest Boat Ramp:**

Blue Beacon Marina

**Distance:**

\_\_\_ minutes

**Boat type recommended:**

Shallow, aluminum hull or airboat

**Closest Airport:**

Scholes Field Airport GLS

**Closest Helicopter Landing:**

Scholes Field Airport, 29°15'55.16"N

094°51'37.46"W

**From MSU Galveston:**

Follow Hwy 87 across the Bolivar Ferry crossing landing on the Bolivar side.

Central Texas Coastal Geographic Response Plan  
July 2001**Trustees/ Contact Numbers:**

U.S.C.G. via NRC	(800) 424-8802
TXGLO via Hotline	(800) 832-8224
TNRCC	(512) 463-7727

**Resources at Risk:**Atlas Priority: **High**Environmental: Habitat for Passerine birds, fish, shrimp, crabs, shorebirds,  
upland/wetlands plants

Economic: Along the Gulf Intracoastal Waterway

**Booming strategy recommendations:****Recommendations:** Boom to protect sensitive marshes**Number of personnel:** 4-8      **Width of inlet:** 3,600 ft**Current:** Minimal      **Water depth at mouth:** 4 ft**Safety / Cautionary notes:** Very shallow water near the shoreline. Piping  
plover have been spotted along the west Bolivar Peninsula beachfront.

**24. VIRGINIA POINT**

SW Galveston Bay, West Bay, Jones Bay and GIWW

CHART(S): Nautical Chart (11324 & 11322)  
Upper Coast Atlas Page 42

STAGING AREA: 1. Fat Boy's Bait &amp; Boat Ramp (2)

(b) (7)(F)

(b) (7)(F)

2. Teakwood Marina (1)

(b) (7)(F)

3. T&amp;T Marine (Staging Area)

ACCESS ROAD: 1. I-45 south from Houston to Tiki Island exit, loop to the right  
and proceed north to boat ramp2. I-45 south from Houston to Tiki Island exit, follow sign to  
Marina on left.3. I-45 south from Houston to Teichman Rd., turn right and  
proceed to the end of the road at T&T Marine.**DISCRIPTION:**Swift currents (2+) in this area will require cascading diversion boom techniques to divert  
product away from sensitive areas, or to collection sites.Galveston Bay

24-A Boom to protect Swan Lake

West Bay

24-B Boom to protect Offatts Bayou

24-C Boom entrance to Sydnor Bayou (460' wide)

24-D Boom to protect South Deer Island

24-E Boom to protect North Deer Island

24-F Boom to protect Gangs Bayou

24-G Boom canals to Village of Tiki Island

24-H Boom entrance to Jones Bay East Tiki Island (210' wide)

24-I Boom to protect Islands in south Jones Bay

Jones Bay

24-J Boom three marsh entrances north Jones Bay east of Highland Bayou

24-K Boom entrance to Highland Bayou (640' wide)

24-L Boom entrance to Basford Bayou (600' wide)

24-M Boom entrance to canal west of Basford Bayou (220' wide)

GIWW

24-N Boom entrance to West Bay at Mile 364.3 (1,650' wide)

24-O Boom entrance to Greens Lake (2,850' wide)

24-P Boom entrance to Sweetwater Lake

24-Q Boom to protect Flamingo Isles.

24-R Boom to protect tidal inlet off Sportsman Road

24-S Boom to protect tidal inlet on the north side of Jones Bay



Central Texas Coastal Geographic Response Plan  
July 2001

**NOTIFY:**

Texas Parks & Wildlife Dept.  
U.S. Fish & Wildlife Service

(281) 461-4071 Houston  
(281) 286-8282 Houston

**CAUTION:**

Very shallow water near the shoreline, shallow draft boats, or airboats may be required to respond.

**NATURAL COLLECTION AREA:**

Due to the extensive marshland and shallow water located in this area, there are not any good collection sites noted.

Central Texas Coastal Geographic Response Plan  
July 2001

**Site Specific Information****Site # 24-P      TGLO Polygon # 17****Quad Name Virginia Point****Site information:**

Site Description: Entrance to Sweetwater Lake

**(b) (7)(F)****Map# 42**

NOAA chart #      11324, 11322

**County:**

Galveston

Nearest ICW Marker:      357

**Date last visited:**

05-10-01

**Access:****Closest Boat Ramp:**

Private ramp

**Distance:**

\_\_\_\_ minutes

**Boat type recommended:**

Shallow hull or airboat

**Closest Airport:**

Scholes Field Airport GLS

**Closest Helicopter Landing:**

Scholes Field Airport, 29°15'55.16"N

094°51'37.46"W

**From MSU Galveston:****Trustees/ Contact Numbers:**

U.S.C.G. via NRC

(800) 424-8802

TXGLO via Hotline

(800) 832-8224

TNRCC

(512) 463-7727

**Resources at Risk:**

Atlas Priority:      Medium

Environmental:      Habitat for fish, wading birds

Economic:      N/A

**Booming strategy recommendations:****Recommendations:**      Boom to protect sensitive marshes.**Number of personnel:**      2-4      **Width of inlet:**      300    ft**Current:**      Minimal      **Water depth at mouth:** 3    ft**Safety / Cautionary notes:** \_\_\_\_\_  
\_\_\_\_\_

Central Texas Coastal Geographic Response Plan  
July 2001**Site Specific Information**

Site # 24-G TGLO Polygon # 10

Quad Name Virginia Point

**Site information:**

Site Description: East Entrance to Tiki Island @ Jones Bay

(b) (7)(F)

Map# 42

NOAA chart # 11324, 11322

County:

Galveston

Nearest ICW Marker: 357

Date last visited:

05-10-01

**Access:**

Closest Boat Ramp:

Private ramp

Distance:

minutes

Boat type recommended:

Shallow hull or airboat

Closest Airport:

Scholes Field Airport GLS

Closest Helicopter Landing:

Scholes Field Airport, 29°15'55.16"N

094°51'37.46"W

**From MSU Galveston:****Trustees/ Contact Numbers:**

U.S.C.G via NRC

(800) 424-8802

TXGLO via Hotline

(800) 832-8224

TNRCC

(512) 463-7727

**Resources at Risk:**

Atlas Priority: High

Environmental: Habitat for fish, wading birds, turtles, shrimp, crabs, gulls, terns

Economic: N/A

**Booming strategy recommendations:**

Recommendations:

Boom to protect sensitive marshes.

Number of personnel:

2-6

Width of inlet: 210 ft

Current:

Medium

Water depth at mouth: 12 ft

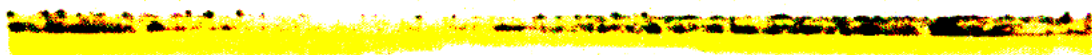
Safety / Cautionary notes:

Central Texas Coastal Geographic Response Plan  
July 2001

**Site Specific Information**

Site # 24-L TGLO Polygon # 5

Quad Name Virginia Point

**Site information:**

Site Description: Entrance to Basford Bayou

(b) (7)(F)

Map# 42

NOAA chart # : 11324, 11322

County:

Galveston

Nearest ICW Marker: 357

Date last visited:

05-10-01

**Access:**

Closest Boat Ramp:

Private ramp

Distance:

minutes

Boat type recommended:

Shallow hull or airboat

Closest Airport:

Scholes Field Airport GLS

Closest Helicopter Landing:

Scholes Field Airport, 29°15'55.16"N

094°51'37.46"W

**From MSU Galveston:****Trustees/ Contact Numbers:**

U.S.C.G. via NRC

(800) 424-8802

TXGLO via Hotline

(800) 832-8224

INRCC

(512) 463-7727

**Resources at Risk:**

Atlas Priority: Low

Environmental: Habitat for fish, wading birds, waterfowl

Economic: N/A

**Booming strategy recommendations:**

Recommendations:

Boom to protect sensitive marshes.

Number of personnel:

4-6

Width of inlet:

50 ft

Current:

Medium

Water depth at mouth: 3ft

Safety / Cautionary notes:

---

Central Texas Coastal Geographic Response Plan  
July 2001

**Site Specific Information**

Site # 24-C      TGLO Polygon # N/A

Quad Name Virginia Point

**Site information:**

Site Description: Entrance to Snyder Bayou

(b) (7)(F)

NOAA chart #      11324, 11322

County:

Map# 42

Nearest ICW Marker:      357

Date last visited:

Galveston

05-10-01

**Access:**

Closest Boat Ramp:

Private ramp

Distance:

\_\_\_\_ minutes

Boat type recommended:

Shallow hull or airboat

Closest Airport:

Scholes Field Airport GLS

Closest Helicopter Landing:

Scholes Field Airport, 29°15'55.16"N

094°51'37.46"W

From MSU Galveston:

**Trustees/ Contact Numbers:**

U.S.C.G. via NRC

(800) 424-8802

TXGLO via Hotline

(800) 832-8224

TNRCC

(512) 463-7727

**Resources at Risk:**

Atlas Priority:      N/A

Environmental:      N/A

Economic:      N/A

**Booming strategy recommendations:**

Recommendations:

Boom to protect sensitive marshes.

Number of personnel:

2-6

Width of inlet:

30 ft

Current:

Medium

Water depth at mouth: 6 ft

Safety / Cautionary notes:

Central Texas Coastal Geographic Response Plan  
July 2001

**Site Specific Information**

**Site # 24-Q      TGLO Polygon # 4      Quad Name Virginia Point**

**Site information:**

**Site Description:** Flaming Isles

(b) (7)(F)

<b>NOAA chart #</b>	11324, 11322	<b>County:</b>	<b>Map# 42</b> Galveston
<b>Nearest ICW Marker:</b>	357	<b>Date last visited:</b>	05-10-01

**Access:**

<b>Closest Boat Ramp:</b>	Private ramp
<b>Distance:</b>	___ minutes
<b>Boat type recommended:</b>	Shallow hull or airboat
<b>Closest Airport:</b>	Scholes Field Airport GLS
<b>Closest Helicopter Landing:</b>	Scholes Field Airport, 29°15'55.16"N 094°51'37.46"W

**From MSU Galveston:**

<b><u>Trustees/ Contact Numbers:</u></b>	U.S.C.G. via NRC	(800) 424-8802
	TXGLO via Hotline	(800) 832-8224
	TNRCC	(512) 463-7727

**Resources at Risk:**

<b>Atlas Priority:</b>	Low
<b>Environmental:</b>	Habitat for fish, wading birds, waterfowl
<b>Economic:</b>	N/A

**Booming strategy recommendations:**

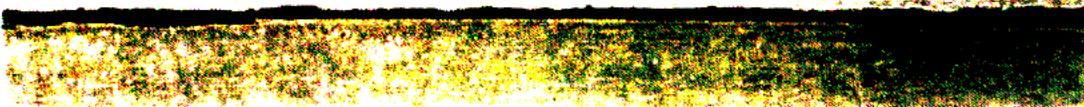
<b>Recommendations:</b>	Boom to protect sensitive marshes.		
<b>Number of personnel:</b>	2-4	<b>Width of inlet:</b>	150 ft
<b>Current:</b>	Slow	<b>Water depth at mouth:</b>	6 ft

**Safety / Cautionary notes:**

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Central Texas Coastal Geographic Response Plan  
July 2001**Site Specific Information**

Site # 24-F      TGLO Polygon # 19      Quad Name Virginia Point

**Site information:**

Site Description: Gang's Bayou

(b) (7)(F)

NOAA chart #	11324, 11322	County:	Galveston
Nearest ICW Marker:	357	Date last visited:	05-10-01

Map# 42

**Access:**

Closest Boat Ramp:	Private ramp
Distance:	_____ minutes
Boat type recommended:	Shallow hull or airboat
Closest Airport:	Scholes Field Airport GLS
Closest Helicopter Landing:	Scholes Field Airport, 29°15'55.16"N
	094°51'37.46"W

From MSU Galveston:

<b><u>Trustees/ Contact Numbers:</u></b>	U.S.C.G. via NRC	(800) 424-8802
	TXGLO via Hotline	(800) 832-8224
	TNRCC	(512) 463-7727

**Resources at Risk:**

Atlas Priority:	High
Environmental:	Habitat for gulls, terns
Economic:	N/A

**Booming strategy recommendations:**

Recommendations:	Boom to protect sensitive marshes		
Number of personnel:	2-4	Width of inlet:	200 ft
Current:	Medium	Water depth at mouth:	3 ft

Safety / Cautionary notes:

**Site # 24-N      TGLO Polygon # 1      Quad Name Virginia Point**

**Site Description:** Green's Cut @ West Bay

NOAA chart #	11324, 11322	County:	Galveston
Nearest ICW Marker:	357	Date last visited:	05-10-01

<b>Closest Boat Ramp:</b>	Private ramp
<b>Distance:</b>	___ minutes
<b>Boat type recommended:</b>	Shallow hull or airboat
<b>Closest Airport:</b>	Scholes Field Airport GLS
<b>Closest Helicopter Landing:</b>	Scholes Field Airport, 29°15'55.16"N
094°51'37.46"W	

**Trustees/ Contact Numbers:**

U.S.C.G. via NRC	(800) 424-8802
TXGLO via Hotline	(800) 832-8224
TNRCC	(512) 463-7727

Atlas Priority:	High
Environmental:	Habitat for fish, wading birds, waterfowl
Economic:	N/A

<b>Recommendations:</b>	Boom to protect sensitive marshes.		
<b>Number of personnel:</b>	2-6	<b>Width of inlet:</b>	1650 ft
<b>Current:</b>	Medium	<b>Water depth at mouth:</b>	3 ft

**Safety / Cautionary notes:**



Central Texas Coastal Geographic Response Plan  
July 2001

**Site Specific Information**

**Site # 24-O      TGLO Polygon # 2      Quad Name Virginia Point**

**Site information:**

Site Description: Entrance to Greens Lake

(b) (7)(F)

Map# 42

NOAA chart #      11324, 11322      County:      Galveston  
Nearest ICW Marker:      357      Date last visited:      05-10-01

**Access:**

**Closest Boat Ramp:**      Private ramp  
**Distance:**      \_\_\_\_\_ minutes  
**Boat type recommended:**      Shallow hull or airboat  
**Closest Airport:**      Scholes Field Airport GLS  
**Closest Helicopter Landing:**      Scholes Field Airport, 29°15'55.16"N  
094°51'37.46"W

**From MSU Galveston:**

**Trustees/ Contact Numbers:**      U.S.C.G. via NRC      (800) 424-8802  
TXGLO via Hotline      (800) 832-8224  
TNRCC      (512) 463-7727

**Resources at Risk:**

Atlas Priority:      Medium  
Environmental:      Habitat for fish, wading birds  
Economic:      N/A

**Booming strategy recommendations:**

**Recommendations:**      Boom to protect sensitive marshes.  
**Number of personnel:**      2-6      **Width of inlet:**      2850 ft  
**Current:**      Medium      **Water depth at mouth:**      5 ft

**Safety / Cautionary notes:** \_\_\_\_\_

Central Texas Coastal Geographic Response Plan  
July 2001

**Site Specific Information**

Site # 24-K TGLO Polygon # 5

Quad Name Virginia Point

**Site information:**

Site Description: Highland Bayou

(b) (7)(F)

Map# 42

NOAA chart # 11324, 11322

County:

Galveston

Nearest ICW Marker: 357

Date last visited:

05-10-01

**Access:**

Closest Boat Ramp:

Private ramp

Distance:

\_\_\_ minutes

Boat type recommended:

Shallow hull or airboat

Closest Airport:

Scholes Field Airport GLS

Closest Helicopter Landing:

Scholes Field Airport, 29°15'55.16"N

094°51'37.46"W

**From MSU Galveston:****Trustees/ Contact Numbers:**

U.S.C.G. via NRC

(800) 424-8802

TXGLO via Hotline

(800) 832-8224

TNRCC

(512) 463-7727

**Resources at Risk:**

Atlas Priority: Low

Environmental: Habitat for fish, wading birds, waterfowl

Economic: N/A

**Booming strategy recommendations:**

Recommendations:

Boom to protect sensitive marshes.

Number of personnel:

2-4

Width of inlet:

640 ft

Current:

Medium

Water depth at mouth: 4 ft

Safety / Cautionary notes:

Central Texas Coastal Geographic Response Plan  
July 2001**Site Specific Information**

Site # 24-C TGLO Polygon # \_\_\_\_\_

Quad Name Virginia Point

**Site information:**

Site Description: Housing area Entrance to Snyder Bayou

(b) (7)(F)

Map# 42

NOAA chart # 11324, 11322

County:

Galveston

Nearest ICW Marker: 357

Date last visited:

05-10-01

**Access:**

Closest Boat Ramp:

Private ramp

Distance:

\_\_\_\_\_ minutes

Boat type recommended:

Shallow hull or airboat

Closest Airport:

Scholes Field Airport GLS

Closest Helicopter Landing:

Scholes Field Airport, 29°15'55.16"N

094°51'37.46"W

**From MSU Galveston:****Trustees/ Contact Numbers:**

U.S.C.G. via NRC

(800) 424-8802

TXGLO via Hotline

(800) 832-8224

TNRCC

(512) 463-7727

**Resources at Risk:**

Atlas Priority: N/A

Environmental: N/A

Economic: N/A

**Booming strategy recommendations:****Recommendations:**

Boom to protect sensitive marshes.

Number of personnel:

2-4

Width of inlet:

600 ft

Current:

Medium

Water depth at mouth: 11 ft

Safety / Cautionary notes: \_\_\_\_\_

Central Texas Coastal Geographic Response Plan  
July 2001**Site Specific Information****Site # 24-I**      **TGLO Polygon # 12****Quad Name Virginia Point****Site information:**

Site Description: Island in Jones Bay

**(b) (7)(F)****Map# 42****NOAA chart #**      11324, 11322**County:**

Galveston

**Nearest ICW Marker:**      357**Date last visited:**

05-10-01

**Access:****Closest Boat Ramp:**

Private ramp

**Distance:**

\_\_\_ minutes

**Boat type recommended:**

Shallow hull or airboat

**Closest Airport:**

Scholes Field Airport GLS

**Closest Helicopter Landing:**

Scholes Field Airport, 29°15'55.16"N

094°51'37.46"W

**From MSU Galveston:****Trustees/ Contact Numbers:**

U.S.C.G. via NRC

(800) 424-8802

TXGLO via Hotline

(800) 832-8224

TNRCC

(512) 463-7727

**Resources at Risk:**

Atlas Priority:      Low

Environmental:      Habitat for fish, wading birds, waterfowl

Economic:      N/A

**Booming strategy recommendations:****Recommendations:**

Boom to protect sensitive marshes.

**Number of personnel:**

2-4

**Width of inlet:**

N/A ft

**Current:**

Medium

**Water depth at mouth:** N/A ft**Safety / Cautionary notes:**

Central Texas Coastal Geographic Response Plan  
July 2001

**Site Specific Information**

Site # 24-S      TGLO Polygon # 5      Quad Name Virginia Point

**Site information:**

Site Description: Marsh North side of Jones Bay

(b) (7)(F)

Map# 42

NOAA chart #      11324, 11322      County:      Galveston  
Nearest ICW Marker:      357      Date last visited:      05-10-01

**Access:**

Closest Boat Ramp:      Private ramp  
Distance:      \_\_\_\_\_ minutes  
Boat type recommended:      Shallow hull or airboat  
Closest Airport:      Scholes Field Airport GLS  
Closest Helicopter Landing:      Scholes Field Airport, 29°15'55.16"N  
094°51'37.46"W

**From MSU Galveston:**

**Trustees/ Contact Numbers:**      U.S.C.G. via NRC      (800) 424-8802  
TXGLO via Hotline      (800) 832-8224  
TNRCC      (512) 463-7727

**Resources at Risk:**

Atlas Priority:      Low  
Environmental:      Habitat for fish, wading birds, waterfowl  
Economic:      N/A

**Booming strategy recommendations:**

**Recommendations:**      Boom to protect sensitive marshes  
**Number of personnel:**      2-4      **Width of inlet:**      N/A ft  
**Current:**      Medium      **Water depth at mouth:** N/A ft

**Safety / Cautionary notes:**

Central Texas Coastal Geographic Response Plan  
July 2001

**Site Specific Information**

Site # 24- TGLO Polygon # N/A

Quad Name Virginia Point

**Site information:**

Site Description: North Bird Island

(b) (7)(F)

Map# 42

NOAA chart # 11324, 11322

County:

Galveston

Nearest ICW Marker: 357

Date last visited:

05-10-01

**Access:**

Closest Boat Ramp:

Private ramp

Distance:

\_\_\_ minutes

Boat type recommended:

Shallow hull or airboat

Closest Airport:

Scholes Field Airport GLS

Closest Helicopter Landing:

Scholes Field Airport, 29°15'55.16"N

094°51'37.46"W

**From MSU Galveston:****Trustees/ Contact Numbers:**

U.S.C.G. via NRC

(800) 424-8802

TXGLO via Hotline

(800) 832-8224

TNRCC

(512) 463-7727

**Resources at Risk:**

Atlas Priority: N/A

Environmental: N/A

Economic: N/A

**Booming strategy recommendations:**

Recommendations:

Boom to protect sensitive marshes.

Number of personnel:

2-4

Width of inlet:

N/A ft

Current:

Medium

Water depth at mouth:

N/A ft

Safety / Cautionary notes:

Central Texas Coastal Geographic Response Plan  
July 2001

**Site Specific Information****Site # 24-B      TGLO Polygon # 23****Quad Name Virginia Point****Site information:**

Site Description: Offatts Bayou

**(b) (7)(F)****Map# 42****NOAA chart #      11324, 11322****County:**

Galveston

**Nearest ICW Marker:      357****Date last visited:**

05-10-01

**Access:****Closest Boat Ramp:**

Private ramp

**Distance:**

\_\_\_ minutes

**Boat type recommended:**

Shallow hull or airboat

**Closest Airport:**

Scholes Field Airport GLS

**Closest Helicopter Landing:**

Scholes Field Airport, 29°15'55.16"N

094°51'37.46"W

**From MSU Galveston:****Trustees/ Contact Numbers:**

U.S.C.G. via NRC

(800) 424-8802

TXGLO via Hotline

(800) 832-8224

TNRCC

(512) 463-7727

**Resources at Risk:**

Atlas Priority:      Medium

Environmental:      Habitat for fish, wading birds, shrimp, bi-valves

Economic:      N/A

**Booming strategy recommendations:****Recommendations:**

Boom to protect sensitive marshes.

**Number of personnel:**

4-6

**Width of inlet:      3000 ft****Current:**

Medium

**Water depth at mouth: 12 ft****Safety / Cautionary notes:**

Central Texas Coastal Geographic Response Plan  
July 2001

**Site Specific Information**

Site # 24- TGLO Polygon # N/A

Quad Name Virginia Point

**Site information:**

Site Description: South Bird Island

(b) (7)(F)

Map# 42

NOAA chart # 11324, 11322

County:

Galveston

Nearest ICW Marker: 357

Date last visited:

05-10-01

**Access:**

Closest Boat Ramp:

Private ramp

Distance:

\_\_\_ minutes

Boat type recommended:

Shallow hull or airboat

Closest Airport:

Scholes Field Airport GLS

Closest Helicopter Landing:

Scholes Field Airport, 29°15'55.16"N

094°51'37.46"W

From MSU Galveston:

**Trustees/ Contact Numbers:**

U.S.C.G. via NRC

(800) 424-8802

TXGLO via Hotline

(800) 832-8224

INRCC

(512) 463-7727

**Resources at Risk:**

Atlas Priority: N/A

Environmental: N/A

Economic: N/A

**Booming strategy recommendations:**

Recommendations:

Boom to protect sensitive marshes.

Number of personnel:

2-4

Width of inlet:

N/A ft

Current:

Medium

Water depth at mouth:

N/A ft

Safety / Cautionary notes:

---



Central Texas Coastal Geographic Response Plan  
July 2001**Site Specific Information**

Site # 24-A TGLO Polygon # 23

Quad Name Virginia Point

**Site information:**

Site Description: Swan Lake

(b) (7)(F)

Map# 42

NOAA chart # 11324, 11322

County:

Galveston

Nearest ICW Marker: 357

Date last visited:

05-10-01

**Access:**

Closest Boat Ramp:

Private ramp

Distance:

\_\_\_ minutes

Boat type recommended:

Shallow hull or airboat

Closest Airport:

Scholes Field Airport GLS

Closest Helicopter Landing:

Scholes Field Airport, 29°15'55.16"N

094°51'37.46"W

**From MSU Galveston:****Trustees/ Contact Numbers:**

U.S.C.G. via NRC

(800) 424-8802

TXGLO via Hotline

(800) 832-8224

TNRCC

(512) 463-7727

**Resources at Risk:**

Atlas Priority: Medium

Environmental: Habitat for fish, wading birds, bi-valves, shrimp

Economic: N/A

**Booming strategy recommendations:**

Recommendations:

Boom to protect sensitive marshes.

Number of personnel:

2-8

Width of inlet:

15,000 ft

Current:

Medium

Water depth at mouth:

3 ft

Safety / Cautionary notes:

Central Texas Coastal Geographic Response Plan  
July 2001**Site Specific Information**

Site # 24-M TGLO Polygon # 8

Quad Name Virginia Point

**Site information:**

Site Description: Canal West of Basford Bayou

(b) (7)(F)

Map# 42

NOAA chart # 11324, 11322

County:

Galveston

Nearest ICW Marker: 357

Date last visited:

05-10-01

**Access:**

Closest Boat Ramp:

Private ramp

Distance:

minutes

Boat type recommended:

Shallow hull or airboat

Closest Airport:

Scholes Field Airport GLS

Closest Helicopter Landing:

Scholes Field Airport, 29°15'55.16"N

094°51'37.46"W

From MSU Galveston:

**Trustees/ Contact Numbers:**

U.S.C.G. via NRC

(800) 424-8802

TXGLO via Hotline

(800) 832-8224

TNRCC

(512) 463-7727

**Resources at Risk:**

Atlas Priority: Low

Environmental: Habitat for fish, wading birds, waterfowl

Economic: N/A

**Booming strategy recommendations:**

Recommendations:

Boom to protect sensitive marshes

Number of personnel:

2-4

Width of inlet:

220 ft

Current:

Medium

Water depth at mouth: 4 ft

Safety / Cautionary notes:

Central Texas Coastal Geographic Response Plan  
July 2001

**Site Specific Information****Site # 24-R      TGLO Polygon # 18****Quad Name Virginia Point****Site information:**

Site Description: Tidal Entrance off Sportsman's Road

**(b) (7)(F)****Map# 42****NOAA chart #      11324, 11322****County:**

Galveston

**Nearest ICW Marker:      357****Date last visited:**

05-10-01

**Access:****Closest Boat Ramp:**

Private ramp

**Distance:**

\_\_\_\_ minutes

**Boat type recommended:**

Shallow hull or airboat

**Closest Airport:**

Scholes Field Airport GLS

**Closest Helicopter Landing:**

Scholes Field Airport, 29°15'55.16"N

094°51'37.46"W

**From MSU Galveston:****Trustees/ Contact Numbers:**

U.S.C.G. via NRC

(800) 424-8802

TXGLO via Hotline

(800) 832-8224

TNRCC

(512) 463-7727

**Resources at Risk:**

Atlas Priority:      Low

Environmental:      Habitat for fish, wading birds

Economic:      N/A

**Booming strategy recommendations:****Recommendations:**

Boom to protect sensitive marshes.

**Number of personnel:**

2-4

**Width of inlet:**

90 ft

**Current:**

Medium

**Water depth at mouth:** 2 ft**Safety / Cautionary notes:**

Central Texas Coastal Geographic Response Plan  
July 2001

**Site Specific Information**

Site # 24-H      TGLO Polygon # 10      Quad Name Virginia Point

**Site information:**

Site Description: Representative channel of Tiki Island

(b) (7)(F)

NOAA chart #      11324, 11322      County:      Galveston      Map# 42  
Nearest ICW Marker:      357      Date last visited:      05-10-01

**Access:**

Closest Boat Ramp:      Private ramp  
Distance:      \_\_\_\_\_ minutes  
Boat type recommended:      Shallow hull or airboat  
Closest Airport:      Scholes Field Airport GLS  
Closest Helicopter Landing:      Scholes Field Airport, 29°15'55.16"N  
094°51'37.46"W

**From MSU Galveston:**

**Trustees/ Contact Numbers:**      U.S.C.G. via NRC      (800) 424-8802  
TXGLO via Hotline      (800) 832-8224  
TNRCC      (512) 463-7727

**Resources at Risk:**

Atlas Priority:      High  
Environmental:      Habitat for fish, wading birds, turtles, gulls, terns, crabs, shrimp  
Economic:      N/A

**Booming strategy recommendations:**

Recommendations:      Boom to protect sensitive marshes.  
Number of personnel:      2-6      Width of inlet:      100 ft  
Current:      Medium      Water depth at mouth:      8 ft

**Safety / Cautionary notes:**

**23. GALVESTON**

Gulf of Mexico, Bolivar Roads and S Galveston Bay

CHART(S): Nautical Chart (11324 & 11326)  
Upper Coast Atlas Page 41

STAGING AREA: 1. Galveston Yacht Basin (2) (b) (7)(F)  
2. Erman Pilsner Boat Ramp (2)  
3. Pleasure Island Boat Ramp (2)

ACCESS ROAD: 1. I-45 south from Houston to Harbor Drive, turn left and proceed to N. Holiday Dr., turn left and proceed to marina gate.  
2. Bolivar Ferry Landing proceed east on Hwy 87 to 16<sup>th</sup>. Street, turn right and proceed to end of road boat ramp.  
3. I-45 south from Houston to Teichman Rd., turn right and proceed to Blume Dr., turn right and proceed to end of road boat ramp.

**DISCRIPTION:**

Swift currents (3+) in this area will require cascading diversion boom techniques to divert product away from sensitive areas, or to collection sites.

**Bolivar Roads**

- 23-A Boom entrance to The Lagoon (50' wide)
- 23-B Boom to protect marsh northeast of Fort Travis Seashore Park
- 23-C Boom entrance to Horseshoe Lake (100' wide)

**Galveston Bay**

- 23-D Boom to protect northeast shore of Pelican Island
- 23-E Boom to protect northwest shore of Pelican Island
- 23-F Boom to protect southwest shore of Pelican Island Spit
- 23-G Boom entrance to march on Pelican Island east of bridge (40' wide)

**NOTIFY:**

Texas Parks & Wildlife Dept. (281) 461-4071 Houston  
U.S. Fish & Wildlife Service (281) 286-8282 Houston

**CAUTION:**

Large swells may develop near deep draft vessel movement, extra caution is recommended while operating near the Texas City Dike and Pelican Island areas. Very shallow water near the shoreline of Pelican Island and Pelican Island Spit.

**NATURAL COLLECTION AREA:**

Debris has been noted on the southwest beach of Bolivar Peninsula. The east shore of Pelican Island tends to collect large quantities of debris.

## Site Specific Information

Site # 23- TGLO Polygon # 13 Quad Name Galveston



### Site information:

Site Description: 61<sup>st</sup> street boat ramp, Offatts Bayou.

(b) (7)(F)

Map # 41

NOAA chart # 11324,11326

County: Galveston

Nearest ICW Marker: 358

Date last visited: 4 April 2001

### Access:

**Closest Boat Ramp:** 61<sup>st</sup> street boat ramp

**Distance:** 0 minutes

**Boat type recommended:** Any

**Closest Airport:** Scholes Field Airport GLS

**Closest Helicopter Landing:** Scholes Field Airport, 29°15'55.16"N  
094°51'37.46"W

### From MSU Galveston:

Go Broadway north and exit 61<sup>st</sup>, then go left. The boat ramp is half mile on right.

### Trustees/ Contact Numbers:

U.S.C.G. via NRC (800) 424-8802

TXGLO via Hotline (800) 832-8224

TNRCC (512) 463-7727

### Resources at Risk:

Atlas Priority: Low

Environmental: Habitat for dolphins, waterfowl, diving birds, fish, shrimp

Economic: Recreational boating

### Booming strategy recommendations:

**Recommendations:** Boom entrance to Offatts Bayou.

**Number of personnel:** 2-4 **Width of inlet:** \_\_\_\_\_ ft

**Current:** Minimal **Water depth at mouth:** \_\_\_\_\_ ft

**Safety / Cautionary notes:**

---

**Site Specific Information**

Site # 23-A TGLO Polygon # 12 Quad Name Galveston

**Site information:**

Site Description: boom entrance to the lagoon.

(b) (7)(F)

Map # 41

NOAA chart # 11324, 11326

County: Galveston

Nearest ICW Marker: 348

Date last visited: April 2002

**Access:****Closest Boat Ramp:**

Galveston Yacht Basin

**Distance:**

10 minutes

**Boat type recommended:**

V-hull

**Closest Airport:**

Scholes Field Airport GLS

**Closest Helicopter Landing:**

Scholes Field Airport. 29°15'55.16"N

094°51'37.46"W

**From MSU Galveston:**

Same as new area

**Trustees/ Contact Numbers:**

U.S.C.G. via NRC

(800) 424-8802

TXGLO via Hotline

(800) 832-8224

TNRCC

(512) 463-7727

**Resources at Risk:**

Atlas Priority: Medium

Environmental: Habitat for fish

Economic: Recreational boating

**Booming strategy recommendations:****Recommendations:**

Boom entrance to the Lagoon

**Number of personnel:**

2-4

**Width of inlet:**

\_\_\_\_\_ ft

**Current:**

Medium

**Water depth at mouth:**

\_\_\_\_\_ ft

**Safety / Cautionary notes:**

**Site Specific Information**

Site # 23- TGLO Polygon # 15 Quad Name Galveston

**Site information:**

Site Description: east shore of Sydnor Bayou, wetlands on east and west shore.

(b) (7)(F)

Map # 41

NOAA chart # 11324, 11326

County: Galveston

Nearest ICW Marker: 357

Date last visited: 4 April 2001

**Access:****Closest Boat Ramp:**

Turtle Lake Apartments

**Distance:**

20 minutes

**Boat type recommended:**

Flat bottom

**Closest Airport:**

Scholes Field Airport GLS

**Closest Helicopter Landing:**

Scholes Field Airport, 29°15'55.16"N

094°51'37.46"W

**From MSU Galveston:**

Take Seawall toward Freeport to 89<sup>th</sup> St. and turn right to Stewart. Then go left to 99<sup>th</sup> St. Go right to Sydnor Rd. go right and the Lake is on the right.

**Trustees/ Contact Numbers:**

U.S.C.G. via NRC

(800) 424-8802

TXGLO via Hotline

(800) 832-8224

TNRCC

(512) 463-7727

**Resources at Risk:**

Atlas Priority:

**Medium**

Environmental:

N/A

Economic:

Near Scholes Field Airport

**Booming strategy recommendations:****Recommendations:**

Boom to protect sensitive marshes.

**Number of personnel:**

2-4

**Width of inlet:**

\_\_\_\_\_ ft

**Current:**

Minimal

**Water depth at mouth:**

\_\_\_\_\_ ft

**Safety / Cautionary notes:**



**Site Specific Information**

Site # 23-C TGLO Polygon # 11 Quad Name Galveston

**Site information:**

Site Description: boom entrance to Horseshoe Lake.

(b) (7)(F)

Map # 41

NOAA chart # 11324, 11326

County: Galveston

Nearest ICW Marker: 348

Date last visited: April 2002

**Access:**

Closest Boat Ramp: Erman Piesner

Distance: 10 minutes

Boat type recommended: V-hull

Closest Airport: Scholes Field Airport GLS

Closest Helicopter Landing: Scholes Field Airport 29°15'55.16"N  
094°51'37.46"W**From MSU Galveston:**

Cross Ferry and take 87 to first left onto French Town Rd. Entrance is first small bridge.

**Trustees/ Contact Numbers:**

U.S.C.G. via NRC (800) 424-8802

TXGLO via Hotline (800) 832-8224

TNRCC (512) 463-7727

**Resources at Risk:**Atlas Priority: **Medium**

Environmental: Habitat for turtles

Economic: Commercial-fishing boats

**Booming strategy recommendations:**

Recommendations: Boom entrance to Horseshoe Lake

Number of personnel: 2-4 Width of inlet: \_\_\_\_\_ ft

Current: Medium Water depth at mouth: \_\_\_\_\_ ft

Safety / Cautionary notes:

**Site Specific Information**

Site # 23-G TGLO Polygon # 8 Quad Name Galveston

**Site information:**

Site Description: boom entrance to marsh on Pelican Island east of bridge (40' wide).

(b) (7)(F)

Map # 41

NOAA chart # 11324,11326

County: Galveston

Nearest ICW Marker: 352

Date last visited: April 2002

**Access:**

Closest Boat Ramp: TAMU oil spill control school

Distance: 2 minutes

Boat type recommended: V-hull

Closest Airport: Scholes Field Airport GLS

Closest Helicopter Landing: Scholes Field Airport, 29°15'55.16"N  
094°51'37.46"W**From MSU Galveston:**From MSU, take Harborside to 51<sup>st</sup> turn right. Just past the bridge turn right into TAMU  
Follow road to right. Marsh on right**Trustees/ Contact Numbers:**

U.S.C.G. via NRC (800) 424-8802

TXGLO via Hotline (800) 832-8224

TNRCC (512) 463-7727

**Resources at Risk:**

Atlas Priority: Medium

Environmental: Habitat for wading birds, gulls, terns, diving birds, upland/wetland  
plants

Economic: Along the Houston Ship Channel

**Booming strategy recommendations:**

Recommendations: Boom to protect sensitive marshes.

Number of personnel: 2-4

Width of inlet: \_\_\_\_\_ ft

Current: High

Water depth at mouth: \_\_\_\_\_ ft

Safety / Cautionary notes: Large swells may develop near deep draft vessel  
movement, extra caution is recommended while operating near the Texas City Dike and  
Pelican Island areas. Very shallow water near the shoreline of Pelican Island and Pelican  
Island Spit.

**Site Specific Information**

Site # 23-B TGLO Polygon # 10 Quad Name Galveston

**Site information:**

Site Description: boom to protect marsh northeast of Ft. Travis Seashore Park. No marsh found. All beach VP to north jetty.

(b) (7)(F)

**Map # 41**

NOAA chart # 11324,11326

County: Galveston

Nearest ICW Marker: 349

Date last visited: April 2002

**Access:****Closest Boat Ramp:**

Pilsner Boat Ramp

**Distance:**

1 minutes

**Boat type recommended:**

V-hull

**Closest Airport:**

Scholes Field Airport GLS

**Closest Helicopter Landing:**

Scholes Field Airport, 29°15'55.16"N

094°51'37.46"W

**From MSU Galveston:**

Cross Ferry. Take 87 east to 16<sup>th</sup> St. go right, go to beach make right and follow Fort Travis.

**Trustees/ Contact Numbers:**

U.S.C.G. via NRC

(800) 424-8802

TXGLO via Hotline

(800) 832-8224

TNRCC

(512) 463-7727

**Resources at Risk:**

Atlas Priority: Medium

Environmental: Habitat for turtles, fish, wading birds

Economic: Along the Houston Ship Channel

**Booming strategy recommendations:****Recommendations:**

Boom to protect sensitive marshes

**Number of personnel:**

2-4

**Width of inlet:**

\_\_\_\_ ft

**Current:**

Medium

**Water depth at mouth:**

\_\_\_\_ ft

**Safety / Cautionary notes:**

## Site Specific Information

Site # 23-C-1      TGLO Polygon # 10      Quad Name Galveston



### Site information:

Site Description: marsh surrounding Horseshoe Lake.

(b) (7)(F)

Map # 41

NOAA chart # 11324,11326

County: Galveston

Nearest ICW Marker: 348

Date last visited: April 2002

### Access:

Closest Boat Ramp:

Erman Pilsner

Distance:

10 minutes

Boat type recommended:

Shallow, flat bottom

Closest Airport:

Scholes Field Airport GLS

Closest Helicopter Landing:

Scholes Field Airport. 29°15'55.16"N

094°51'37.46"W

### From MSU Galveston:

Cross Ferry. Take 87 east. Take 1<sup>st</sup> left onto Frenchtown Rd. Marsh is on the right.

### Trustees/ Contact Numbers:

U.S.C.G. via NRC

(800) 424-8802

TXGLO via Hotline

(800) 832-8224

TNRCC

(512) 463-7727

### Resources at Risk:

Atlas Priority:

**Medium**

Environmental:

Habitat for turtles

Economic:

Along the Houston Ship Channel

### Booming strategy recommendations:

Recommendations:

Boom entrance to Horseshoe Lake and sensitive marshes.

Number of personnel:

2-4

Width of inlet:

\_\_\_\_ ft

Current:

Slow

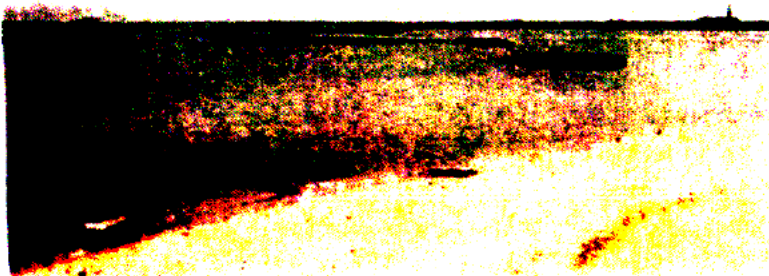
Water depth at mouth:

\_\_\_\_ ft

Safety / Cautionary notes:

**Site Specific Information**

Site # 23-C-2      TGLO Polygon # 11      Quad Name Galveston

**Site information:**

Site Description: Horseshoe Lake area.

(b) (7)(F)

Map # 41

NOAA chart # 11324, 11326

County: Galveston

Nearest ICW Marker: 348

Date last visited: April 2002

**Access:**

Closest Boat Ramp: Erman Pilsner

Distance: 10 minutes

Boat type recommended: Shallow, flat bottom

Closest Airport: Scholes Field Airport GLS

Closest Helicopter Landing: Scholes Field Airport, 29°15'55.16"N

094°51'37.46"W

**From MSU Galveston:**Cross Ferry. Take 87 east take 1<sup>st</sup> left onto Frenchtown Rd. Lake on right.**Trustees/ Contact Numbers:**

U.S.C.G. via NRC (800) 424-8802

TXGLO via Hotline (800) 832-8224

TNRCC (512) 463-7727

**Resources at Risk:**Atlas Priority: **Medium**

Environmental: Turtles

Economic: Along the Houston Ship Channel

**Booming strategy recommendations:**

Recommendations: Boom to protect sensitive marshes.

Number of personnel: 2-4

Width of inlet: \_\_\_\_\_ ft

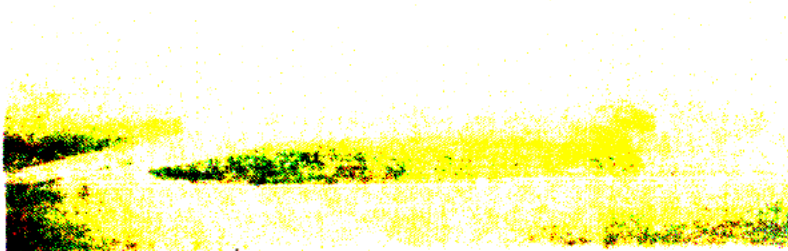
Current: Slow

Water depth at mouth: \_\_\_\_\_ ft

**Safety / Cautionary notes:**

**Site Specific Information**

Site # 23-D TGLO Polygon # 1 Quad Name Galveston

**Site information:**

Site Description: Pelican island spit north of GIWW.

(b) (7)(F)

**Map # 41**

NOAA chart # 11324,11326

County: Galveston

Nearest ICW Marker: 352

Date last visited: April 2002

**Access:**

Closest Boat Ramp: Texas City Dike Marina

Distance: 10 minutes

Boat type recommended: V-Hull

Closest Airport: Scholes Field Airport GLS

Closest Helicopter Landing: Scholes Field Airport, 29°15'55.16"N  
094°51'37.46"W**From MSU Galveston:**

No land access

**Trustees/ Contact Numbers:**

U.S.C.G. via NRC (800) 424-8802

TXGLO via Hotline (800) 832-8224

TNRCC (512) 463-7727

**Resources at Risk:**Atlas Priority: **Medium**

Environmental: Nursery and fishing, rookery, and smooth cordgrass.

Economic: Along the Houston Ship Channel

**Booming strategy recommendations:**

Recommendations: Boom to protect sensitive marshes.

Number of personnel: 2-4 Width of inlet: \_\_\_\_\_ ft

Current: High Water depth at mouth: \_\_\_\_\_ ft

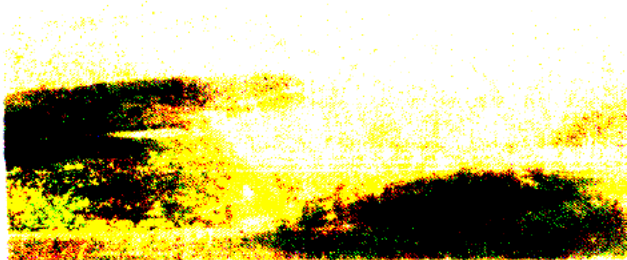
**Safety / Cautionary notes:** Large swells may develop near deep draft vessel movement, extra caution is recommended while operating near the Texas City Dike and Pelican Island areas. Very shallow water near the shoreline of Pelican Island and Pelican Island Spit.

## Site Specific Information

Site # 23-D-1

TGLO Polygon # 6

Quad Name Galveston



### Site information:

Site Description: Pelican island spit north of GIWW.

(b) (7)(F)

Map # 41

NOAA chart # 11324, 11326

County: Galveston

Nearest ICW Marker: 352

Date last visited: April 2002

### Access:

Closest Boat Ramp:

Texas City Dike Marina

Distance:

10 minutes

Boat type recommended:

V-Hull

Closest Airport:

Scholes Field Airport GLS

Closest Helicopter Landing:

Scholes Field Airport, 29°15'55.16"N

094°51'37.46"W

### From MSU Galveston:

Take Broadway south from I-45 to 51<sup>st</sup> St. go left across the bridge. Various dirt roads lead to north side of island.

### Trustees/ Contact Numbers:

U.S.C.G. via NRC

(800) 424-8802

TXGLO via Hotline

(800) 832-8224

TNRCC

(512) 463-7727

### Resources at Risk:

Atlas Priority:

**Medium**

Environmental:

large rookery area

Economic:

Along the Houston Ship Channel

### Booming strategy recommendations:

Recommendations:

Boom to protect sensitive marshes.

Number of personnel:

2-4

Width of inlet:

\_\_\_\_\_ ft

Current:

High

Water depth at mouth:

\_\_\_\_\_ ft

### Safety / Cautionary notes:

Large swells may develop near deep draft vessel movement, extra caution is recommended while operating near Pelican Island areas. Very shallow water near the shoreline of Pelican Island and Pelican Island Spit.



**Site Specific Information**

Site # 23-D TGLO Polygon # 7

Quad Name Galveston

**Site information:**

Site Description: northeastern shore of Pelican Island.

(b) (7)(F)

Map # 41

NOAA chart # 11324, 11326

County: Galveston

Nearest ICW Marker: 352

Date last visited: April 2002

**Access:**

Closest Boat Ramp:

Texas City Dike Marina

Distance:

10 minutes

Boat type recommended:

V-Hull

Closest Airport:

Scholes Field Airport GLS

Closest Helicopter Landing:  
094°51'37.46"W

Scholes Field Airport, 29°15'55.16"N

**From MSU Galveston:**Take Broadway south from I-45 to 51<sup>st</sup> St. go left across the bridge. Various dirt roads lead to north side of island.**Trustees/ Contact Numbers:**

U.S.C.G. via NRC

(800) 424-8802

TXGLO via Hotline

(800) 832-8224

TNRCC

(512) 463-7727

**Resources at Risk:**

Atlas Priority:

**High**

Environmental:

Wetlands; nursery; rookery

Economic:

Along the Houston Ship Channel

**Booming strategy recommendations:**

Recommendations:

Boom to protect sensitive marshes.

Number of personnel:

2-4

Width of inlet:

\_\_\_\_\_ ft

Current:

High

Water depth at mouth:

\_\_\_\_\_ ft

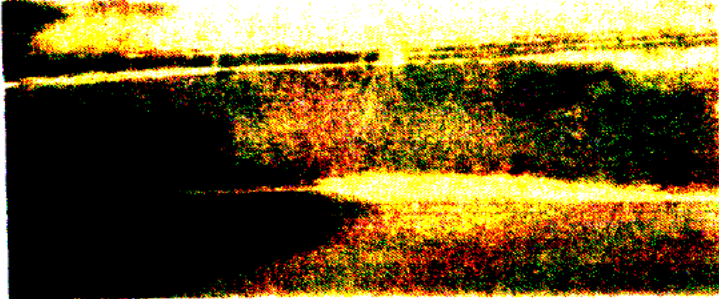
**Safety / Cautionary notes:**

Large swells may develop near deep draft vessel movement, extra caution is recommended while operating near Pelican Island areas.



**Site Specific Information**

Site # 23-E TGLO Polygon # 8 Quad Name Galveston

**Site information:**

Site Description: off north shore of Pelican Island.

(b) (7)(F)

Map # 41

NOAA chart # 11324, 11326

County: Galveston

Nearest ICW Marker: 352

Date last visited: April 2002

**Access:**

**Closest Boat Ramp:** Texas City Dike Marina  
**Distance:** 10 minutes  
**Boat type recommended:** V-Hull  
**Closest Airport:** Scholes Field Airport GLS  
**Closest Helicopter Landing:** Scholes Field Airport, 29°15'55.16"N  
 094°51'37.46"W

**From MSU Galveston:**

Take Broadway south from I-45 to 51<sup>st</sup> St. go left across the bridge. Various dirt roads lead to north side of island.

**Trustees/ Contact Numbers:**

U.S.C.G. via NRC	(800) 424-8802
TXGLO via Hotline	(800) 832-8224
TNRCC	(512) 463-7727

**Resources at Risk:**

**Atlas Priority:** **Medium**  
**Environmental:** Fishing area; nursery; rookery  
**Economic:** Along the Houston Ship Channel

**Booming strategy recommendations:**

**Recommendations:** Boom to protect sensitive marshes.  
**Number of personnel:** 2-4 **Width of inlet:** \_\_\_\_\_ ft  
**Current:** High **Water depth at mouth:** \_\_\_\_\_ ft

**Safety / Cautionary notes:** Large swells may develop near deep draft vessel movement, extra caution is recommended while operating near Pelican Island areas. Very shallow water near the shoreline of Pelican Island and Pelican Island Spit.

**Site Specific Information**

Site # 23-D-1      TGLO Polygon # 9      Quad Name Galveston

**Site information:**

Site Description: Eastern Shore of Pelican Island.

(b) (7)(F)

Map # 41

NOAA chart #      11324,11326      County:      Galveston  
 Nearest ICW Marker:      352      Date last visited:      April 2002

**Access:**

**Closest Boat Ramp:**      Texas City Dike Marina  
**Distance:**      10 minutes  
**Boat type recommended:**      V-Hull  
**Closest Airport:**      Scholes Field Airport GLS  
**Closest Helicopter Landing:**      Scholes Field Airport, 29°15'55.16"N  
    094°51'37.46"W

**From MSU Galveston:**

Take Broadway south from I-45 to 51<sup>st</sup> St. go left across the bridge. Various dirt roads lead to north side of island.

**Trustees/ Contact Numbers:**      U.S.C.G. via NRC      (800) 424-8802  
    TXGLO via Hotline      (800) 832-8224  
    TNRCC      (512) 463-7727

**Resources at Risk:**

Atlas Priority:      **Medium**  
 Environmental:      Fishing area; nursery; rookery  
 Economic:      Along the Houston Ship Channel

**Booming strategy recommendations:**

**Recommendations:**      Boom to protect sensitive marshes.  
**Number of personnel:**      2-4      **Width of inlet:**      \_\_\_\_\_ ft  
**Current:**      High      **Water depth at mouth:**      \_\_\_\_\_ ft

**Safety / Cautionary notes:**      Large swells may develop near deep draft vessel movement, extra caution is recommended while operating near the Texas City Dike and Pelican Island areas. Very shallow water near the shoreline of Pelican Island and Pelican Island Spit.

**22. THE JETTIES**

Gulf of Mexico and Bolivar Roads

CHART(S): Nautical Chart (11324)  
Upper Coast Atlas Page 40

STAGING AREA: (See Galveston for site)

ACCESS ROAD: N/A

**DISCRIPTION:**Gulf of Mexico

22-A Boom to protect Bolivar Flats. Cascading diversion boom can work in calm sea conditions.

Bolivar Roads

22-B Boom entrance to The Lagoon (50' wide)

**NOTIFY:**

Texas Parks & Wildlife Dept.

(281) 461-4071 Houston

U.S. Fish & Wildlife Service

(281) 286-8282 Houston

Houston Audubon Society

(713) 932-1392

**CAUTION:**

Access to Bolivar Flats in strictly controlled. Tide conditions must be monitored to prevent loss of equipment.

**NATURAL COLLECTION AREA:**

Big Reef and the S Jetty tends to collect debris.

**Site Specific Information**

Site # 22-A      TGLO Polygon # N/A      Quad Name The Jetties

**Site information:**

Site Description: Marsh located on the north side of the Bodeller drive. North shore line marsh; south shore line rock and marsh. Lake is one mile long. South/north entrances open at high tide. Southern location at (b) (7)(F); northern location at (b) (7)(F)

(b) (7)(F)

Map # 40

NOAA chart # 11224

County: Galveston

Nearest ICW Marker: 350

Date last visited: 4 April 2001

**Access:**

Closest Boat Ramp: Galveston Yacht Basin

Distance: 10 minutes

Boat type recommended: Air boat

Closest Airport: Scholes Field Airport GLS

Closest Helicopter Landing: Scholes Field Airport, 29°15'55.16"N

094°51'37.46"W

**From MSU Galveston:**

Take Rosenberg to the Seawall Blvd. then make left on Seawall to Jetty.

**Trustees/ Contact Numbers:**

U.S.C.G. via NRC (800) 424-8802

TXGLO via Hotline (800) 832-8224

TNRCC (512) 463-7727

**Resources at Risk:**Atlas Priority: **Medium**

Environmental: Birds; reptiles; amphibians; fish; shell fish; marsh land

Economic: Along the Houston Ship Channel

**Booming strategy recommendations:**

Recommendations: Boom to protect sensitive marshes.

Number of personnel: 4-6      Width of inlet: \_\_\_\_\_ ft

Current: High      Water depth at mouth: \_\_\_\_\_ ft

Safety / Cautionary notes: \_\_\_\_\_

**Site Specific Information**

Site # 22-A-2

TGLO Polygon # 5

Quad Name The Jetties

**Site information:**

Site Description: Unnamed inlet at Old Fort San Jacinto.

(b) (7)(F)

Map # 40

NOAA chart # 11324

County: Galveston

Nearest ICW Marker: 350

Date last visited: Apr 2002

**Access:****Closest Boat Ramp:**

Galveston Yacht Basin

**Distance:**

10 minutes

**Boat type recommended:**

V-hull

**Closest Airport:**

Scholes Field Airport GLS

**Closest Helicopter Landing:**

Scholes Field Airport, 29°15'55.16"N

094°51'37.46"W

**From MSU Galveston:**

Same as new area

**Trustees/ Contact Numbers:**

U.S.C.G. via NRC

(800) 424-8802

TXGLO via Hotline

(800) 832-8224

TNRCC

(512) 463-7727

**Resources at Risk:**

Atlas Priority:

**Low**

Environmental:

Birds; reptiles; amphibians; fish shell fish; marsh

Economic:

Along the Houston Ship Channel

**Booming strategy recommendations:****Recommendations:**

Boom to protect sensitive marshes.

**Number of personnel:**

4-6

**Width of inlet:**

ft

**Current:**

High

**Water depth at mouth:**

ft

**Safety / Cautionary notes:**

**Site Specific Information**

Site # 22-B-1

TGLO Polygon # 3

Quad Name The Jetties

**Site information:**

Site Description: Galveston Island sand pit.

(b) (7)(F)

Map # 40

NOAA chart # 11324

County:

Galveston

Nearest ICW Marker: 350

Date last visited:

4 April 2001

**Access:****Closest Boat Ramp:**

Galveston Yacht Basin

**Distance:**

10 minutes

**Boat type recommended:**

Air boat

**Closest Airport:**

Scholes Field Airport GLS

**Closest Helicopter Landing:**

Scholes Field Airport, 29°15'55.16"N

094°51'37.46"W

**From MSU Galveston:**

Same as new area

**Trustees/ Contact Numbers:**

U.S.C.G. via NRC

(800) 424-8802

TXGLO via Hotline

(800) 832-8224

TNRCC

(512) 463-7727

**Resources at Risk:**

Atlas Priority:

**Low**

Environmental:

Birds; reptiles; amphibians; fish; shell fish

Economic:

Along the Houston Ship Channel

**Booming strategy recommendations:****Recommendations:**

Boom to protect sensitive marshes.

**Number of personnel:**

4-6

**Width of inlet:**

ft

**Current:**

High

**Water depth at mouth:**

ft

**Safety / Cautionary notes:**

**Site Specific Information**

Site # 22-B-2      TGLO Polygon # N/A      Quad Name The Jetties

**Site information:**

Site Description: The lagoon entrance soft wide with rock shoreline

(b) (7)(F)

Map # 40

NOAA chart # 11324

County: Galveston

Nearest ICW Marker: 350

Date last visited: 3 April 2001

**Access:**

Closest Boat Ramp: Galveston Yatch Basin

Distance: 10 minutes

Boat type recommended: V-hull

Closest Airport: Scholes Field Airport GLS

Closest Helicopter Landing: Scholes Field Airport, 29°15'55 16"N

094°51'37.46"W

**From MSU Galveston:**

Same as new area

**Trustees/ Contact Numbers:**

U.S.C.G. via NRC (800) 424-8802

TXGLO via Hotline (800) 832-8224

TNRCC (512) 463-7727

**Resources at Risk:**

Atlas Priority: N/A

Environmental: Birds; reptiles; amphibians; fish; shell fish

Economic: Along the Houston Ship Channel

**Booming strategy recommendations:**

Recommendations: Boom to protect sensitive marshes.

Number of personnel: 4-6      Width of inlet: 50 ft

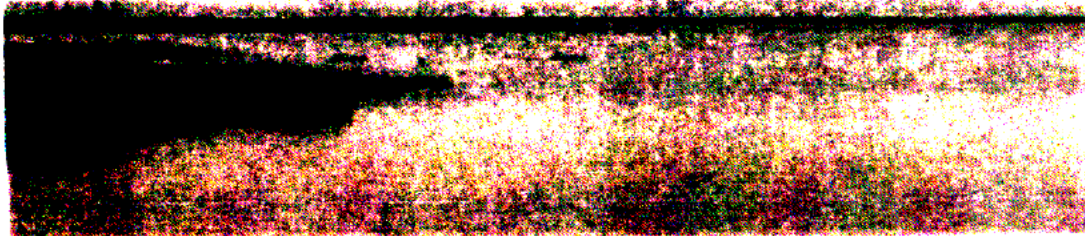
Current: High      Water depth at mouth: \_\_\_\_ ft

Safety / Cautionary notes:



# Site Specific Information

Site # 22-B-3      TGLO Polygon # 1      Quad Name: The Jetties



## Site information:

Site Description: Marsh south of Route 87 (from Flake quad.)

(b) (7)(F)

Map # 40

NOAA chart # 11324

County:

Galveston

Nearest ICW Marker: 350

Date last visited:

4 April 2001

## Access:

Closest Boat Ramp: Erman Pilsner Boat Ramp

Distance: 10 minutes

Boat type recommended: Air boat

Closest Airport: Scholes Field Airport GLS

Closest Helicopter Landing: Scholes Field Airport, 29°15'55.16"N  
094°51'37.46"W

## From MSU Galveston:

Take Ferry to Bolivar; exit State Hwy 87 and take a left on 7<sup>th</sup> Loop 108.

## Trustees/ Contact Numbers:

U.S.C.G. via NRC (800) 424-8802

TXGLO via Hotline (800) 832-8224

TNRCC (512) 463-7727

## Resources at Risk:

Atlas Priority: **High**

Environmental: Birds; reptiles; amphibians; fish; shell fish; marsh land

Economic: Along the Houston Ship Channel

## Booming strategy recommendations:

Recommendations: Boom to protect sensitive marshes.

Number of personnel: 4-6

Width of inlet: \_\_\_\_\_ ft

Current: High

Water depth at mouth: \_\_\_\_\_ ft

Safety / Cautionary notes:

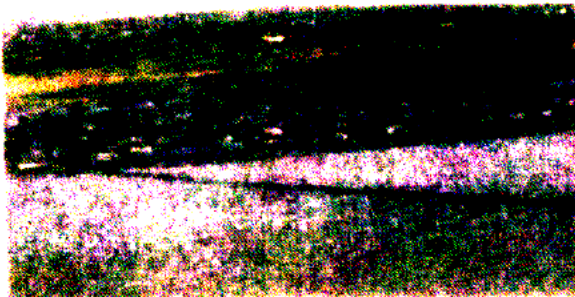
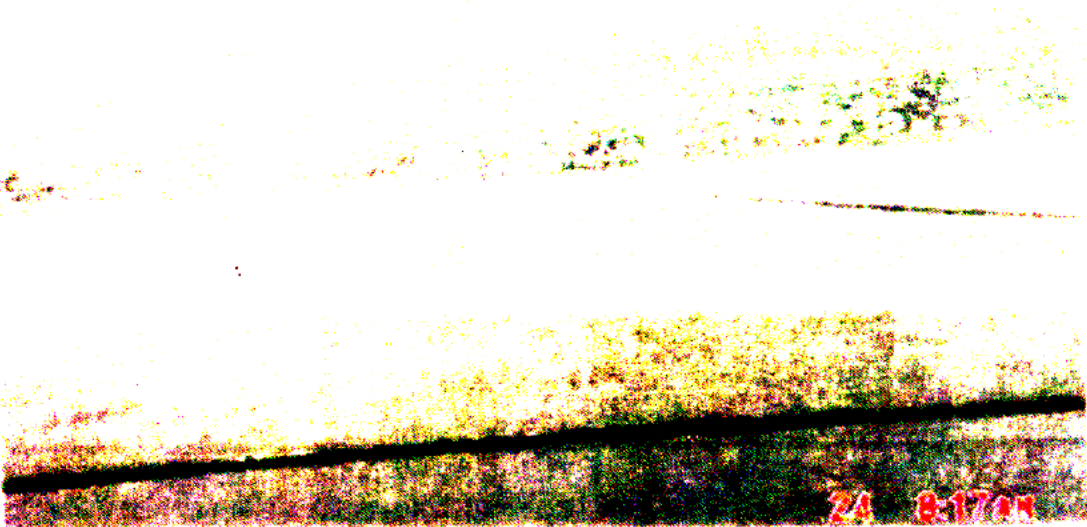


**Site Specific Information**

Site # 22-B-4

TGLO Polygon # 1

Quad Name: The Jetties

**Site information:**

Site Description: North Jetty.

(b) (7)(F)

Map # 40

NOAA chart # 11324

County:

Galveston

Nearest ICW Marker: 350

Date last visited:

Apr 02

**Access:****Closest Boat Ramp:****Distance:**

2-5 minutes

**Boat type recommended:**

Shallow bottom boat

**Closest Airport:**

Scholes Field Airport GLS

**Closest Helicopter Landing:**

Scholes Field Airport, 29°15'55.16"N

094°51'37.46"W

**From MSU Galveston:**

Take Ferry to Bolivar; exit State Hwy 87 and take a right at North Jetty entrance.

**Trustees/ Contact Numbers:**

U.S.C.G. via NRC

(800) 424-8802

TXGLO via Hotline  
TNRCC

(800) 832-8224  
(512) 463-7727

**Resources at Risk:**

Atlas Priority: **High**  
Environmental: Birds; reptiles; amphibians; fish; shell fish; marsh land  
Economic: Along the Houston Ship Channel

**Booming strategy recommendations:**

Recommendations: Boom to protect sensitive marshes.  
Number of personnel: 4-6      Width of inlet: \_\_\_\_\_ ft  
Current: High      Water depth at mouth: \_\_\_\_\_ ft

Safety / Cautionary notes: The North Jetty is a prime location for fishing from shore year round.

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## APPENDIX A

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### GENERAL INFORMATION

	<u>PAGE</u>
U.S. EPA 40 CFR Part 112 Cross References	
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U.S. DOT / PHMSA 49 CFR Part 194 Cross Reference .....	A-22

**U.S. EPA 40 CFR Part 112.20(h)**  
**Final Rule - July 1, 1994**  
**CROSS REFERENCE**

<b>§ 112.20 (h)</b>	<b>BRIEF DESCRIPTION</b>	<b>LOCATION IN PLAN</b>
(1)	<b><i>Emergency Response Action Plan</i></b>	-----
(1)(I)	The identity and telephone number of a qualified individual	ERAP - QI Info
(1)(ii)	The identity of individuals or organizations to be contacted in the event of a discharge	ERAP - Notif.
(1)(iii)	A description of information to pass to response personnel in the event of a reportable spill	ERAP - Notif.
(1)(iv)	A description of the facility's response equipment and its location	ERAP - Facility Response Equip.
(1)(v)	A description of response personnel capabilities	ERAP - Local Response Team
(1)(vi)	Plans for evacuation of the Facility and a reference to community evacuation plans, as appropriate	ERAP - Initial Response Actions
(1)(vii)	A description of immediate measures to secure the source of the discharge, and to provide adequate containment and drainage of spilled oil	ERAP - Initial Response Actions
(1)(viii)	A diagram of the facility	ERAP - Facility Diagram
(2)	<b><i>Facility information</i></b>	-----
	location and type of the facility	Fig 1.3
	the identity and tenure of the present owner and operator	Fig 1.3
	the identity of the qualified individual	Fig 1.3, 2.2
(3)	<b><i>Information about emergency response.</i></b>	-----
(3)(I)	The identity of private personnel and equipment	Fig 5.1, App C
(3)(ii)	Evidence of contracts or other approved means for ensuring the availability of such personnel and equipment	App C
(3)(iii)	The identity and the telephone number of individuals or organizations to be contacted in the event of a discharge	Fig 2.1, 2.2, 2.4, 2.5
(3)(iv)	A description of information to pass to response personnel	Fig 2.3
(3)(v)	A description of response personnel capabilities, including:	-----
	• duties of persons at the Facility during a response action	Fig 3.1, 4.3, App B
	• response times and qualifications...	§ 4.5, Fig 2.2
(3)(vi)	A description of the facility's response equipment including:	-----
	• location of the equipment	§ 5.1
	• equipment testing	Fig 5.3
(3)(vii)	Plans for evacuation of the Facility and a reference to community evacuation plans, as appropriate	App D
(3)(viii)	A diagram of evacuation routes	App D

**U.S. EPA 40 CFR Part 112.20(h)**  
**Final Rule - July 1, 1994**  
**CROSS REFERENCE (Cont'd)**

<b>§ 112.20 (h)</b>	<b>BRIEF DESCRIPTION</b>	<b>LOCATION IN PLAN</b>
(3)(ix)	A description of the duties of the qualified individual that include	-----
(3)(ix)(A)	Activate internal alarms and hazard communications systems	§ 4.2
(3)(ix)(B)	Notify all response personnel, as needed	§ 4.2
(3)(ix)(C)	Identify the character, exact source, amount, and extent of release	§ 4.2
(3)(ix)(D)	Notify and provide necessary information to the appropriate Federal, State, and local authorities	§ 4.2
(3)(ix)(E)	Assess the interaction of the spilled substance with water and/or other substances stored at the Facility	§ 4.2
(3)(ix)(F)	Assess the possible hazards to human health and environment	§ 4.2
(3)(ix)(G)	Assess and implement prompt removal actions	§ 4.2
(3)(ix)(H)	Coordinate rescue and response actions	§ 4.2
(3)(ix)(I)	Use authority to immediately access company funding	§ 4.2
(3)(ix)(J)	Direct cleanup activities until properly relieved	§ 4.2
(4)	<b>Hazard evaluation</b>	-----
	identifiable history of discharges reportable under 40 CFR part 110 for the entire life of the facility	App H
	identify areas within the facility where discharges could occur	App H
	what the potential effects would be on the affected environment	App H
(5)	<b>Response planning levels</b>	-----
(5)(i)	A worst case discharge, as calculated using the appropriate worksheet in appendix D	App G
(5)(ii)	A discharge of 2,100 gallons or less provided this amount is less than the WCD amount	App G
(5)(iii)	A discharge greater than 2,100 gallons and less than or equal to 36,000 gallons or 10 percent of the capacity of the largest tank, whichever is less	App G
(6)	<b>Discharge detection systems</b> ... Describe the procedures and equipment used to detect discharges	App I
(7)	<b>Plan implementation</b>	-----
(7)(i)	Response actions to be carried out by facility personnel or contracted personnel	§ 3.1, Fig 3.1, 3.2, 3.3
(7)(ii)	A description of the equipment to be used for each scenario	App C, G
(7)(iii)	Plans to dispose of contaminated cleanup materials	App F
(7)(iv)	Measures to provide adequate containment and drainage of spilled oil	§ 3.1, Fig 3.1
(8)	<b>Self-inspection, training, and meeting logs.</b>	-----

# U.S. EPA 40 CFR Part 112.20(h)

*Final Rule - July 1, 1994*

## CROSS REFERENCE (Cont'd)

§ 112.20 (h)	BRIEF DESCRIPTION	LOCATION IN PLAN
(8)(I)	A checklist and record of inspection for:	-----
	• tanks	App I
	• secondary containment	App I
	• response equipment	App K
(8)(ii)	A description of the drill/exercise program to be carried out under the response plan as described in § 112.21	§ 4.6
(8)(iii)	A description of the training program to be carried out under the response plan as described in § 112.21	§ 4.5
(8)(iv)	Logs of:	-----
	• discharge prevention meetings	App K
	• training sessions	App K
	• drills/exercises	App K
(9)	<b>Diagrams</b>	-----
	• site plan	Fig 1.2
	• drainage plan	App H
(10)	<b>Security systems.</b> The review plan shall include a description of facility security systems.	App I
(11)	<b>Response plan cover sheet</b>	App M

**U.S. EPA 40 CFR Part 112.21**  
**Final Rule - July 1, 1994**  
**CROSS REFERENCE**

<b>§ 112.21</b>	<b>BRIEF DESCRIPTION</b>	<b>LOCATION IN PLAN</b>
(a)	Develop a training and drill program that satisfies the requirements of this section	-----
(b)	Develop a facility response training program to train personnel involved in response activities.	§ 4.5
(b)(1)	Proper instruction of facility personnel in the procedures to respond to discharges of oil and in applicable oil spill response laws, rules, and regulations`	§ 4.5
(b)(2)	Training shall be functional in nature according to job tasks for both supervisory and non-supervisory operational personnel	§ 4.5
(b)(3)	Trainers shall develop specific lesson plans on subject areas relevant to facility personnel involved in oil spill response and cleanup	§ 4.5
(c)	Develop a program of facility response drills/exercises, including evaluation procedures. Can follow PREP.	§ 4.6

**U.S. EPA 40 CFR Part 112, Appendix F**  
**Final Rule - July 1, 1994**  
**CROSS REFERENCE**

<b>Appendix F to Part 112</b>	<b>BRIEF DESCRIPTION</b>	<b>LOCATION IN PLAN</b>
1.0	<b><i>Model Facility-Specific Response Plan</i></b>	-----
1.1	<b><i>Emergency Response Action Plan</i></b>	-----
	1. Qualified Individual Information	ERAP - QI Info
	2. Emergency Notification Phone List	ERAP - Notifications
	3. Spill Response Notification Form	ERAP - Notifications
	4. Response Equipment List and Location	ERAP - Facility Response Equipment
	5. Response Equipment Testing and Deployment	ERAP - Facility Response Equipment
	6. Local Response Team	ERAP - Local Response Team
	7. Evacuation Plan	ERAP - Evacuation Diagram
	8. Immediate Actions	ERAP - Initial Response Actions
	9. Facility Diagram	ERAP - Facility Diagram
1.2	<b><i>Facility Information</i></b>	-----
1.2.1	Facility name and location	Fig 1.3
1.2.2	Latitude and Longitude	Fig 1.3
1.2.3	Wellhead Protection Area	Fig 1.3
1.2.4	Owner/operator	Fig 1.3
1.2.5	Qualified Individual	Fig 1.3, 2.2
1.2.6	Date of Oil Storage Start-up	Fig 1.3
1.2.7	Current Operation	Fig 1.3, App H
1.2.8	Dates and Types of Substantial Expansion	Fig 1.3
1.3	<b><i>Emergency Response Information</i></b>	-----
1.3.1	Notification	§ 2.0 (all)
1.3.2	Response Equipment List	§ 5.1, App C
1.3.3	Response Equipment Testing/Deployment	App K
1.3.4	Personnel	§ 4.3, Fig 2.2, 2.5
1.3.5	Evacuation Plans	App F
1.3.6	Qualified Individual's Duties	§ 4.2
1.4	<b><i>Hazard Evaluation</i></b>	-----
1.4.1	Hazard Identification	App H
1.4.2	Vulnerability Analysis	App H
1.4.3	Analysis of the Potential for an Oil Spill	App H



**U.S. EPA 40 CFR Part 112, Appendix F**  
**Final Rule - July 1, 1994**  
**CROSS REFERENCE (Cont'd)**

<b>Appendix F to Part 112</b>	<b>BRIEF DESCRIPTION</b>	<b>LOCATION IN PLAN</b>
1.4.4	Facility Reportable Oil Spill History	App H
1.5	<b><i>Discharge Scenarios</i></b>	-----
1.5.1	Small and Medium Discharges	App G
1.5.2	Worst Case Discharge	App G
1.6	<b><i>Discharge Detection Systems</i></b>	-----
1.6.1	Discharge Detection by Personnel	App I
1.6.2	Automated Discharge Detection	App I
1.7	<b><i>Plan Implementation</i></b>	-----
1.7.1	Response Resources for Small, Medium, and Worst Case Spills	Fig 5.1, App C, G
1.7.2	Disposal Plans	App F
1.7.3	Containment and Drainage Planning	App I
1.8	<b><i>Self-Inspection, Drills/Exercises, and Response Training</i></b>	-----
1.8.1	Facility Self-Inspection	App I
1.8.1.1	Tank Inspection	App I
1.8.1.2	Response Equipment Inspection	App K
1.8.2	Facility Drills/Exercises	§ 4.6
1.8.2.1	Qualified Individual Notification Drill Log	App K
1.8.2.2	Spill Management Team Tabletop Exercise Log	App K
1.8.3	Response Training	§ 4.5
1.8.3.1	Personnel Response Training Log	App K
1.8.3.2	Discharge Prevention Meeting Log	App K
1.9	<b><i>Diagrams</i></b>	-----
	(1) Site Plan Diagram	Fig 1.2
	(2) Site Drainage Plan Diagram	App H
	(3) Site Evacuation Plan Diagram	App D
1.10	<b><i>Security</i></b>	App I
2.0	<b><i>Response Plan Cover Sheet</i></b>	App M
3.0	<b><i>Acronyms</i></b>	App L

# U.S. EPA , 40 CFR Part 264, 265, 279

## CROSS REFERENCE

40 CFR	BRIEF DESCRIPTION	LOCATION
264.52	Content of contingency plan:	Entire Plan
(a)	Emergency response actions:	§3.0
(b)	Amendments to SPCC Plan.	SPCC Plan
(c)	Coordination with State and local response parties	App. B
(d)	Emergency coordinator(s)	Fig. 1.2
(e)	Detailed description of emergency equipment on-site	Fig. 5.2
(f)	Evacuation plan if applicable	App. D
264.53	Copies of contingency plan	Distribution List
264.54	Amendment of contingency plan	§1.4
264.55	Emergency coordinator	Fig. 1.2
264.56	Emergency procedures:	
(a)	Notification	§2.0
(b)	Emergency identification/characterization	§3.0, §4.2
(c)	Health/environmental assessment	§3.0, §4.2
(d)	Reporting	§2.0
(e)	Containment	§3.0
(f)	Monitoring	§3.0
(g)	Treatment, storage, or disposal of wastes	App. F
(h)	Cleanup procedures: (1) Disposal (2) Decontamination	App. F
(i)	Follow-up procedures	App. E
(j)	Follow-up report	App. E
265.52	Content of contingency plan:	Entire Plan
(a)	Emergency response actions	§3.0
(b)	Amendments to SPCC Plan	SPCC Plan
(c)	Coordination with State and local response parties	App. B
(d)	Emergency coordinator(s)	Fig. 1.2
(e)	Detailed description of emergency equipment on-site	Fig. 5.2
(f)	Evacuation plan if applicable	App. D
265.53	Copies of contingency plan	Distribution List
265.54	Amendment of contingency plan	§1.4
265.55	Emergency coordinator	Fig. 1.2
265.56	Emergency procedures:	
(a)	Notification	§2.0
(b)	Emergency identification/characterization	§3.0, §4.2
(c)	Health/environmental assessment	§3.0, §4.2
(d)	Reporting	§2.0
(e)	Containment	§3.0

# U.S. EPA , 40 CFR Part 264, 265, 279

## CROSS REFERENCE (Cont'd)

40 CFR	BRIEF DESCRIPTION	LOCATION
(f)	Monitoring	§3.0
(g)	Treatment, storage, or disposal of wastes	App. F
(h)	Cleanup procedures: (1) Disposal (2) Decontamination	App. F
(i)	Follow-up procedures	App. E
(j)	Follow-up report	App. E
279.52(b)(2)	Content of contingency plan	Entire Plan
(i)	Emergency response actions	§3.0
(ii)	Amendments to SPCC Plan	SPCC Plan
(iii)	Coordination with State and local response parties	App. B
(iv)	Emergency coordinator(s)	Fig. 1.2
(v)	Detailed description of emergency equipment on-site	Fig. 5.2
(vi)	Evacuation plan if applicable	App. D
(3)	Copies of contingency plan	Distribution List
(4)	Amendment of contingency plan	§1.4
(5)	Emergency coordinator	Fig. 1.2
(6)	Emergency procedures:	
(i)	Notification	§2.0
(ii)	Emergency identification/characterization	§3.0, §4.2
(iii)	Health/environmental assessment	§3.0, §4.2
(iv)	Reporting	§2.0
(v)	Containment	§3.0
(vi)	Monitoring	§3.0
(vii)	Treatment, storage, or disposal of wastes	§3.0
(viii)	Cleanup procedures: (A) Disposal (B) Decontamination	App. F
(ix)	Follow-up report	App. E

**U.S. COAST GUARD 33 CFR 154**  
**FINAL RULE - FEBRUARY 29, 1996**  
**CROSS REFERENCE**

§ 154.1030		DESCRIPTION OF GUIDELINE ITEM	SECTION
<b>General response plan contents.</b>			
(a)	The plan must be written in English.		Entire Plan
(b)	A response plan must be divided into sections ....		-----
(b)(1)	Introduction and plan contents.		§1.1
(b)(2)	Emergency response action plan:		-----
(b)(2)(i)	Notification procedures.		ERAP, §2.1, 2.2
(b)(2)(ii)	Facility's spill mitigation procedures.		ERAP, §2.0, 3.0, 4.0
(b)(2)(iii)	Facility's response activities.		ERAP, §3.1, Fig 3.1, 3.2
(b)(2)(iv)	Fish and wildlife and sensitive environments.		ERAP, §6.0
(b)(2)(v)	Disposal plan.		App F
(b)(3)	Training and Exercises:		-----
(b)(3)(i)	Training procedures.		§4.5
(b)(3)(ii)	Exercise procedures.		§4.6
(b)(4)	Plan review and update procedures.		§1.3, 1.4
(b)(5)	Appendices.		-----
(b)(5)(i)	Facility-specific information.		§1, Fig 1.1, 1.2, 1.3
(b)(5)(ii)	List of contacts.		§2.1, 2.2, Fig 2.1, 2.2
(b)(5)(iii)	Equipment lists and records.		§5.1, 5.2, App C
(b)(5)(iv)	Communications plan		§5.7
(b)(5)(v)	Site-specific safety and health plan.		§4.7, App K
(b)(5)(vi)	List of acronyms and definitions.		App L
(b)(5)(vii)	A geographic-specific appendix ... mobile facility operates.		-----
(c)	... contained in § 154.1035, 154.1040, and 154.1041, as appropriate.		-----
(d)	...information required in § 154.1035, 154.1040, and 154.1041...		-----
(e)	... cross-reference ...		App A
(f)	... be consistent with the NCP and ACP ...		Entire Plan, Acknowledgement Page

**U.S. COAST GUARD 33 CFR 154**  
**FINAL RULE - FEBRUARY 29, 1996**  
**CROSS REFERENCE (Cont'd)**

§ 154.1035	DESCRIPTION OF GUIDELINE ITEM	SECTION(S)
<b>Specific requirements for facilities that could reasonable be expected to cause significant and substantial harm to the environment.</b>		
(a)	<i>Introduction and plan content.</i>	§1.0
(a)(1)	The facility's name, street address, city, county, state, ZIP code, facility telephone number, and tele-facsimile number, if so equipped...	Fig 1.3
(a)(2)	The facility's location ...	Fig 1.1, 1.2, 1.3
(a)(3)	... name, address, and procedures ... owner or operator ... 24-hour basis.	Fig 1.3
(a)(4)	A table of contents.	Foreword
(a)(5)	... cross index ....	App A
(a)(6)	A record of change(s) to record information and plan updates.	Foreword
(b)	<i>Emergency Response Action Plan...</i>	-----
(b)(1)	Notification procedures.	ERAP, §2.1, 2.2
(b)(1)(i)	... a prioritized list identifying the person(s) ... to be notified of a discharge or substantial threat of a discharge of oil ...	§2.1, 2.2, Fig 2.1, 2.2, 2.3, §4.2, 4.3, Fig 4.1
(b)(1)(i)(A)	Facility response personnel, and spill management team, oil spill removal organizations, and the qualified individual(s) ...	§2.1, 2.2, 4.2, 4.3, 4.4, 5.1, 5.2, 5.3
(b)(1)(i)(B)	Federal, State, or local agencies, as required.	§2.2, Fig 2.5
(b)(1)(ii)	... a form, ... which contains information to be provided in the initial and follow-up notifications to Federal, State, and local agencies ...	Fig 2.3, App K
(b)(2)	Facility's spill mitigation procedures.	§3.1, Fig 3.1, 3.2
(b)(2)(i)	...describe the volume(s) and oil groups..	§1.2, 6.5, App G, H
(b)(2)(i)(A)...(D)	...discharges from the MTR facility ... non-transportation related...	§1.2, App G
(b)(2)(ii)	... must contain prioritized procedures for facility personnel to mitigate or prevent any discharge or substantial threat of a discharge of oil ...	§1.2, 2.1, 2.2, Fig 2.1, 2.2 §3.0, Fig 3.1, 3.2, App G
(b)(2)(ii)(A)...(G)	... Typical scenarios....	§1.2, 3.0, Fig 3.1, 3.2, 3.3, App G
(b)(2)(iii)	... a listing of equipment and the responsibilities of facility personnel to mitigate an average most probable discharge.	§3.0, Fig 3.1, §5.1, 5.2, 5.3, 5.4, Fig 5.1, App C, G
(b)(3)	Facility's response activities.	-----
(b)(3)(i)	... a description of the facility personnel's responsibilities ... pending the arrival of the qualified individual.	§3.1, Fig 3.1, 4.2, 4.3, 5.1
(b)(3)(ii)	... a description of the responsibilities and authority of the qualified individual and alternate as required in § 154.1026.	§4.2



**U.S. COAST GUARD 33 CFR 154**  
**FINAL RULE - FEBRUARY 29, 1996**  
**CROSS REFERENCE (Cont'd)**

<b>§ 154.1035</b>	<b>DESCRIPTION OF GUIDELINE ITEM</b>	<b>SECTION(S)</b>
(b)(3)(iii)	... describe the corporate organizational structure that will be used to manage the response actions, including ...	§4.3
(b)(3)(iii)(A)..(H)	Command and control...Public Information...Safety... Liaison...Operations...Planning...Logistics...Finance.	§4.3, 4.4, Fig 4.3, App B
(b)(3)(iv)	... identify the oil spill removal organization(s) and the spill management team ...	§4.0, 5.0, App B, C
(b)(3)(iv)(A)	Be capable of providing the following response resources:	-----
(b)(3)(iv)(A)(1)	Equipment and supplies to meet...§154.1045, §154.1047 or...	§5.1, 5.2, 5.3, 5.4, Fig 5.1, App G, H, I
(b)(3)(iv)(A)(2)	Trained personnel necessary to continue operation...first 7 days of the response.	Fig 2.2, §4.3, 4.4, 5.0, 5.1, Fig 5.1
(b)(3)(iv)(B)	...job descriptions for each spill management team member...	App B
(b)(3)(v)	For mobile facilities ... the oil spill removal organization and the spill management team in the applicable geographic-specific appendix...	N/A
(b)(4)	Fish and wildlife and sensitive environments.	-----
(b)(4)(i)	...identify areas of economic importance and environmental sensitivity..	§6.0, Fig 6.1, 6.2, App H
(b)(4)(ii)	For a worst case discharge...this section must...	-----
(b)(4)(ii)(A)	List all fish and wildlife and sensitive environments identified in the ACP... ..	§6.3, Fig 6.1, 6.2, App H
(b)(4)(ii)(B)	Describe all the response actions ... to protect these fish and wildlife and sensitive environments...	§3.1, 6.0 Fig 3.1, 3.2, 3.3
(b)(4)(ii)(C)	Contain a map or chart showing the location of those fish and wildlife and sensitive environments ...	Fig 6.1, 6.2
(b)(4)(iii)	For a worst case discharge, ... identify appropriate equipment and required personnel to protect these areas...	§3.1, 4.2, 4.4, 5.0, 6.0, App C
(b)(4)(iii)(A)	Identify the appropriate equipment and required personnel to protect all fish and wildlife and sensitive environments ...	§2.0, 3.0, 4.0, 5.0, 6.0
(b)(4)(iii)(B)	Calculate the distances required by...by selecting one method described...	-----
(b)(4)(iii)(B)(1)	Distances calculated...	App G
(b)(4)(iii)(B)(2)	A spill trajectory or model may be substituted for distances...	-----
(b)(4)(iii)(B)(3)	The procedures contained in the Environmental Protection Agency's regulations...may be substituted for distances...	-----
(b)(4)(iii)(C)	Based on historical...COTP may require the additional fish and wildlife and sensitive environments	-----
(b)(5)	Disposal plan ...describe any actions to be taken or procedures to be used to ensure that all recovered oil and oil contaminated debris ...	App F

**U.S. COAST GUARD 33 CFR 154**  
**FINAL RULE - FEBRUARY 29, 1996**  
**CROSS REFERENCE (Cont'd)**

<b>§ 154.1035</b>	<b>DESCRIPTION OF GUIDELINE ITEM</b>	<b>SECTION(S)</b>
(c)	<i>Training and exercises.</i> To be divided into the following subsections:	-----
(c)(1)	Training procedures. ...must describe the training procedures ..	§4.5
(c)(2)	Exercise procedures. ... must describe the exercise program ...	§4.6
(d)	<i>Plan review and update procedures.</i> ... address the procedures ...	§1.3, 1.4
(e)	<i>Appendices.</i> ...must include appendices described...	-----
(e)(1)	Facility-specific information.. ... principal characteristics ...	-----
(e)(1)(i)	There must be a physical description of the facility...	Fig 1.2, 1.3, App H
(e)(1)(ii)	...must identify the sizes, types, and number of vessels...	Fig 1.3, App H
(e)(1)(iii)	...must identify the first valve(s) ...inside the secondary containment...	Fig 1.2, 1.3, App H
(e)(1)(iv)	...must contain information on the oil(s) and hazardous material...	Fig 1.3 §3.1, Fig 3.1, 3.2, 3.3, 3.4 MSDS at Facility
(e)(1)(iv)(A)	The generic or chemical name	Fig 1.3 – Physical Description App. H – Hazard Identification Tanks
(e)(1)(iv)(B)	A description of the appearance and odor	Fig 3.2, 3.3, 3.4 – Product Specific Response Considerations
(e)(1)(iv)(C)	The physical and chemical characteristics	Fig 3.2, 3.3, 3.4 – Product Specific Response Considerations
(e)(1)(iv)(D)	The hazards involved in handling the oil(s) and hazardous...	Fig 3.1 – Fire/Explosions
(e)(1)(iv)(E)	A list of firefighting procedures and extinguishing agents...	Fig 3.1 – Fire/Explosions
(e)(1)(v)	The appendix may contain any other information which the facility owner or operator determines to be pertinent...	-----
(e)(2)	List of contacts...	-----
(e)(2)(i)	The primary and alternate qualified individual(s) for the facility;	Fig 1.3, 2.2
(e)(2)(ii)	The contact(s) ... for activation of the response resources; and	Fig 1.3, 2.2, 2.5
(e)(2)(iii)	Appropriate Federal, State, and local officials.	Fig 2.5
(e)(3)	Equipment list and records. ... must include ...	-----
(e)(3)(i)	...list of equipment ... average most probable	§5.1, 5.2, 5.5, Fig 4.1, 4.2, 4.3, App C
(e)(3)(ii)	...detailed listing of all the major equipment identified in the plan as belonging to an oil spill removal organization(s)...	§5.0, Fig 5.1, App C

**U.S. COAST GUARD 33 CFR 154**  
**FINAL RULE - FEBRUARY 29, 1996**  
**CROSS REFERENCE (Cont'd)**

<b>§ 154.1035</b>	<b>DESCRIPTION OF GUIDELINE ITEM</b>	<b>SECTION(S)</b>
(e)(3)(iii)	It is not necessary to list response equipment from oil spill removal organization(s) ... classified by the Coast Guard ... When it is necessary ... the list must include for each piece of equipment -	-----
(e)(3)(iii)(A)	The type, make, model, and year of manufacture ... of the equipment;	N/A
(e)(3)(iii)(B)	For oil recovery devices, the effective daily recovery rate ...	N/A
(e)(3)(iii)(C)	For containment boom, ...height and type of end connectors;	N/A
(e)(3)(iii)(D)	The spill scenario in which the equipment will be used ...	N/A
(e)(3)(iii)(E)	The total daily capacity for storage and disposal of recovered oil;	N/A
(e)(3)(iii)(F)	For communication equipment, the type and amount of equipment ...	N/A
(e)(3)(iii)(G)	Location of the equipment; and	N/A
(e)(3)(iii)(H)	The date of the last inspection by the oil spill removal organization(s).	N/A
(e)(4)	<i>Communications plan ...</i>	§2.0, 4.0, 5.7
(e)(5)	<i>Site-specific safety and health plan ...</i>	§4.7, App K
(e)(6)	<i>List of acronyms and definitions ...</i>	App L

<b>§ 154.1045</b>	<b>DESCRIPTION OF GUIDELINE ITEM</b>	<b>SECTION</b>
<b>Response plan development and evaluation criteria for facilities that handle, store, or transport Group I through Group IV petroleum oils.</b>		
(a)	...facility that handles...Group I through Group IV petroleum oils..	-----
(a)(1)	..criteria in Table 1 ...identification of appropriate equipment..	-----
(a)(2)	...resources must be evaluated...including, but not limited to -	-----
(a)(2)(i)...(v)	Ice conditions; Debris; ... other appropriate....	-----
(a)(3)(i)...(ii)	The COTP may reclassify a specific body of water or location ...	-----
(b)(1)...(3)	Response equipment must ---	App C, G
(c)	...identify response resources...average most probable discharge...	§5.0, Fig 5.1, App C, G
(c)(1)	1,000 feet of containment boom or two times the length of the largest vessel ... and the means of deploying and anchoring the boom ... within 1 hour of the detection of a spill;	§5.0, Fig 5.1, App C, G
(c)(2)	...recovery devices and oil storage capacity ... within 2 hours ...	§5.0, Fig 5.1, App C, G
(d)	... identify response resources ... maximum most probable discharge...	§5.0, Fig 5.1, App C, G



**U.S. COAST GUARD 33 CFR 154**  
**FINAL RULE - FEBRUARY 29, 1996**  
**CROSS REFERENCE (Cont'd)**

<b>§ 154.1045</b>	<b>DESCRIPTION OF GUIDELINE ITEM</b>	<b>SECTION</b>
(d)(1)	... include sufficient containment boom, oil recovery devices, and storage capacity for any recovery of up to the maximum most probable discharge planning volume...	App C, G
(d)(2)	... resources must be appropriate for each group of oil ...	§5.0, App C, G
(d)(3)	... must be positioned ... arrive ... scene of a discharge ...	-----
(d)(3)(i)	... within the specified times ...	Fig 5.1, App C
(d)(3)(ii)	In higher volume port areas ... within 6 hours ...	N/A
(d)(3)(iii)	In all other locations, ... within 12 hours ...	Fig 5.1, App C
(d)(4)	... COTP may impose additional operational restrictions ...	-----
(e)	... identify the response resources ... worst case discharge ...	§5.0, Fig 5.1, App C, G
(e)(1)	The location must be suitable to meet the response times identified..	§5.0, App C, G
(e)(2)	The response resources must be appropriate for ---	-----
(e)(2)(i)	The volume of the facility's worst case discharge;	App C, G
(e)(2)(ii)	Group(s) of oil...handled, stored or transported by the facility; and	App C, G
(e)(2)(iii)	The geographic area(s) in which the facility operates.	App C, G
(e)(3)	... sufficient boom, oil recovery devices, and storage capacity to recover the worst case discharge planning volumes.	§5.0, App C, G
(e)(4)	... quantity of response resources ... to respond ... to the worst case discharge to the maximum extent practicable.	§5.0, App C, G
(e)(5)	... The following percentages of the response equipment ... must be capable of operating in waters of 6 feet or less depth.	-----
(e)(5)(i)	Offshore - 10 percent.	N/A
(e)(5)(ii)	Nearshore/inland/Great Lakes/rivers and canals - 20 percent.	§5.0, App G
(e)(6)	... COTP may impose additional operational restrictions ...	-----
(f)	Response equipment ... must be capable of arriving on scene within the times specified in this paragraph ...	§5.0, App C, G
(g)	... response equipment identified for Tier 1 plan credit must be capable of being mobilized and en route to the scene of a discharge within 2 hours of notification ...	§5.0, App C, G
(g)(1)	Either directly or through the qualified individual; and	§4.2, App C, G
(g)(2)	Within 30 minutes of a discovery ...	App C, G
(h)	Response resources identified for Tier 2 and Tier 3 plan credit must be capable of arriving on scene within the time specified ...	App C, G
(i)	... a facility that is located in any environment with year-round preapproval for use of dispersants, ... Group II or III persistent petroleum oils, may request a credit for up to 25 percent ...	N/A
(j)	... identify response resources with firefighting capability ...	Fig 1.2, 2.5, 5.3, 5.6
(k)	... identify equipment and required personnel ... to protect fish and wildlife and sensitive environments.	§5.0, App C

**U.S. COAST GUARD 33 CFR 154**  
**FINAL RULE - FEBRUARY 29, 1996**  
**CROSS REFERENCE (Cont'd)**

<b>§ 154.1045</b>	<b>DESCRIPTION OF GUIDELINE ITEM</b>	<b>SECTION</b>
(k)(1)	... the identified response resources must include the quantities of boom sufficient to protect ....	§5.0, App C
(k)(2)	... resources and response methods ... must be consistent with the ... ACP in effect 6 months prior to initial plan submission or the annual plan review ...	§1.5, 3.1, 6.0, App C
(l)	The response plan for a facility that handles, stores, or transports Groups I through IV petroleum oils must identify an oil spill removal organization(s) with response resources that are available...	§5.3, Fig 5.1, App C
(l)(1)	Except as required in paragraph (l)(2) ... shoreline clean-up response resources required must be determined as described in Appendix C of this part.	§5.3, App C, G
(l)(2)	... resources and response methods ... must be consistent with the ... ACP in effect 6 months prior to initial plan submission or the annual plan review ...	§1.5, 3.1, 6.0, App C
(m)	Appendix C ... quantity of response resources ... for the maximum most probable discharge volume, and for each worst case discharge response tier.	App C, G
(m)(1)	Included in Appendix C of this part is a cap that recognizes the practical and technical limits of response capabilities ...	App G
(m)(2)	... Appendix C of this part lists the caps that will apply in ... February 18, 1998. ...facility whose estimated recovery capacity exceeds ... caps ... shall identify sources of additional equipment equal to twice the cap ... or the amount necessary to reach the calculated planning volume, whichever is lower.	App G
(n)(1)...(2)	The Coast Guard will initiate a review of cap increases and other requirements contained within this subpart ...	-----

**OSHA EMERGENCY ACTION PLANS**  
**(29 CFR 1910.38(a)) and Process Safety (29 CFR 1910.119)**  
**CROSS REFERENCE**

<b>29 CFR</b>	<b>BRIEF DESCRIPTION</b>	<b>LOCATION</b>
1910.38(a)	<b><i>Emergency action plan:</i></b>	
(1)	Scope and applicability	§1.0
(2)	Elements:	-----
(i)	Emergency escape procedures and emergency escape route assignments.	App. D
(ii)	Procedures to be followed by employees who remain to operate critical terminal operations before they evacuate.	§3.0
(iii)	Procedures to account for all employees after emergency evacuation has been completed.	App. D
(iv)	Rescue and medical duties for those employees who are to perform them.	§3.0, App. K
(v)	The preferred means of reporting fires and other emergencies.	§2.0, 3.0
(vi)	Names or regular job titles of persons or departments who can be contacted for further information or explanation of duties under the plan.	§2.0
(3)	Alarm system	App. D
(4)	Evacuation	App. D
(5)	Training	§4.0
1910.165	<b><i>Employee alarm systems:</i></b>	-----
(b)	General requirements	App. D
(b)(1)	Purpose of alarm system	App. D
(b)(4)	Preferred means of reporting emergencies	§2.0, 3.0
(d)	Maintenance and testing	App. D

# OSHA HAZWOPER (29 CFR 1910.120) CROSS REFERENCE

29 CFR	BRIEF DESCRIPTION	LOCATION
1910.120(q)	<b><i>Emergency response to hazardous substance releases:</i></b>	-----
(1)	Emergency response plan	Entire Plan
(2)	Elements of an emergency response plan:	-----
(i)	Pre-emergency planning and coordination with outside parties	§ 2.0
(ii)	Personnel roles, lines of authority, training, and communication	§ 2.0, 4.0
(iii)	Emergency recognition and prevention	§ 3.0, App. G, H & I
(iv)	Safe distances and places of refuge	App. D
(v)	Site security and control	App. I
(vi)	Evacuation routes and procedures	App. D
(vii)	Decontamination procedures	§ 3.0, App. K
(viii)	Emergency medical treatment and response procedures	§ 3.0
(ix)	Emergency alerting and response procedures	§2.0, 3.0
(x)	Critique of response and follow-up	App. E
(xi)	PPE and emergency equipment	§3.0, App. K
(xii)	Emergency response plan coordination and integration	§4.0
(3)	Procedures for handling emergency response:	-----
(i)	The senior emergency response official responding to an emergency shall become the individual in charge of a site-specific Incident Command System (ICS).	§4.0
(ii)	The individual in charge of the ICS shall identify, to the extent possible, all hazardous substances or conditions, present and shall address as appropriate site analysis, use of engineering controls, maximum exposure limits, hazardous substance handling procedures, and use of any new technologies.	§3.0, 4.0
(iii)	Implementation of appropriate emergency operations and use of PPE.	§3.0, App. K
(iv)	Employees engaged in emergency response and exposed to hazardous substances presenting an inhalation hazard or potential inhalation hazard shall wear positive pressure self-contained breathing apparatus while engaged in emergency response.	§3.0, App. K
(v)	The individual in charge of the ICS shall limit the number of emergency response personnel at the emergency site, in those areas of potential or actual exposure to incident or site hazards, to those who are actively performing emergency operations.	§3.0, 4.0, App. K
(vi)	Backup personnel shall stand by with equipment ready to provide assistance or rescue.	§3.0, 4.0, App. K
(vii)	The individual in charge of the ICS shall designate a safety official, who is knowledgeable in the operations being implemented at the emergency response site.	§3.0, 4.0
(viii)	When activities are judged by the safety official to be an IDLH condition and/or to involve an imminent danger condition, the safety official shall have authority to alter, suspend, or terminate those activities.	§3.0, App. K
(ix)	After emergency operations have terminated, the individual in charge of the ICS shall implement appropriate decontamination procedures.	App. K

**OSHA HAZWOPER**  
**(29 CFR 1910.120)**  
**CROSS REFERENCE (Cont'd)**

29 CFR	BRIEF DESCRIPTION	LOCATION
(x)	When deemed necessary for meeting the tasks at hand, approved self-contained compressed air breathing apparatus may be used with approved cylinders from other approved self-contained compressed air breathing apparatus provided that such cylinders are of the same capacity and pressure rating.	§3.0, App. K
(4)	Skilled support personnel	§4.0
(5)	Specialist employees	§4.0
(6)	Training	§4.0
(7)	Trainers	§4.0
(8)	Refresher training	§4.0
(9)	Medical surveillance and consultation	§3.0, App. K
(10)	Chemical protective clothing	§3.0, App. K
(11)	Post-emergency response operations	§3.0, App. K, E

# Texas Oil Spill Prevention and Response Act of 1991

## 31 TAC Section 19.14 - Major Facilities

### CROSS REFERENCE

DESCRIPTION OF GUIDELINE ITEM		LOCATION IN PLAN
<b>§ 19.12</b>		
(C)	For corporate applications, the application must be signed by an officer of at least the rank of vice-president. For partnerships...signed by a partner. All applications must also be signed by the person responsible for operation...(i.e. the facility manager or area manager).	Foreword
<b>§ 19.14</b>		
(1)	Name and address including street address and directions ... owner, operator, person(s) in charge and the registered agent for service.	Fig. 1.3
(2)	A description of the facility, including	-----
(2)(A)	Date the facility began operating under current owner/operator, types of oil handled, <b>the location of and the contact person for obtaining</b> MSDS sheets for all the types of oil handled, the oil storage and transfer capacity, the throughput capacity, and the average daily throughput; and	Fig. 1.3 (MSDS Sheets fully maintained at Facility)
(2)(B)	the latitude and longitude ... all environmentally sensitive areas ...	Fig. 1.3, §6.0, Fig. 6.1
(2)(C)	Dimensions and oil capacity of largest vessel docking or providing services to facility and a description of the vessels under operational control of the facility	Fig. 1.3, App. H
(2)(D)	Certified site plan	Fig. 1.2
(2)(D)(i)	Location of all structures in which oil is handled and vessel and tank car or truck transfer area	Fig. 1.1, 1.2, 1.3, §6.0, App. H
(2)(D)(ii)	Vicinity maps showing vehicular access to the facility, pipelines to and from the facility, nearby environmentally sensitive areas, and nearby residential or populous areas	Fig. 1.1, 1.2, 1.3, App. H
(2)(D)(iii)	Drainage and diversion plans of the facility (including all watercourses into which surface runoff from the facility drains)	Fig. 6.1, App. H
(2)(E)	The most recent aerial photos	-----
(3)	Proof of financial responsibility	Ack. Page, §4.0, 5.0, App. C
(4)	Number and qualifications of prevention and response personnel	§4.0, 5.0, Fig. 5.1, 2.2, App. C
(5)	Current discharge prevention or response training programs for facility personnel and outside contractors working at the facility	§4.0, App. C SPCC Plan § 2.0
(6)	Statement of facility's discharge prevention and response capabilities	Fig. 1.3, §4.0, 5.0, App. C, App. H
(6)(A)	... response capability will be based primarily on third party contracts/agreements or the facility personnel and equipment	Fig. 1.3, §4.0, 5.0, App. C, App. H
(6)(B)	Copy of current Discharge Prevention and Response Plan required under the Clean Water Act (including SPCC plan)	Supplied with Submittal



**Texas Oil Spill Prevention and Response Act of 1991**  
**31 TAC Section 19.14 - Major Facilities**  
**CROSS REFERENCE (Cont'd)**

DESCRIPTION OF GUIDELINE ITEM		LOCATION IN PLAN
(6)(C)	Facility preventative measures, including:	-----
(6)(C)(i)	Leak detection and discharge prevention safety systems, devices, equipment or procedures	Fig. 1.3, App. H
(6)(C)(ii)	Schedules, methods, and procedures for testing, maintaining, and inspecting storage tanks, pipelines, and other structures ...	App. I, § 2.0
(6)(C)(iii)	<b>Schedules, methods, and procedures for conducting discharge response drills;</b>	§4.6, App. K
(6)(D)	Description of the facility's response plan, including:	-----
(6)(D)(i)	Planned response actions, the chain of command, lines of communication, and procedure for notifying the GLO	§2.0, 3.0, 4.0
(6)(D)(ii)	Response equipment and supplies available to respond to a spill, its ownership and location, and the time required to deploy ...	§5.0, Fig. 5.1, App. C
(6)(D)(iii)	Plans for sampling, testing, and measuring the volume of the spill	§6.0, App. F
(6)(D)(iv)	... recovery, storage, separation, transportation, and disposal of waste...	§6.0, App. F
(6)(D)(v)	Probable direction and rate of flow for a spill at the facility	§6.0, App. H,
(6)(D)(vi)	Plans and maps showing the strategy for protection of environmentally sensitive areas...;	§6.0, Fig. 6.1, App. H
(6)(D)(vii)	Plans for providing emergency medical treatment, site safety and security, and fire prevention	§3.0, App. K § 5.0
(6)(D)(viii)	<b>Schedules, methods and procedures at the facility for maintaining and evaluating the readiness of facility-owned and facility-maintained response equipment and supplies...</b>	§5.1, App. C
(7)	... response or clean-up contracts or basic ordering agreements, or the terms of either, the applicant has with a DCO or other	§5.0, Fig. 5.1, App. C
(8)	... worst case discharge, including the rationale used to determine this	App. G
(9)	List of prior spills dating back one year (oil and hazardous substance)	App. H
(10)	List of environmental permits, registration, or identification numbers applied for/obtained for the facility	Application, Fig. 1.3
(11)	<b>If applicable, a statement describing the (facility's) participation in...(PREP).</b>	§4.6
<b>§ 19.20</b>		
(b)	A discharge cleanup organization must be certified by the GLO to be listed...	App. C
(C)	Those entities having federal (OSRO) classification shall,...be certified by the GLO as a discharge clean-up organization	-----

## DOT/PHMSA 49 CFR PART 194 CROSS REFERENCE

<b>§ 194.105</b>	<b>BRIEF DESCRIPTION</b>	<b>LOCATION in PLAN</b>
(a)	... determine the worst case discharge ... provide methodology, including calculations, used to arrive at the volume.	Fig 1.3, App G
(b)	The worst case discharge is the largest volume, in barrels, of the following:	-----
(b)(1)	... maximum release time in hours, plus the maximum shutdown response time in hours, multiplied by the maximum flow rate expressed in barrels per hour, plus the largest line drainage volume after shutdown of the line section(s) ...; or	App G
(b)(2)	The largest foreseeable discharge for the line section(s) within a response zone, expressed in barrels, based on the maximum historic discharge, if one exists, adjusted for any subsequent corrective or preventative action taken; or	N/A (App G)
(b)(3)	If the response zone contains one or more breakout tanks, the capacity of the single largest tank or battery of tanks within a single secondary containment system, adjusted for the capacity or size of the secondary containment system, expressed in barrels.	N/A (App G)
(b)(4)	Operators may claim prevention credits for breakout tank secondary containment and other specific spill prevention measures as follows:...	N/A (App G)
<b>§ 194.107</b>	<b>BRIEF DESCRIPTION</b>	<b>LOCATION in PLAN</b>
(a)	Each response plan must plan for resources for responding, to the maximum extent practicable, to a worst case discharge, and to a substantial threat of such a discharge.	§ 5, App C
(b)	An operator must certify in the plan ... reviewed NCP and each applicable ACP...	Foreword
(b)(1)	As a minimum to be consistent with the NCP as a facility response plan must:	-----
(b)(1)(i)	Demonstrate an operator's clear understanding of the function of the Federal response structure...	§ 4, App J
(b)(1)(ii)	Establish provisions to ensure the protection of safety at the response site; and	§ 4.7, App K
(b)(1)(iii)	Identify the procedures to obtain any required Federal and State permissions for using alternative response strategies such as in-situ burning and dispersants...	§ 6.8
(b)(2)	As a minimum, to be consistent with the applicable ACP the plan must:	-----
(b)(2)(i)	Address the removal of a worst case discharge and the mitigation or prevention of a substantial threat of a worst case discharge;	§ 3.0, App F, G
(b)(2)(ii)	Identify environmentally and economically sensitive areas;	§ 6.0
(b)(2)(iii)	Describe the responsibilities of the operator and operator and of Federal, State and local agencies in removing a discharge and in mitigating or preventing a substantial threat of a discharge; and	App B
(b)(2)(iv)	Establish the procedures for obtaining an expedited decision on use of dispersants or other chemicals.	§ 6.8
(c)	Each response plan must include:	----
(c)(1)	A core plan consisting of ...	----
(c)(1)(i)	An information summary as required in § 194.113,	Fig 1.3
(c)(1)(ii)	Immediate notification procedures,	§ 2.0
(c)(1)(iii)	Spill detection and mitigation procedures,	§ 3.0, App G
(c)(1)(iv)	The name, address, and telephone number of the oil spill response organization, if appropriate,	Fig 5.1, App C
(c)(1)(v)	Response activities and response resources,	§ 3.0, Fig 5.1, App C
(c)(1)(vi)	Names and telephone numbers of Federal, state, and local agencies which the operator expects to have pollution control responsibilities or support,	Fig 2.5
(c)(1)(vii)	Training procedures,	§ 4.5



**DOT/PHMSA 49 CFR PART 194**  
**CROSS REFERENCE (Cont'd)**

<b>§ 194.107</b>	<b>BRIEF DESCRIPTION</b>	<b>LOCATION in PLAN</b>
(c)(1)(viii)	Equipment testing,	§ 4.6, 5.3, App K
(c)(1)(ix)	Drill program – an operator will satisfy the requirement for a drill program by following the National Preparedness for Response Exercise Program (PREP) guidelines. An operator choosing not to follow PREP guidelines must have a drill program that is equivalent to PREP. The operator must describe the drill program in the response plan and OPS will determine if the program is equivalent to PREP.	§ 4.6, App K
(c)(1)(x)	Plan review and update procedures;	§ 1.4
(c)(2)	An appendix for each response zone that includes the information required in paragraph (c)(1)(i)-(ix) of this section and the worst case discharge calculations that are specific to that response zone. An operator submitting a response plan for a single response zone does not need to have a core plan and a response zone appendix. The operator of a single response zone onshore pipeline shall have a single summary in the plan that contains the required information in § 194.113.7; and.	N/A (Fig. 1.3)
(c)(3)	A description of the operator's response management system including the functional areas of finance, logistics, operations, planning, and command. The plan must demonstrate that the operator's response management system uses common terminology and has a manageable span of control, a clearly defined chain of command, and sufficient trained personnel to fill each position.	§ 4.0, App B
<b>§ 194.111</b>	<b>BRIEF DESCRIPTION</b>	<b>LOCATION in PLAN</b>
(a)	Each operator shall maintain relevant portions of its response plan at the operator's headquarters and at other locations from which response activities may be conducted, for example, in field offices, supervisor's vehicles, or spill response trailers.	Foreword Distribution List
<b>§ 194.113</b>	<b>BRIEF DESCRIPTION</b>	<b>LOCATION in PLAN</b>
(a)	The information summary for the core plan, required by § 194.107, must include:	----
(a)(1)	The name and address of the operator.	Fig 1.3
(a)(2)	For each response zone which contains one or more line sections that meet the criteria for determining significant and substantial harm as described in § 194.103, a listing and description of the response zones, including county(s) and state(s).	Fig 1.3
(b)	The information summary for the response zone appendix, required in § 194.107, must include:	----
(b)(1)	The information summary for the core plan.	Fig 1.3
(b)(2)	The names or titles and 24-hour telephone numbers of the qualified individual(s) and at least one alternate qualified individual(s);	Fig 1.3
(b)(3)	The description of the response zone, including county(s) and state(s), for those zones in which a worst case discharge could cause substantial harm to the environment.	Fig 1.3
(b)(4)	A list of line sections for each pipeline contained in the response zone, identified by milepost or survey station number, or other operator designation.	Fig 1.3
(b)(5)	The basis for the operator's determination of significant and substantial harm.	Fig 1.3, App M
(b)(6)	The type of oil and volume of the worst case discharge.	Fig 1.3

**DOT/PHMSA 49 CFR PART 194**  
**CROSS REFERENCE (Cont'd)**

<b>§ 194.115</b>	<b>BRIEF DESCRIPTION</b>	<b>LOCATION in PLAN</b>
(a)	Each operator shall identify and ensure, by contract or other approved means, the resources necessary to remove, to the maximum extent practicable, a worst case discharge and to mitigate or prevent a substantial threat of a worst case discharge.	App C
(b)	An operator shall identify in the response plan the response resources which are available to respond within the time specified, after discovery of a worst case discharge, or to mitigate the substantial threat of such a discharge.	App C
<b>§ 194.117</b>	<b>BRIEF DESCRIPTION</b>	<b>LOCATION in PLAN</b>
(a)	Each operator shall conduct training to ensure that:	-----
(a)(1)	All personnel know --	-----
(a)(1)(i)	Their responsibilities under the response plan	§ 4.5, 4.6, App B
(a)(1)(ii)	The name and address of, and the procedure for contacting, the operator on a 24-hour basis	§ 2.0, Fig 2.2
(a)(1)(iii)	The name of, and procedures for contacting, the qualified individual on a 24-hour basis	Fig 1.2, Fig. 2.2, § 2.0,
(a)(2)	Reporting personnel know --	-----
(a)(2)(i)	The content of the information summary of the response plan.	Fig 1.3
(a)(2)(ii)	The toll-free telephone number of the National Response Center	Fig. 2.5
(a)(2)(iii)	The notification process	§ 2.0, Fig. 2.4
(a)(3)	Personnel engaged in response activities know --	-----
(a)(3)(i)	The characteristics and hazards of the oil discharged	§ 3.0
(a)(3)(ii)	The conditions that are likely to worsen emergencies, including the consequences of facility malfunctions or failures, and the appropriate corrective actions.	§ 3.0
(a)(3)(iii)	The steps necessary to control any accidental discharge of oil and to minimize the potential for fire, explosion, toxicity, or environmental damage	§ 3.0
(a)(3)(iv)	The proper firefighting procedures and use of equipment, fire suits, and breathing apparatus	§ 1.2, 3.0
(b)	Each operator shall maintain a training record for each individual that has been trained as required by this section. These records must be maintained in the following manner as long as the individual is assigned duties under the response plan	-----
(b)(1)	Records for operator personnel must be maintained at the operator's headquarters	§ 4.5
(b)(2)	Records for personnel engaged in response, other than operator personnel, shall be maintained as determined by the operator.	§ 4.5
(b)(3)	Nothing in this section relieves an operator from the responsibility to ensure that all response personnel are trained to meet the OSHA standards for emergency response operations in 29 CFR 1910.120 ...	§ 4.5

**DOT/PHMSA 49 CFR PART 194**  
**CROSS REFERENCE (Cont'd)**

<b>§ 194.119</b>	<b>BRIEF DESCRIPTION</b>	<b>LOCATION in PLAN</b>
(a)	Each owner shall submit two copies...	Distribution
(b)	...PHMSA will notify the operator of any alleged deficiencies...	-----
(c)	The operator...may petition PHMSA for reconsideration within 30 days...	-----
(d)	...PHMSA will approve the Response Plan...	-----
(e)	...The operator may submit a certification to PHMSA...that the operator has obtained, through contract or other approved means, the necessary private personnel and equipment to record, to the maximum extent practicable, to a worst case discharge...	Foreword
(f)	...PHMSA may require an operator to provide a copy of the response plan to the OSC...	-----

## APPENDIX B

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### RESPONSE TEAM JOB DESCRIPTIONS

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Incident Command System .....	B-2

#### ***RESPONSE TEAM JOB DESCRIPTIONS***

Command.....	B-3
Operations.....	B-8
Planning .....	B-11
Logistics .....	B-14
Finance .....	B-17

## INCIDENT COMMAND SYSTEM

The Incident Command System is intended to be used as an emergency management tool to aid in mitigating all types of emergency incidents. This system is readily adaptable to very small emergency incidents as well as more significant or complex emergencies. The Incident Command System utilizes the following criteria as key operational factors:

- Assigns overall authority to one individual
- Provides structured authority, roles and responsibilities during emergencies
- The system is simple and familiar, and is used routinely at all incidents
- Communications are structured
- There is a structured system for response and assignment of resources
- The system provides for expansion, escalation, and transfer and transition of roles and responsibilities
- Allows for "Unified Command" where agency involvement at the command level is required

Effective establishment and utilization of the "Incident Command System" during response to all types of emergencies can:

- Provide for increased safety
- Shorten emergency mitigation time by providing more effective and organized mitigation
- Cause increased confidence and support from local, state, and federal public sector emergency response personnel
- Provide a solid cornerstone for emergency planning efforts

Response team duty sheets on the following pages provide a comprehensive list of the duties of each assignment.

## COMMAND

Senior Executive .....	B-4
Incident Commander.....	B-4
Deputy Incident Commander .....	B-5
IC Assistant .....	B-5
Industrial Hygiene Leader .....	B-5
Legal Officer.....	B-6
Liaison Officer .....	B-6
Safety Officer .....	B-6
Medical Leader.....	B-7
Public Information Officer .....	B-7

## SENIOR EXECUTIVE

The Senior Executive is the primary senior management contact person for the Incident Commander. The Senior Executive has access to senior management personnel who may establish Company policies and ensure that the Incident Commander has the resources and support necessary to mount and sustain emergency response operations.

- Can authorize the use of company's resources at Head Office.
- Facilitates senior management's involvement in decisions and internal resource allocations to support the Incident Commander and the response effort.
- Senior Executive may locate at Head Office or at the Incident Command Post depending on the severity of the incident.

## INCIDENT COMMANDER

The Incident Commander is responsible for:

- All duties until specifically assigned to staff
- Overall management of Incident to protect personnel, public, property, and the environment in a safe effective manner.
- Develop and implement strategic objectives with Unified Command as appropriate.
- Has full authority to mobilize and secure resources.
- Assign/verify responsibilities and roles in the Incident Command System, including use of agency and local personnel.
- Assure that all required internal and external notifications have been made.
- Provide senior management with incident status and updates.
- Provide and or approve all media updates, releases, or conferences.
- Authorize demobilization.
- Approves Daily Action Plans
- Approves General Plan

## **DEPUTY INCIDENT COMMANDER**

The Deputy Incident Commander is responsible for:

- Assisting the Incident Commander in the development and implementation of the long term objectives and the daily short term objectives.
- If so delegated the Deputy Incident Commander assumes the responsibility of the Incident Commander in his/her absence.
- Overseeing the implementation of the Incident Action Plans and the General Plan.
- Coordinating the activities of response personnel.
- Serves as facilitator between Operations Section, Source Section and Command Section, and Unified Command concerning difficulties with implementation of the Incident Action Plans and the General Plan.

## **IC ASSISTANT**

The IC Assistant serves as an administrative assistant to the Incident Commander and is responsible for:

- Scheduling/tracking the daily activities of the Incident Commander.
- Providing information from the Command Staff to the Incident Commander.
- Providing information from the Incident Commander to the Command Staff as required.
- Attending meetings as requested by the Incident Commander.
- Liaison with Federal and State Chief of Staffs.

## **INDUSTRIAL HYGIENE LEADER**

The Industrial Hygiene Leader is a responsible for:

- Acting as site Safety Officer in certain spill responses.
- Providing support to the site Safety Officer as needed for safety, industrial hygiene, and medical programs.
- Coordinating Hazwoper training for site workers as needed.
- Attending Command Center briefings and meetings as needed
- Providing expertise for regulatory issues related to health and safety



## LEGAL OFFICER

The Legal Officer is a lawyer responsible for:

- Providing the Incident Commander with an assessment of the company's potential liability for the effects of incident and actions associated with clean-up operations.
- Advising the Incident Commander on the legal aspects of incident control, containment, and recovery operations.
- Providing counsel to other sections of the Incident Command as requested.
- Anticipating any legal action that could result from the incident and/or cleanup and providing necessary advice.

## LIAISON OFFICER

The Liaison Officer is responsible for assisting and cooperating with local, state and federal and private agencies such as Red Cross, water departments, environmental agencies, etc. to disseminate and receive information relevant to the incident. Typically these agencies support the incident or supply assistance other than providing tactical resources.

- Coordinate with JIC on which agencies to Liaison with
- Determine agencies level of concern and seek information to address those concerns.

## SAFETY OFFICER

The Safety Officer is responsible for:

- Monitoring and assessing hazardous and unsafe conditions.
- Developing and implementing measures that assure personnel safety
- Coordinating the preparation of site safety plans.
- Establishing requirements for personal protective equipment.
- Being aware of applicable health and safety policies, procedures, and regulations.
- Coordinating safety tailgate meetings.
- Working with contractors' and regulatory agencies' safety officers to ensure a coordinated site health and safety program.
- Monitoring the safety performance of contractors at the site.

**MEDICAL LEADER**

The Medical Leader must be familiar with medical and first aid services and practices that will be required during an emergency operation.

- Develop Medical Emergency Plan (Incident and Daily).
- Set up medical aid and obtain transportation for injured and ill response personnel.
- Prepare and maintain medical reports and records for injured and ill response personnel.
- Establish Medical aid stations in the Incident Command Post and in the field.

**PUBLIC INFORMATION OFFICER**

The Public Information Officer is responsible for:

- Establishing a single media center, Joint Information Center (JIC) where all summaries and statements about the incident are prepared in conjunction with Federal and State agencies. Operation of the JIC to develop and provide external communications for governmental, community, and media audiences.
- Coordinating the Joint Information Center activities.
- Releasing information to the media and visiting government agencies.
- Maintaining appropriate communications with the public.
- Developing Senior Executive itinerary and/ or briefings.

Note: The Internal Information Communication Officer (IICO) will function in this role until the Corporate IO arrives.

## OPERATIONS

Operations Section Chief .....	B-9
Branch Directors .....	B-9
Air Operations Branch Director .....	B-9
Division Supervisors .....	B-9
Staging Area Manager .....	B-10
Disposal Leader .....	B-10
Cleanup Advisor .....	B-10

## **OPERATIONS SECTION CHIEF**

The Operations Chief is responsible for the management and implementation of spill response strategies pertaining to containment, protection, removal and disposal directly related to the primary mission.

The Operations Chief activates and supervises elements in accordance with the Incident Action Plan and directs its execution; activates and executes the site safety plan; directs the preparation of unit operational plans, requests or releases resources, makes expedient changes to the Incident Action Plan as necessary, and reports such to the Incident Commander.

## **BRANCH DIRECTORS**

The Branch Directors when activated, are under the direction of the Operations Section Chief, and are responsible for the implementation of the Incident Action Plan appropriate to operations in the field. Including but not limited to the:

- Protection and deflection on water.
- Containment and removal on water.
- Removal and cleanup on land.

## **AIR OPERATIONS BRANCH DIRECTOR**

The Air Operations Branch Director, who is ground based, is responsible for preparing the air operations portion of the Incident Action Plan. This includes implementing the air operations strategic and tactical aspects of the response. It also includes, coordination and scheduling of aircraft operations intended to locate, observe, track, survey, support dispersant application, or other deliverable response application techniques, or report on the incident situation when fixed and/or rotary-wing aircraft are airborne at an incident.

## **DIVISION SUPERVISORS**

The Division Supervisor reports to the Operations Section Chief or Branch Director when activated. The supervisor is responsible for the implementation of the assigned portion of the Incident Action Plan, assignment of resources within the division and reporting on progress and status of resources with the division.

## **STAGING AREA MANAGER**

Under the Operations Section Chief, the Staging Area Manager is responsible for managing all activities within the designated staging areas.

## **DISPOSAL LEADER**

The Disposal Leader is responsible for:

- Managing and supervision operations associated with the transfer, storage, transportation, and disposal of liquid, solid, and/or hazardous wastes generated during response operations.
- Determining the most effective methods to be employed and makes recommendations on how best to minimize the amount of waste materials generated during the cleanup.

## **CLEANUP ADVISOR**

The Cleanup Advisor is a retained expert in the operation, application, and use of spill containment and recovery techniques. The Advisor knows which equipment works best under the particular conditions of the spill.

- Recommends the best methods to be used to contain and recover the oil.
- Knowledgeable in ways and means to temporarily store recovered oil.
- Knowledgeable in the ways and means to ultimately dispose of oil and oil waste or debris.
- Work with others in the Incident Command to recommend the most appropriate methods to transfer, store, transport, and dispose of oil, oily wastes, and debris.

## PLANNING

Planning Section Chief.....	B-12
Documentation Unit Leader .....	B-12
Demobilization Unit Leader .....	B-12
Plan Development Unit Leader .....	B-13
Situation Unit Leader .....	B-13
Resource Unit Leader .....	B-13

## PLANNING SECTION CHIEF

The Planning Chief is responsible for:

- Activating and supervising the Planning Section.
- The collection, evaluation, dissemination and use of information about the development of the incident and status of resources.
- Supervising the preparation and compilation of the Incident Action Plan (IAP).
- Understanding the current situation.
- Obtaining and assigning Technical Specialists where needed.
- Predicting probable course of incident events.
- Preparing alternative strategies for the incident.
- Supervising the development of the Incident Demobilization Plan.
- Developing and submitting the General Plan for approval.

## DOCUMENTATION UNIT LEADER

The Documentation Unit Leader (DUL) is responsible for:

- The maintenance of accurate and up-to-date incident files.
- Provides duplication and copying services.

**Note:** This is a proactive position. You must seek out sources and establish processes and schedules for obtaining the needed documentation from all the staff and sections responding to the incident.

## DEMOBILIZATION UNIT LEADER

The Demobilization Unit Leader is responsible for:

- Developing the Incident Demobilization Plan.
- Assisting Sections/Units in ensuring that an orderly, safe, and cost effective demobilization of personnel and equipment is accomplished from the incident.

**Note:** The intent is to over commit resources in the initial response to an incident. The Demobilization Unit Leader's job, using the Demobilization Plan, is to bring a balance to the equation of response demands and the resources required in meeting these demands.

## PLAN DEVELOPMENT UNIT LEADER

The Plan Development Unit Leader is responsible for:

- Supervising the compilation of the Incident Action Plans (IAP) and other incident specific plans.
- Supervising the preparation of the General Plan.

## SITUATION UNIT LEADER

The Situation Unit Leader (SUL) is responsible for:

- The collection and evaluation of information about the current and possible future status of the incident and the incident response operations.
- Providing projections and estimates of the situation as it develops.
- Preparing and maintaining the Situation Status Map and Board.

**Note:** This is a proactive position. You must seek out information and establish processes to ensure the continued receipt of information.

## RESOURCE UNIT LEADER

The Resource Unit Leader (RUL) is responsible for maintaining the status of all resources (primary and support) at an incident.

- Maintains up-to-date records of the location and status of all equipment and personnel involved in the operation and provides this information to appropriate requesters.
- Provides input to the Planning Section Chief (PSC) to ensure adequate resources are available to implement the Incident Action Plan (IAP).

**Note:** This is a proactive position. You must seek out information and establish processes to ensure the continued receipt of resource information.



## LOGISTICS

Logistics Section Chief.....	B-15
Communications Unit.....	B-15
Procurement Unit .....	B-15
Security Unit.....	B-16

## **LOGISTICS SECTION CHIEF**

The Logistics Chief is responsible for providing resources to ensure proper handling of the incident:

- Personnel
- Equipment
- Facilities
- Services
- Communications
- Security
- Materials

## **COMMUNICATIONS UNIT**

The Communications Unit is responsible for

- Establishing, operating, and maintaining an effective communications network in the field.
- Establishing, operating, and maintaining an effective communications network in the Incident Command Post.
- Establishing, operating, and maintaining an effective communications network between the field and the Incident Command Post.

## **PROCUREMENT UNIT**

The Procurement Unit is responsible for:

- Administering all financial matters pertaining to vendor contracts.
- Coordinating with local jurisdictions on plans and supply sources.

## **SECURITY UNIT**

The Security Unit is responsible for:

- The protection of personnel and equipment involved with the response operations.
- Ensuring the general public is not allowed to interfere with the cleanup operation.
- Maintaining security at designated response locations.
- Advising personnel of security procedures and systems.
- Provide security to senior executives.

**FINANCE**

Finance Section Chief.....B-18

Accounting Unit.....B-18

Auditing Unit.....B-18

Compensation and Claims Unit .....B-19

**FINANCE SECTION CHIEF**

The Finance Chief is responsible for:

- Tracking and documenting all costs and resources
- Verification and payment of contractor services
- Cost containment controls
- Ensuring that financial authorities are identified
- Establishing lines of credit at local banks as needed
- Record keeping of time sheets and expenses for company personnel
- Oversight of insurance / claims activity

**ACCOUNTING UNIT**

The Accounting Leader is responsible for:

- Estimating the cost of the response operations
- Tracking actual costs and resources of all contractors involved in the response
- Making cost saving recommendations.
- Preparing cost documentation

**AUDITING UNIT**

The Auditing Unit is a specialist in evaluating internal controls, verifying the accuracy of financial records and compliance with the Company's policies and procedures.

- Verifying the accuracy of the response operations.
- Verifying actual costs and resources of all contractors involved in the response.
- Making cost saving recommendations.

## **COMPENSATION & CLAIMS UNIT**

The Compensation & Claims Unit is responsible for:

- Managing local on-site insurance and claims activities.
- Coordinating activities between insurers
- Set up local claims office
- Facilitate handling, adjustment, payment and settlement process for claims..
- Communicating status of claims response and issues of significant interest to Corporate.
- Management of local TPA activities.



## APPENDIX C

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### RESPONSE RESOURCES

#### USCG CLASSIFIED OIL SPILL REMOVAL ORGANIZATIONS (OSROs)

**Minimum Equipment Requirements for OSRO Classifications** .....C-2

**Garner Environmental Services, Inc.**

Houston COTP Zone .....C-5a, b, c . . .

**T&T Marine Salvage, Inc.**

Houston COTP Zone .....C-6

## REVISED USCG OSRO CLASSIFICATIONS (As of October 2002)

The USCG has classified OSROs according to their response capabilities, within each Captain of the Port (COTP) zone, for vessels and for facilities in four types of environments. Response capabilities are rated MM, W1, W2, or W3 as described below.

MINIMUM EQUIPMENT REQUIREMENTS FOR OSRO CLASSIFICATIONS						
Classification	Resource Quantity Guidelines <sup>2,3</sup>		Maximum Facility Response Times		Maximum Vessel Response Times	
Rivers/Canals <sup>1</sup>						
MM	Protective Boom:	4,000*ft	High Volume Ports: 6 hours Other Ports: 12 hours		High Volume Ports: 12 hours Other Ports: 24 hours	
	EDRC: TSC:	1,200 bbls 2,400 bbls				
W <sup>1</sup>	Protective Boom:	25,000*ft	High Volume Ports: 12 hours Other Ports: 24 hours		High Volume Ports: 12 hours Other Ports: 24 hours	
	EDRC: TSC:	1,875 bbls 3,750 bbls				
W <sup>2</sup>	Protective Boom:	25,000*ft	High Volume Ports: 30 hours Other Ports: 36 hours		High Volume Ports: 36 hours Other Ports: 48 hours	
	EDRC: TSC:	3,750 bbls 7,500 bbls				
W <sup>3</sup>	Protective Boom:	25,000*ft	High Volume Ports: 54 hours Other Ports: 60 hours		High Volume Ports: 60 hours Other Ports: 72 hours	
	EDRC: TSC:	7,500 bbls 15,000 bbls				
Great Lakes						
MM	Protective Boom:	6,000*ft	All Ports: 6 hours		All Ports: 12 hours	
	EDRC: TSC:	1,250 bbls 2,500 bbls				
W <sup>1</sup>	Protective Boom:	30,000*ft	High Volume Ports: 12 hours		High Volume Ports: 12 hours Other Ports: 24 hours	
	EDRC: TSC:	6,250 bbls 12,500 bbls				
W <sup>2</sup>	Protective Boom:	30,000*ft	All Ports: 36 hours		All Ports: 42 hours	
	EDRC: TSC:	12,500 bbls 25,000 bbls				
W <sup>3</sup>	Protective Boom:	30,000*ft	All Ports: 60 hours		All Ports: 66 hours	
	EDRC: TSC:	25,000 bbls 50,000 bbls				



## REVISED USCG OSRO CLASSIFICATIONS (Cont'd)

### (As of October 2002)

The USCG has classified OSROs according to their response capabilities, within each Captain of the Port (COTP) zone, for vessels and for facilities in four types of environments. Response capabilities are rated MM, W1, W2, or W3 as described below.

MINIMUM EQUIPMENT REQUIREMENTS FOR OSRO CLASSIFICATIONS						
Classification	Resource Quantity Guidelines <sup>2,3</sup>		Maximum Facility Response Times		Maximum Vessel Response Times	
Inland <sup>1</sup>						
MM	Protective Boom:	6,000* ft				
	EDRC:	1,200 bbls	High Volume Ports:	6 hours	High Volume Ports:	12 hours
	TSC:	2,400 bbls	Other Ports:	12 hours	Other Ports:	24 hours
W <sup>1</sup>	Protective Boom:	30,000* ft				
	EDRC:	12,500 bbls	High Volume Ports:	12 hours	High Volume Ports:	12 hours
	TSC:	25,000 bbls	Other Ports:	24 hours	Other Ports:	24 hours
W <sup>2</sup>	Protective Boom:	30,000* ft				
	EDRC:	25,000 bbls	High Volume Ports:	30 hours	High Volume Ports:	36 hours
	TSC:	50,000 bbls	Other Ports:	36 hours	Other Ports:	48 hours
W <sup>3</sup>	Protective Boom:	30,000* ft				
	EDRC:	50,000 bbls	High Volume Ports:	54 hours	High Volume Ports:	60 hours
	TSC:	100,000 bbls	Other Ports:	60 hours	Other Ports:	72 hours
Nearshore						
MM	Protective Boom:	8,000* ft			High Volume Ports:	12 hours
	EDRC:	1,200 bbls	High Volume Ports:	6 hours	Other Locations:	24 hours
	TSC:	2,400 bbls	Other Locations:	12 hours	(for open ocean, plus travel time from shore)	
W <sup>1</sup>	Protective Boom:	30,000* ft				
	EDRC:	12,500 bbls	High Volume Ports:	12 hours	High Volume Ports:	12 hours
	TSC:	25,000 bbls	Other Locations:	24 hours	Other Locations:	24 hours
W <sup>2</sup>	Protective Boom:	30,000* ft				
	EDRC:	25,000 bbls	High Volume Ports:	30 hours	High Volume Ports:	36 hours
	TSC:	50,000 bbls	Other Locations:	36 hours	Other Locations:	48 hours
W <sup>3</sup>	Protective Boom:	30,000* ft				
	EDRC:	50,000 bbls	High Volume Ports:	54 hours	High Volume Ports:	60 hours
	TSC:	100,000 bbls	Other Locations:	60 hours (for open ocean, plus travel time from shore)	Other Locations:	72 hours (for open ocean, plus travel time from shore)

## REVISED USCG OSRO CLASSIFICATIONS (Cont'd) (As of October 2002)

The USCG has classified OSROs according to their response capabilities, within each Captain of the Port (COTP) zone, for vessels and for facilities in four types of environments. Response capabilities are rated MM, W1, W2, or W3 as described below

MINIMUM EQUIPMENT REQUIREMENTS FOR OSRO CLASSIFICATIONS						
Classification	Resource Quantity Guidelines <sup>2,3</sup>		Maximum Facility Response Times		Maximum Vessel Response Times	
Offshore						
MM	Protective Boom:	8,000* ft				
	EDRC:	1,200 bbls	High Volume Ports:	6 hours	High Volume Ports:	12 hours
	TSC:	2,400 bbls	Other Ports:	12 hours	Other Ports:	24 hours
W <sup>1</sup>	Protective Boom:	15,000* ft				
	EDRC:	12,500 bbls	High Volume Ports:	24 hours	High Volume Ports:	24 hours
	TSC:	25,000 bbls	Other Ports:	48 hours	Other Ports:	48 hours
W <sup>2</sup>	Protective Boom:	15,000* ft				
	EDRC:	25,000 bbls	High Volume Ports:	30 hours	High Volume Ports:	36 hours
	TSC:	50,000 bbls	Other Ports:	36 hours	Other Ports:	48 hours
W <sup>3</sup>	Protective Boom:	15,000 ft				
	EDRC:	50,000 bbls	High Volume Ports:	54 hours	High Volume Ports:	60 hours
	TSC:	100,000 bbls	Other Ports:	60 hours	Other Ports:	72 hours
Open Ocean						
MM	Protective Boom:	0 ft				
	EDRC:	1,200 bbls	High Volume Ports:	6 hours	High Volume Ports:	12 hours
	TSC:	2,400 bbls	Other Ports:	12 hours	Other Ports:	24 hours
W <sup>1</sup>	Protective Boom:	0 ft				
	EDRC:	12,500 bbls	High Volume Ports:	6 hours	High Volume Ports:	12 hours
	TSC:	25,000 bbls	Other Ports:	12 hours	Other Ports:	24 hours
W <sup>2</sup>	Protective Boom:	0 ft				
	EDRC:	25,000 bbls	High Volume Ports:	30 hours	High Volume Ports:	36 hours
	TSC:	50,000 bbls	Other Ports:	36 hours	Other Ports:	48 hours
W <sup>3</sup>	Protective Boom:	0 ft				
	EDRC:	50,000 bbls	High Volume Ports:	54 hours	High Volume Ports:	60 hours
	TSC:	100,000 bbls	Other Ports:	60 hours	Other Ports:	72 hours
<sup>1</sup> Rivers/canals include bodies of water, including the Intracoastal Waterway and other bodies artificially created for navigation, confined within an inland area and having a project depth of 12 feet (3.66 meters).						
<sup>2</sup> EDRC stands for "effective daily recovery capacity," or the calculated recovery capacity of oil recovery devices determined by using a formula that takes into account limiting factors such as daylight, weather, sea state, and emulsified oil in the recovered material.						
<sup>3</sup> TSC stands for "temporary storage capacity," meaning sufficient storage capacity equal to twice the EDRC of an OSRO. Temporary storage may include inflatable bladders, rubber barges, certified barge capacity, or other temporary storage that can be utilized on scene at a spill response and which is designed and intended for the storage of flammable or combustible liquids. It does not include vessels or barges of opportunity for which no pre-arrangements have been made. Fixed shore-based storage capacity, ensured available by contract or other means, will be acceptable.						
* In addition, 1,000 feet of containment boom plus 300 feet per skimming system.						

# **GARNER ENVIRONMENTAL SERVICES**

## **Houston COTP Zone**



**GARNER ENVIRONMENTAL SERVICES, INC., HOUSTON, TEXAS**  
**1717 W. 13TH STREET, DEER PARK, TX 77536 • 281-930-1200 • 800-424-1716**  
**ISO 9001-2000 CERTIFIED**

December 6, 2004

Mr. Kevin Campbell  
 Oiltanking Texas City, L.P.  
 PO Box 29  
 Texas City, TX 77592  
 Ph: 409.797.1750  
 Fax: 409.797.1701

Re: OPA-90 Compliance  
 Deployment, Inspection and Maintenance

Dear Mr. Campbell:

Garner Environmental Services, Inc. acknowledges that it has successfully deployed a representative sample of our spill response equipment during the last 12 months. Attached you will find documentation regarding deployment drills and/or actual responses conducted in the last 12 months. The balance of our response equipment not deployed has been properly inspected, maintained, and documented in accordance with our maintenance program.

In addition, all our spill response personnel have received the necessary training, which includes 29 CFR 1910.120 / OSHA HazWoper to safely and effectively respond to an oil spill. Personnel Training Records are retained on file for three (3) years and are available for review upon request.

In conclusion, Garner Environmental Services, Inc. certifies that our files are current and in compliance with OPA-90 regulations pertaining to Oil Spill Removal Organizations (OSROs) and there have been no changes in Garner Environmental's U.S. Coast Guard OSRO classification.

If you have any questions or require further information, please do not hesitate to contact Garner Environmental at (281) 930-1200.

Sincerely,

Michael Carpenter  
 Operations Manager

**GARNER ENVIRONMENTAL SERVICES, INC.**  
**2003 - PREP Report**

Date	Company	Location	Drill Type	Spill Type	Product	Qty (bbl)	Deployment			
01/07/03	Crown Central Petroleum Co.	Houston, TX	Deployment	Tank	Crude Oil	20	Skimmer	Boom	Boats	Labor
01/13/03	Valero Energy Co., Inc.	Houston, TX	Table Top	Barge	#6 Fuel	5				
01/17/03	Shell Chemical Company	Houston, TX	Table Top	Tank	Acid	7				
01/20/03	Kirby Marine Transport Co.	Channelview, TX	Deployment	Barge	V.G.O	10				
02/01/03	Rustin Transport Co.	La Porte, TX	Deployment	Truck	Diesel	1				
02/10/03	Oiltanking Houston LLC	Channelview, TX	Table Top	Loading Arm	Gasoline	5				
02/17/03	Pennzoil Company	Houston, TX	Table Top	Tank	Motor Oil	2				
02/28/03	Marine Spill Response Co.	Galveston, TX	Deployment	Ship	Diesel	100				
03/04/03	Crown Central Petroleum Co.	Houston, TX	Phone-In	Dock	Coke Dust	2				
03/13/03	Equistar Chemicals LP	Pasadena, TX	Deployment	Tug Boat	Diesel	1				
03/21/03	City of Sugarland, TX	Sugarland, TX	Table Top	Truck	Anthrax	2#				
03/26/03	Devon Energy Operating Co.	Berwick, LA	Phone-In		Crude Oil	2,000				
04/09/03	Koch Hydrocarbon Southwest	Corpus Christi, TX	Deployment	Dock	Hydraulic Fluid	1				
04/14/03	Kinder-Morgan Liquids Term.	Galena Park, TX	Deployment	Dock	#4 Fuel Oil	5				
04/26/03	Eagle Asphalt Products Co.	Houston, TX	Deployment	Tank	Asphalt	20				
05/09/03	Lyondell-CITGO Refining Co.	Houston, TX	Table Top	Barge	#6 Fuel Oil	10				
05/21/03	Marathon-Ashland Petroleum	Gonzales, LA	Table Top		Crude Oil	18,000				
05/21/03	CSX Transportation Inc.	New Orleans, LA	Table Top		Formaldehyde	25,000 gl				
05/21/03	CSX Transportation Inc.	New Orleans, LA	Table Top		Liquid Latex	20,000 gl				
05/21/03	CSX Transportation Inc.	New Orleans, LA	Table Top		Ethylene Glycol					
05/26/03	Syngenta Crop Protection Inc.	Clear Lake, TX	Table Top	Tank	Anti-Freeze	20				
06/03/03	Union Carbide Corporation	Texas City, TX	Deployment	Tank	Acid	2				
06/19/03	Equistar Pipeline Company	Houston, TX	Deployment	Pipeline	Natural Gas	100				
06/21/03	FedEx Freight East, Inc.	Houston, TX	Table Top	Truck	Hydraulic Fluid	2				
07/01/03	Crown Central Petroleum Co.	Houston, TX	Phone-In	Dock	Coke Dust	1				
07/02/03	Williams Terminals Holdings	Gretna, LA	Phone-In		#6 Fuel Oil	6				
07/16/03	Marathon-Ashland Petroleum	Garyville, LA	Table Top		Diesel	200				
07/18/03	Nova Chemicals (USA) Inc.	Seabrook, TX	Table Top	Tank	Gasoline	5				
07/24/03	Shell Oil Company	Jefferson, LA	Phone-In			200,000 gl				
08/02/03	Agrifos Fertilizers, Inc.	Pasadena, TX	Table Top	Ship	Acid	1				
08/09/03	Vopak Industrial Svcs USA Inc.	Deer Park, TX	Deployment	Pipeline	Crude Oil	2				
08/20/03	Odifell Terminals (Houston) LP	Seabrook, TX	Table Top	Railcar	Acid	5				
09/01/03	Linden Bulk, Inc.	Houston, TX	Deployment	Truck	Oil	1				

2





**GARNER ENVIRONMENTAL SERVICES, INC., HOUSTON, TEXAS**  
**1717 W. 13TH STREET, DEER PARK, TX 77536 • 281-930-1200 • 800-424-1716**  
**ISO 9001-2000 CERTIFIED**

December 3, 2004

EMERGENCY  
 RESPONSE

Mr. Kevin Campbell  
 Oiltanking Texas City, L.P.  
 PO Box 29  
 Texas City, TX 77592

PLANT SERVICE

Re: Letter of Intent to Respond

WASTE  
 MANAGEMENT

Mr. Campbell:

REPAIR/MAINTENANCE

Thank you for your recent inquiry concerning Garner Environmental Services, Inc. emergency response capabilities. Per your request, Garner Environmental Services is pleased to offer OILTANKING TEXAS CITY, L.P. our response services to respond in the event of an accidental release on an as needed, first come first served basis, from our GESI'S TEXAS CITY facility, as a first responder for the facility(ies) listed in Attachment 1. Per 33 CFR §154.1045(c)(1) and (c)(2) and 33 CFR §155, Appendix B, Para. 2.2.6, all time and equipment requirements will be met for AMPD coverage. Response time to this facility is based on a 35 mph rate of travel over land routes and 5 kph over water routes. Refer to Attachment 1 for Response Tier and Time Levels.

HAZARDOUS  
 WASTE

In addition, this letter will reconfirm the evergreen Master Service Agreement between GESI and Oiltanking, Inc. that was established on October 24, 2000 and is current in effect for all of Oiltanking, Inc.'s facilities.

EQUIPMENT  
 SALES

TRANSPORTATION

Should a response effort be required, please contact the 24-hour Emergency Response Telephone number listed on Attachment 1.

INDUSTRIAL  
 DISMANTLING

Attached are Garner Environmental Services, Inc.'s U.S. Coast Guard OSRO classification letter and the Texas General Land Office DCO certificate for incorporation in your facility plan.

ASBESTOS/LEAD  
 ABATEMENT

Sincerely,

*Otis L. Chambers /lc*

Otis L. Chambers  
 Executive Vice President



1717 West 13<sup>th</sup> Street, Deer Park, Texas 77536 • Phone: (281) 930-1200 • FAX: (281) 478-0296  
ISO 9001 - 2000 Certified

### Attachment 1

#### Tier Response Level and Response Time

##### Garner Response Facility

##### Contact / Telephone Nr.

Geographic Area	Mileage	Tier Level	Response Time
Deer Park, Texas Michael Carpenter / (281) 930-1200 or (800) 424-1716		TBD	ASAP
La Marque / Texas City, Texas Kim Albright / (409) 935-0308 or (800) 935-0308 2800 loop 197 South Texas City, TX 77592	6 mi.	1	42 Min.
Port Arthur, Texas Elbert Sirmons / (409) 983-5646 or (800) 983-7634		TBD	ASAP
New Orleans, Louisiana Kenny Sconza / (504) 254-2444 or (800) 975-2444		TBD	ASAP



## **MASTER SERVICE AGREEMENT**

THIS AGREEMENT is made and entered into this 24 day of October, 2000, by and between OILTANKING, INC., a corporation with a place of business located at 15602 Jacinto Port, Houston, Texas 77015 (hereinafter "COMPANY"), and GARNER ENVIRONMENTAL SERVICES, INC., a Texas corporation, whose principal office and mailing address is 1717 W. 13<sup>th</sup> Street, Deer Park, Texas 77536 (hereinafter "CONTRACTOR"). COMPANY and CONTRACTOR shall collectively be referred to herein as the "Parties".

WHEREAS, CONTRACTOR is engaged in the business of providing environmental emergency response services relating to Hazardous and/or Non-hazardous Materials and/or remediation services as necessary and/or as requested.

WHEREAS, COMPANY owns and operates or has owned or operated or has otherwise assumed responsibility for facilities, functions, and activities that require compliance with federal, state, and local environmental and regulatory requirements; and

WHEREAS, CONTRACTOR can provide response services relating to such environmental and regulatory obligations and is willing to perform such services for COMPANY.

NOW THEREFORE, in consideration of these premises and the mutual covenants contained herein, the Parties agree as follows:

### **ARTICLE 1 SCOPE OF SERVICE**

- a. CONTRACTOR shall use its best efforts to provide to COMPANY, upon COMPANY'S request, emergency same-day response service that may include, but is not limited to, containment, removal, neutralization, decontamination, recovery, cleanup, repackaging, transportation, confined space rescue and/or disposal of Hazardous and/or Non-hazardous Materials. CONTRACTOR is capable of rendering emergency response services up to and including "worse case" scenario as defined by the Oil Pollution Act of 1990 (hereinafter "OPA") to any COMPANY facility as identified by COMPANY as requiring the immediate services of CONTRACTOR.
- b. CONTRACTOR operates a (24) hour-per-day, seven-(7) days-per-week emergency response service telephone line at 281.930.1200. COMPANY shall be entitled to request CONTRACTOR'S emergency same-day response services by calling CONTRACTOR'S emergency response service telephone line. The COMPANY'S representative making the call shall furnish to CONTRACTOR the name and title of the caller, the location of the site needing emergency response services (hereinafter referred to as the "Site"), the Hazardous and/or Non-hazardous Materials involved, if known, and other relevant facts relating to the situation then known to the caller.
- c. When COMPANY requests emergency response services from CONTRACTOR, CONTRACTOR shall use due diligence to mobilize the necessary personnel and equipment subject to the conditions of availability and necessity.
- d. The Parties recognize that, at the commencement of emergency response services in accordance with this Agreement, the scope thereof may not be well defined. The Parties agree that, at the commencement of an emergency response services project and at frequent intervals, their respective representatives shall consult with each other to review and define the scope of the work to be performed (hereinafter referred to as the "Work") and outline strategies and approaches to such Work. COMPANY and CONTRACTOR shall each designate a representative who will be authorized to act with respect to the Work. Regarding the work:

1. COMPANY shall promptly issue to CONTRACTOR a purchase order describing the scope of the Work to be performed and the names of the designated representatives for COMPANY and CONTRACTOR. In the event of a conflict between the terms of such purchase order and the terms of this Agreement, the terms of this Agreement shall prevail.
  2. If the Parties later agree to modify materially the scope of the work or the strategies or approaches thereto, they shall, within seven calendar (7) days of such modification, sign a written amendment to the purchase order issued pursuant to Paragraph d.1 of this Article.
- e. CONTRACTOR undertakes to obtain and maintain any authorizations, classification, and/or certification required by applicable federal, state, and/or local laws, regulations, and ordinances and to give notice to COMPANY should such authorization, classification, and/or certification terminate.

## ARTICLE 2 RESPONSIBILITIES OF CONTRACTOR

- a. At the time of signing of this Agreement, CONTRACTOR has certain equipment and personnel that CONTRACTOR agrees to utilize, subject to the conditions of availability and necessity.
- b. CONTRACTOR shall provide trained and competent personnel, and the appropriate skilled supervision, labor, materials, tools, equipment, personal protective equipment (hereinafter "PPE"), and subcontracted items where necessary for the performance and completion of the Work in a safe, timely, healthful, workmanlike, and efficient manner. CONTRACTOR recognizes that time is of the essence in the performance of the Work and shall proceed with its best efforts under the circumstances then existing.
- c. CONTRACTOR shall take necessary precautions for safety of its employees and shall comply with all applicable provisions of federal, state, and local safety and health laws, rules, and regulations. While on COMPANY premises, CONTRACTOR shall abide by all of COMPANY'S rules that are provided by COMPANY to CONTRACTOR. CONTRACTOR shall erect and properly maintain, as required by the conditions and progress of the Work, necessary safeguards for the protection of its employees. CONTRACTOR shall require all subcontractors hired or supervised by it to implement such precautions and safeguards and to comply with all such laws, rules and regulations.
- d. If CONTRACTOR removes Hazardous and/or Non-hazardous Materials or waste from the Worksite for disposal, recycling, or other disposition, CONTRACTOR shall prepare any manifests or shipping documents in coordination with COMPANY'S representative and shall obtain COMPANY'S prior written approval of any treatment, storage, disposal, or recycling facility to which such Hazardous and/or Non-hazardous Materials and/or wastes are to be sent.
- e. If requested by COMPANY, CONTRACTOR shall act for COMPANY and assist COMPANY in obtaining the proper and necessary permits for the Work, subject to on-site conditions and/or applicable rules and regulations. All required environmental clean-up permits shall be issued in COMPANY'S name.

## ARTICLE 3 RESPONSIBILITIES OF COMPANY

- a. If requested by CONTRACTOR, COMPANY shall furnish to CONTRACTOR information on the Worksite to the extent known and available to COMPANY concerning physical

characteristics, soil reports, subsurface investigations, utility and easement locations, and other similar reports or documents reasonably needed by CONTRACTOR to perform the Work. Where necessary COMPANY shall furnish information on any body of water or shoreline affected, including charts and maps.

- b. In the event COMPANY requires a separate contract as required by the Oil Pollution Act of 1990, COMPANY shall forward all applicable documentation to CONTRACTOR for CONTRACTOR'S completion and return to COMPANY.
- c. COMPANY shall provide (or arrange to have provided, if COMPANY does not own or operate the Worksite) to CONTRACTOR, its employees and subcontractors, access to the Worksite. If available, COMPANY may provide the following services for CONTRACTOR'S use at the Worksite, upon terms and conditions mutually agreed upon as evidenced by COMPANY'S purchase order: electrical power, potable water, telephones, storage for equipment, and access to the Worksite for vehicles and equipment.
- d. COMPANY shall furnish to CONTRACTOR copies of Material Safety Data Sheets (MSDSs) for all known Hazardous and/or Non-hazardous Materials to be cleaned up at the Worksite, where applicable.
- e. COMPANY shall timely pay Invoices for services rendered in accordance with this agreement. COMPANY agrees to make timely payment without regard to whether COMPANY may be entitled to reimbursement from an entity or person not a party to this agreement including but not limited to COMPANY'S insurance carrier.

#### ARTICLE 4 COMPENSATION

- a. CONTRACTOR shall be compensated for the Work performed pursuant to this Agreement on a time and materials basis in accordance with CONTRACTOR'S current Response Rate Schedule, identified as such and initially attached hereto and incorporated herein for all purposes as if fully copied at length. CONTRACTOR shall be compensated according to CONTRACTOR'S Response Rate Schedule located on CONTRACTOR'S website at GARNER-ES.COM and which is updated quarterly. Compensation for any Work performed outside the United States shall be in accordance with CONTRACTOR'S current International Rate Schedule.
- b. CONTRACTOR shall submit monthly invoices to COMPANY for the Work performed pursuant to the purchase order issued in accordance with Paragraph d.1 of Article 1 herein setting forth the total amounts due in accordance with the applicable Rate Schedule for labor, materials, equipment and subcontract services utilized or incurred in performance of the work under the purchase/work order, less such previous payments as have been received for such work.
- c. COMPANY agrees to pay all amounts due under this Agreement within thirty (30) days after receipt of each invoice. Any invoice not paid within thirty (30) days shall accrue interest at the rate of one and one-half percent (1 ½%) per month, or eighteen percent (18%) per annum. COMPANY agrees to pay all attorney's fees and costs incurred by CONTRACTOR to collect invoiced amounts not timely paid by COMPANY.
- d. All services provided to date by CONTRACTOR are subject to the terms of this Agreement and are to be ratified in accordance with this Agreement.
- e. Should COMPANY request by telephone or in writing CONTRACTOR'S services, and acting on this request CONTRACTOR mobilizes its equipment and personnel, and

COMPANY subsequently terminates this request before services are performed, then COMPANY is obligated and responsible for those equipment and personnel charges on a portal-to-portal basis in accordance with CONTRACTOR'S Response Rate Schedule.

- f. COMPANY shall make payment to CONTRACTOR for services performed, even services performed as contemplated by the Oil Pollution Act of 1990, regardless of whether COMPANY has complied with Article 3, section b.
- g. All payments made to CONTRACTOR by COMPANY shall be made at 1717 W. 13<sup>th</sup> Street, Deer Park, Texas 77536.

#### ARTICLE 5 INDEPENDENT CONTRACTOR

CONTRACTOR is and shall be, in the performance of all Work, services, and activities under this Agreement, an independent contractor and not an employee, agent, or servant of COMPANY. All persons engaged by CONTRACTOR to perform the Work, services, or activities described herein shall, at all times and in all places, be subject to the sole direction, supervision, and control of CONTRACTOR. The relationship between COMPANY and CONTRACTOR (including CONTRACTOR'S employees) shall in all respects be an independent contractor relationship and not an employer/employee or principal/agent relationship.

#### ARTICLE 6 FORCE MAJEURE

The Parties agree that in the event of either Party hereto being rendered unable wholly, or in part by force majeure to carry out its obligations under this Agreement, other than COMPANY'S obligation to make payments of money due hereunder, then on such Party giving notice and full particulars of such force majeure in writing to the other Party immediately after the occurrence of the cause relied on, then the obligation of that party giving such notice, so far as it is affected by such force majeure, shall be suspended during the continuance of any inability so caused, but for no longer period and such cause shall, as far as possible, be remedied with all reasonable dispatch. The term "Force Majeure" as employed herein, shall mean acts of God, strikes, lockouts, or other industrial disturbances, acts of the public enemies, wars, blockades, insurrections, riots, epidemics, landslides, lightning, earthquakes, fires, storms, floods, washouts, arrests and restraints of rulers and people, civil disturbances, explosions, inability with reasonable diligence to obtain materials and any other causes not within the reasonable control of the Party claiming a suspension which by the exercise of due diligence such Party shall not have been able to avoid or overcome. In no event, however, shall the foregoing limit the rights of the COMPANY or CONTRACTOR to terminate this Agreement or the Work as otherwise provided herein.

#### ARTICLE 7 INDEMNIFICATION

- a. CONTRACTOR shall indemnify, hold harmless and defend COMPANY, its officers, directors, employees, agents and representatives from and against any and all damages, losses, claims, demands, causes of action, liens, judgments, penalties, and expenses of every kind and character (including attorneys' fees and investigation expenses and court and settlement costs), and other liabilities in any manner arising out of or in connection and to the extent of any negligent act or omission or willful misconduct of CONTRACTOR or its Subcontractors pursuant to Work. CONTRACTOR shall defend claims asserted against OWNER hereunder and shall bear all costs and judgments related thereto at its sole expense. COMPANY shall have the right, at its option, to participate in the defense of each such claim without relieving CONTRACTOR of any obligations hereunder.

- b. COMPANY shall indemnify, hold harmless and defend CONTRACTOR, its officers, directors, employees, agents and representatives from and against any and all damages, losses, claims, demands, causes of action, liens, judgments, penalties, and expenses of every kind and character (including attorneys' fees and investigation expenses and court and settlement costs), and other liabilities in any manner arising out of or in connection and to the extent of any negligent act or omission or willful misconduct of COMPANY or its Subcontractors pursuant to Work. COMPANY shall defend claims asserted against CONTRACTOR hereunder and shall bear all costs and judgments related thereto at its sole expense. CONTRACTOR shall have the right, at its option, to participate in the defense of each such claim without relieving COMPANY of any obligations hereunder.
- c. With respect to property damage sustained by COMPANY or CONTRACTOR or their employees, subcontractors, or their employees, subcontractors, or invitees or employees of such kind and character, the rights and obligations between the Parties to this Agreement shall be determined at law, except as otherwise expressly provided within this Agreement.
- d. Both COMPANY and CONTRACTOR agree to support their respective indemnity obligations set forth above by furnishing liability insurance coverage. COMPANY and CONTRACTOR, as indemnitors of mutual indemnity obligations, each agree to provide liability insurance or qualified self-insurance in equal amounts to support their respective indemnity obligations. The parties agree that the insurance coverage to be provided by each of them respectively to support their indemnity obligations shall be equal to that set forth in Exhibit B, including workman's compensation and employer's liability insurance as required by statute, however, that (1) either party may purchase or maintain insurance coverage in addition to that provided in Exhibit B, it being understood that the agreed upon amounts of insurance each party is providing to support their respective indemnity obligations shall be that set forth in Exhibit B, and (2) the insurance purchased to support the respective indemnity obligations shall name the other party as an additional insured.

#### ARTICLE 8 TITLE

COMPANY agrees that title to contaminated waste materials resulting from the cleanup of hazardous and/or non-hazardous materials will not be transferred to CONTRACTOR.

#### ARTICLE 9 GOVERNING LAW

All Parties agree that the validity, interpretation, and performance of this Agreement and the contents thereof are to be interpreted and enforced pursuant to the laws of the State of Texas with venue in Harris County, Texas.

#### ARTICLE 10 SEVERABILITY

If any provision of this Agreement is determined or declared by a court of competent jurisdiction to be invalid or otherwise unenforceable, all remaining provisions of the Agreement shall remain in full force and effect.



## ARTICLE 11 TERM OF AGREEMENT

- a. The Initial term of this Agreement shall expire twelve (12) months after the date of execution by all parties. Thereafter, this Agreement shall be renewed for successive one (1) year terms unless either Party hereto provides written notice to the other Party at least thirty (30) days prior to the expiration date of the Agreement that they do not wish to have the Agreement renewed. Otherwise, either Party hereto may terminate this Agreement only for cause and after a failure to cure such cause within ten (10) calendar days after written notice.
- (1) "Cause" in reference to CONTRACTOR means:
- (a) Failure of COMPANY to make payment of an invoice within thirty (30) days of the due date.
  - (b) Actions or demands of COMPANY that impair CONTRACTOR'S professional obligations.
- (2) "Cause" in reference to COMPANY means:
- (a) A failure of the CONTRACTOR to timely perform the services or any other material breach of this Agreement.
- b. If termination occurs for any reason, CONTRACTOR shall deliver to COMPANY all documents and all other required information and data prepared or developed by the CONTRACTOR under this Agreement; and CONTRACTOR shall execute and deliver all documents and take such other steps as are necessary to vest fully in COMPANY'S rights and benefits of the CONTRACTOR arising from any subcontracts issued in connection with this Agreement, unless otherwise required by COMPANY in writing.
- c. COMPANY shall pay CONTRACTOR any unpaid expenses or fees incurred prior to notification of termination and as directed in accordance with Article 4, less any costs incurred by COMPANY as the result of any breach of the Agreement by CONTRACTOR.
- d. All rights and obligations of the parties arising pursuant to this agreement prior to termination shall remain enforceable.

## ARTICLE 12 WAIVER

No waiver by either Party of any default by the other Party in the performance of any provision of this Agreement shall operate as or be construed or deemed to be a waiver of any future default, whether alike or different in character.

## ARTICLE 13 HEADINGS

All headings herein are for convenience only and are in no way to be construed as part of this Agreement or as a limitation of the scope of the particular paragraphs to which they refer.

# **ARTICLE 14 PARTIES BOUND**

The covenants and agreements contained in this Agreement shall apply to, inure to the benefit of, and be binding upon the Parties hereto and upon their respective subsidiaries, affiliates, successors, and assigns. This Agreement shall not be interpreted or deemed to confer rights or benefits on persons not a party hereto.

# **ARTICLE 15 EXECUTION IN COUNTERPARTS**

This Agreement may be executed in two (2) or more counterparts, each of which shall be deemed an original, but all of which together shall constitute one (1) and the same instrument.

# **ARTICLE 16 ENTIRE AGREEMENT**

This instrument together with all documents described herein constitutes and expresses the entire agreement and understanding between COMPANY and CONTRACTOR, and any modification hereto must be made in writing and agreed to by both Parties; provided, however, that the scope of a particular job and the designation of representatives may be defined, amended, and modified as set forth herein.

IN WITNESS WHEREOF, the Parties hereto have executed this Agreement as of the date first above written.

**GARNER ENVIRONMENTAL SERVICES, INC.**

By: *Otis Chambers*  
(Signature)

OTIS CHAMBERS

EXECUTIVE VICE-PRESIDENT  
(Title)

Date: 10/24/00

**Oiltanking Houston, Inc.**

By: *Kim M. Ivy*  
(Signature)

Kim M. Ivy  
(Typed/Printed Name)

Vice President Finance  
(Title)

Date: October 24, 2000

Date: September 1, 2003

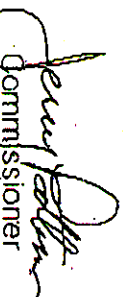
DCO # 509




# Discharge Cleanup Organization Certificate

**Garner Environmental Services**  
Deer Park, Texas

This certificate carries with it the need to maintain a high level of response preparedness, to respond in a timely, professional manner, and to notify the Texas General Land Office of any change in the Holder's ability to accomplish this mission. Certification is for three years from the above date.

  
Commissioner  
Texas General Land Office

  
Deputy Commissioner  
Oil Spill Prevention and Response



# ROAD MILEAGE Hours\*

	Houston	Brownsville	Corpus Christi	New Orleans	Port Arthur	Galveston	Morgan City	Mobile	Tampa
Houston	0	348	220	346	91	49	285	469	982
	0	10	6	10	3	1	8	13	28
San Antonio	195	270	142	537	283	239	481	665	1178
	6	8	4	15	8	7	14	19	34
Corpus Christi	220	165	0	568	319	269	505	689	1202
	6	5	0	16	9	8	14	20	34
New Orleans	346	693	545	0	257	365	86	145	658
	10	20	16	0	7	10	2	4	19
Port Arthur	91	438	290	257	0	109	200	384	897
	3	13	8	7	0	3	6	11	26
LaMarque	36	361	207	354	98	14	293	477	990
	1	10	6	10	3	0	8	14	28
Morgan City	285	639	505	86	196	320	0	226	739
	8	18	14	2	6	9	0	6	21
Fort Worth	260	510	371	518	316	308	493	626	1143
	7	15	11	15	9	9	14	18	33
Mobile	469	822	687	144	379	502	225	0	515
	13	23	20	4	11	14	6	0	15
Tampa	982	1336	1202	658	893	1016	139	515	0
	28	38	34	19	26	29	4	15	0
Cameron	131	484	347	245	47	148	161	364	878
	4	14	10	7	1	4	5	10	25
Dulac	334	687	550	71	245	351	49	210	724
	10	20	16	2	7	10	1	6	21
Intracoastal City	233	586	449	160	144	250	75	285	799
	7	17	13	5	4	7	2	8	23
Fourchon	262	615	481	178	173	296	142	297	810
	7	18	14	5	5	8	4	8	23

\* Mileage based on 35 mph.



**GARNER**  
ENVIRONMENTAL SERVICES, INC.

## OSRO Classifications by Company

### 0027 Garner Environmental Services

		Facilities				Vessels			
		MM	W1	W2	W3	MM	W1	W2	W3
<b>COTP: CORPUS CHRISTI</b>									
<input checked="" type="checkbox"/> High Volume Port	River/Canal	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Inland	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Open Ocean	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Alternate City:	Offshore	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Nearshore	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>COTP: HOUSTON</b>									
<input checked="" type="checkbox"/> High Volume Port	River/Canal	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Inland	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Open Ocean	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Alternate City:	Offshore	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Nearshore	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>COTP: MOBILE</b>									
<input type="checkbox"/> High Volume Port	River/Canal	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Inland	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Open Ocean	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Alternate City:	Offshore	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Nearshore	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>COTP: MOBILE (PANAMA CITY, FL)</b>									
<input type="checkbox"/> High Volume Port	River/Canal	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Inland	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Open Ocean	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Alternate City:	Offshore	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Nearshore	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>COTP: MORGAN CITY</b>									
<input type="checkbox"/> High Volume Port	River/Canal	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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	Open Ocean	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Alternate City:	Offshore	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Nearshore	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>COTP: NEW ORLEANS</b>									
<input checked="" type="checkbox"/> High Volume Port	River/Canal	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Inland	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Open Ocean	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Alternate City:	Offshore	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Nearshore	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>COTP: PORT ARTHUR</b>									
<input checked="" type="checkbox"/> High Volume Port	River/Canal	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Inland	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Open Ocean	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Alternate City:	Offshore	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Nearshore	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>COTP: TAMPA</b>									
<input type="checkbox"/> High Volume Port	River/Canal	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Inland	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Open Ocean	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Alternate City:	Offshore	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	Nearshore	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

GARNER ENVIRONMENTAL SERVICES, INC.  
1717 West 13<sup>th</sup> Street  
Deer Park, Texas 77536  
Telephone: (281) 930-1200  
Fax: (281) 478-0296

RESPONSE EQUIPMENT LISTING

<b>Corporate</b>	<b>Response Equipment Listing</b>	<b>Equipment Listing</b>
<b>Operations</b>		<b>Rev. 04/05</b>

BOOM TYPE CODE		END CONNECTOR CODE	
<b>F</b>	Fence	<b>ASTM</b>	ASTM Std (D962-86)
<b>FR</b>	Fire	<b>BOLT</b>	Bolt Connector
<b>PI</b>	Inflatable (Press)	<b>HP</b>	Hinge & Pin
<b>SI</b>	Inflatable (Self)	<b>Z</b>	Quick-Connect Z
<b>MR</b>	Marsh (Upper air chamber with lower water chamber)	<b>RC</b>	Raised Channel
<b>R</b>	Round	<b>SNAV</b>	Slide (US Navy)
<b>SB</b>	Weir Boom	<b>SLOT</b>	Slotted Tube
<b>OT</b>	Other	<b>US1</b>	Universal Slide Type 1
		<b>US2</b>	Universal Slide Type 2
		<b>OT</b>	Other

### BOOM EQUIPMENT

Name of Manufacturer	Model Number	Boom Type Code	Invent Length (feet)	Skirt Size (in.)	Float Size (in.)	End Connector Type Code	Time to Deploy	Storage Location	Owner
Acme Products Co.	OK CORRAL	R	22,0000	12	6	Z	6.0	Deer Park	Garner
Acme Products Co.	SUPER-MINI	R	400	4	2.5	BOLT	2.0	Deer Park	Garner
Acme Products Co.	OK CORRAL	R	10,000	12	6	Z	6.0	La Marque	Garner
Acme Products Co.	OK CORRAL	R	800	28	8	Z	1.0	La Marque	Garner
Acme Products Co.	OK CORRAL	R	5,000	12	6	Z	2.5	Port Arthur	Garner
Acme Products Co.	SUPER-MINI	R	100	4	2.5	BOLT	0.5	Port Arthur	Garner
Acme Products Co.	OK CORRAL	R	4000	34	8	Z	2.0	Port Arthur	Garner`
Acme Products Co.	OK CORRAL	R	2000	34	8	Z	2.0	New Orleans	Garner
Acme Products Co.	OK CORRAL	R	10,000	12	6	Z	6.0	New Orleans	Garner
Acme Products Co.	MINI-BOOM	R	700	4	2.5	BOLT	1.0	New Orleans	Garner

<b>Corporate</b>	<b>Response Equipment Listing</b>	<b>Equipment Listing</b>
<b>Operations</b>		<b>Rev. 04/05</b>

<b>COMMUNICATIONS TYPE CODES</b>			
<b>AF</b>	Aviation Frequency	<b>MF</b>	Marine Frequency
<b>CP</b>	Cellular Phone	<b>PAG</b>	Pager
<b>COM</b>	Command Post	<b>PHH</b>	Portable Hand Held
<b>MOD</b>	Computer w/modem	<b>SSB</b>	Single Side Band
<b>FAX</b>	Facsimile	<b>TP</b>	Telephone
<b>FBS</b>	Fixed Base Station	<b>OT</b>	Other

COMMUNICATIONS EQUIPMENT										
Name of Manufacturer	Model Number	Comm Type	Nr. of Units	Frequency	Band	Range (miles)	Field Tunable		Storage Location	Owner
							Yes	No		
Motorola	A05J	PAG	20	931.462	FM	150		x	Deer Park	Garner
Motorola	F09LF	CP	40	152.840	FM	200		X	Deer Park	Garner
40' Garner Command Post		COM	1					X	Deer Park	Garner
26' Communications Trailer	MCC1	COM	1	931.462			X		La Marque	Garner
Motorola	A05J	PAG	20	931.462	FM	150		X	La Marque	Garner
Motorola	F09LF	PHH	20					X	La Marque	Garner
Motorola	A05J	PAG	12	931.462	FM	150		X	Port Arthur	Garner
Motorola	F09LF	CP	12	152.840	FM	200		X	Port Arthur	Garner
Motorola	MTS	PHH	12	896.901	FM	30		X	N. Orleans	Garner
Standard	HX 1505	PHH	4		MF	30		X	N.Orleans	Garner
Nokia	5160	PHH	7		CP			X	N.Orleans	Garner
RS	TRQ507	OT	3		FM	150		X	N.Orleans	Garner
Motorola	Ao5j	Page	8	931.462	Fm			X	N.Orleans	Garner

<b>Corporate</b>	<b>Response Equipment Listing</b>	<b>Equipment Listing</b>
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**RESPONSE VEHICLES**

Name of Manufacturer	Response Vehicle	Number of Units	Wide Load Permit Needed		Storage Location	Owner
			Yes	No		
<b>Ford/Chevy</b>	Pick-up Truck, 1 ton	24		X	Deer Park	Garner
<b>Sooner</b>	Emergency Response Trailer, 32'	3		X	Deer Park	Garner
<b>Modern Mfg.</b>	Spill Trailer, 16' Lo-Boy	5		X	Deer Park	Garner
<b>Containment Sys. &amp; Gooseneck</b>	Emergency Haz-Mat Response Trailers 32' & 24'	2		X	Deer Park	Garner
<b>Falcon</b>	Trailer, 20', Stand-by/Rescue	2		X	Deer Park	Garner
<b>Pace</b>	28' Rescue Standby & Command Post	1		X	Deer Park	Garner
<b>Ford/Chevy</b>	Pick-up Truck, 1 ton	13		X	La Marque	Garner
<b>Garner</b>	Roll-Off Box, 20 yd;	2		X	La Marque	Garner
<b>Sooner</b>	Emergency Response Trailer, 32'	1		X	La Marque	Garner
<b>Sooner</b>	Boom Trailer, 28' Gooseneck	5		X	La Marque	Garner
<b>Modern Mfg.</b>	Spill Trailer, 16' Lo-Boy	4		X	La Marque	Garner
<b>Modern Mfg.</b>	Spill Trailer, 20'	2		X	La Marque	Garner
<b>Ford</b>	Pick-up Truck, 1 ton	7		x	Port Arthur	Garner
<b>Sooner</b>	Emergency Response Trailer, 32"	1		x	Port Arthur	Garner
<b>Modern Mfg.</b>	Trailer, Spill Response, 16' Lo-Boy	1		x	Port Arthur	Garner
<b>Modern Mfg.</b>	Trailer, Boom, Gooseneck, 24'	3		x	Port Arthur	Garner
<b>Gemini Cargo</b>	Trailer, Haz-Mat, 19'	1		x	Port Arthur	Garner
<b>Ford/Chevy</b>	Pick-up Truck, 1 ton	7		x	N. Orleans	Garner
<b>Modern Mfg.</b>	Spill Trailer, 20' Lo-Boy	2		x	N. Orleans	Garner
	53' Box Van Trailer (5,000' 18" Boom )	1			N. Orleans	Garne
	36' Haz Mat Response Trailer	1			N. Orleans	Garne
	Roll Off Box Trailer	1			N. Orleans	Garne
	21' Oil Spill Response Trailer ( Boat/Boom/ Sorbent)	1			N. Orleans	Garne
	20' Response Trailer ( Industrial Response)	1			N. Orleans	Garne
	32' Boom Trailers	2			N. Orleans	Garne
	8' Utility Trailers	1			N. Orleans	Garne
<b>Sooner</b>	Spill Trailer 32 ' Response	1		x	N. Orleans	Garner

<b>Corporate</b>	<b>Response Equipment Listing</b>	<b>Equipment Listing</b>
<b>Operations</b>		<b>Rev. 04/05</b>

**BOOM EQUIPMENT**

<b>Name of Manufacturer</b>	<b>Model Number</b>	<b>Equipment Type</b>	<b>Quantity</b>	<b>Storage Location</b>	<b>Owner</b>
<b>Norfloat</b>	A2	Buoy, Anchor Marker, Inflatable, 18" dia.	25	Deer Park	Garner
<b>Polycord</b>	600x1/4	Rope, Polypropylene, 1/4" x 600'	5	Deer Park	Garner
<b>Polycord</b>	600x1/2	Rope, Polypropylene, 1/2" x 600'	5	Deer Park	Garner
<b>U.S. Anchor Mfg., Inc.</b>	22#	Anchor, Galvanized Steel, 22 lb., Danforth Style	11	Deer Park	Garner
<b>U.S. Anchor Mfg., Inc.</b>	40#	Anchor, Galvanized Steel, 40 lb., Danforth Style	6	Deer Park	Garner
<b>U.S. Anchor Mfg., Inc.</b>	75#	Anchor, Galvanized Steel, 75 lb., Danforth Style	8	Deer Park	Garner
<b>U.S. Anchor Mfg. Inc.</b>	100#	Anchor, Galvanized Steel, 100 Lb. Danforth Style	13	Deer Park	Garner
<b>Norfloat</b>	A2	Buoy, Anchor Marker, Inflatable, 18" dia.	25	La Marque	Garner
<b>Polycord</b>	600 x 1/4	Rope Polypropylene, 1/4" x 600'	5	La Marque	Garner
<b>Polycord</b>	600 x 1/2	Rope Polypropylene, 1/2 " x 600'	5	La Marque	Garner
<b>U.S. Anchor Mfg., Inc.</b>	22#	Anchor, Galvanized Steel, 22 lb., Danforth Style	8	La Marque	Garner
<b>U.S. Anchor Mfg., Inc.</b>	40#	Anchor, Galvanized Steel, 40 lb., Danforth Style	5	La Marque	Garner
<b>Norfloat</b>	A2	Buoy, Anchor Marker, Inflatable, 18" dia.	15	Port Arthur	Garner
<b>Polycord</b>	600 x 1/4	Rope Polypropylene 1/4 " x 600 '	5	Port Arthur	Garner
<b>Polycord</b>	600 x 1/2	Rope Polypropylene 1/2 " x 600'	5	Port Arthur	Garner
<b>U.S. Anchor Mfg., Inc.</b>	22 #	Anchor, Galvanized Steel, 22 lb., Danforth Style	12	Port Arthur	Garner
<b>U.S. Anchor Mfg., Inc.</b>	75#	Anchor, Galvanized Steel, 75 lb., Danforth Style	6	Port Arthur	Garner
<b>U.S. Anchor Mfg., Inc.</b>	100#	Anchor, Galvanized Steel, 75 lb., Danforth Style	4	Port Arthur	Garner
<b>Norfloat</b>	A2	Buoy, Anchor Marker, Inflatable, 18" dia.	20	N. Orleans	Garner
<b>Polycord</b>	600 x 1/4	Rope Polypropylene, 1/4" x 600'	5	N. Orleans	Garner
<b>Polycord</b>	600 x 1/2	Rope Polypropylene, 1/2 " x 600'	5	N. Orleans	Ganrer
<b>U.S. Anchor Mfg., Inc.</b>	22 #	Anchor, Galvanized Steel, 18 lb., Danforth Style	20	N. Orleans	Garner
<b>U.S. Anchor Mfg., Inc.</b>	40 #	Anchor, Galvanized Steel, 22 lb., Danforth Style	8	N. Orleans	Garner

Corporate Operations	Response Equipment Listing	Equipment Listing
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U.S. Anchor Mfg. Inc.	100 #	Anchor, Galvanized Steel, 100 #, Danforth Style	10	N. Orleans	Ganrer
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### AIR MONITORING EQUIPMENT

Name of Manufacturer	Miscellaneous Equipment	Number of Units	Storage Location	Owner
Rae Systems	Q-RAE	4	Deer Park	Garner
Rae Systems	Mini RAE 2000	2	Deer Park	Garner
Rae Systems	Ultra Rae	1	Deer Park	Garner
MSA	5 Star	3	Deer Park	Garner
MSA	Watchman	1	Deer Park	Garner
Airzona Instruments	Jerome X431	2	Deer Park	Garner
Elmer Perkins	Micro FID	1	Deer Park	Garner
Draeger	CMS	2	Deer Park	Garner
Ludlum	Model # 3	2	Deer Park	Garner
MSA	4-Gas Meter	3	La Marque	Garner
Draeger	Accuro Pump	1	La Marque	Garner
Rae	Photo-Ionisation Detector	1	La Marque	Garner
	Mercury Vapor Analyzer	1	N. Orleans	Garner
	Radiation Monitor	1	N. Orleans	Garner
	Solar Radiation Monitor	1	N. Orleans	Garner
	Weather Station	2	N. Orleans	Garner
	Infrared Thermometer	1	N. Orleans	Garner
	GPS Units	2	N. Orleans	Garner
Aim	4-Gas Monitor	2	N. Orleans	Garner
Draeger	Accuro Pump	2	N. Orleans	Garner
Draeger	CMS Meter	1	N. Orleans	Garner
Rae	Mini-Rae 2000 Portable VOC Meter	2	N. Orleans	Garner
Quest	Single Gas Personal Meter	1	N. Orleans	Garner
MSA	Escort Particulate Air Monitor	1	N. Orleans	Garner



Corporate	Response Equipment Listing	Equipment Listing		
Operations		Rev. 04/05		

Sper Scientific	PH Meter	1	N. Orleans	Garner
Dexsil	PetroFlag Hydrocarbon Test Kit	1	N. Orleans	Garner
Chlorine	AC/ Kit	1	N. Orleans	Garner

Specialty Equipment				
Name of Manufacturer		Number of Units	Storage Location	Owner
	Self Contained Breathing Apparatus(SCBA) with 12 extra bottles / Scott	12	Deer Park	Garner
	Self Contained Breathing Apparatus (SCBA) with 12 extra bottles / Dreager	12	Deer Park	Garner
	Bezt Valve / Off Loading Valve	2	Deer Park	Garner
	Chlorine Emergency Kit A	1	Deer Park	Garner
	Chlorine Emergency Kit B	1	Deer Park	Garner
	Chlorine Emergency Kit C	1	Deer Park	Garner
	Vacuum Cleaner / Stainless Steel, Mercury, HEPA	2	Deer Park	Garner
	Cameras / Digital	10	Deer Park	Garner
	Confine Space Rescue Kits	3	Deer Park	Garner
	Coppus Blowers	2	Deer Park	Garner
	Air Compressors 11.8 cfm 90 psi	6	Deer Park	Garner
	Drum Crushers / Diesel Power	2	Deer Park	Garner
	Drum Crabber	5	Deer Park	Garner
	Generators	2	Deer Park	Garner
	Scare Guns	3	Deer Park	Garner
	Decontamination Pools 20" x 100'	2	Deer Park	Garner
	Fan, Ventilation 48'	3	Deer Park	Garner

Corporate	Response Equipment Listing	Equipment Listing		
Operations		Rev. 04/05		

	Honda Four Wheeler	1	Deer Park	Garner
	Light Stands	5	Deer Park	Garner
	Self Contained Breathing Apparatus (SCBA) with Extra bottles	9	La Marque	Garner
	Air Compressors ( Portable )	3	La Marque	Garner
	HEPA Vacuums	3	La Marque	Garner
	Cameras / Digital	3	La Marque	Garner
	Artic Cat Four Wheeler	2	La Marque	Garner
	Generators	4	La Marque	Garner
	Self Contain Breathing Apparatus (SCBA)	10	Port Arthur	Garner
	Cameras / Digital	1	Port Arthur	Garner
	Coppus Blowers	1	Port Arthur	Garner
	<b>Specialty Equipment / Continued</b>			
	Air Compressors	3	Port Arthur	Garner
	Generators	1	Port Arthur	Garner
	Scare Guns	4	Port Arthur	Garner
	Pressure Washers	1	Port Arthur	Garner
	Explosion Proof Lights	1	Port Arthur	Garner
	Weed Eaters	1	Port Arthur	Garner
	Chlorine Emergency Kit "C"	1	N. Orleans	Garner
	Midland Kit	1	N. Orleans	Garner
	Railcar Haz Hammock	1	N. Orleans	Garner
	Mercury Vacuum	1	N. Orleans	Garner
	Carbon Filter Systems	1	N. Orleans	Garner
	Sand Filter Systems	2	N. Orleans	Garner
	Wet & Dry Vacuum with HEPA Filter	1	N. Orleans	Garner
	100 Watt Explosion Proof Light Sets	2	N. Orleans	Garner
	Decon Pools 4' x4' x14' 5"	2	N. Orleans	Garner
	Spill Guard 6' x 4' x8"	1	N. Orleans	Garner
	Drum Dolly	3	N. Orleans	Garner
	3/4 " Core Sampler	1	N. Orleans	Garner
	Soil Sampler ( boring) Kit	1	N. Orleans	Garner

Corporate	Response Equipment Listing	Equipment Listing
Operations		Rev. 04/05

	Self Contained Breathing Apparatus ( SCBA )	9	N. Orleans	Garner
	Generators ( Portable )	3	N. Orleans	Garner
	Weed Eaters	5	N. Orleans	Garner
	Steam Cleaners	3	N. Orleans	Garner
	Air Compressors ( Portable )	2	N. Orleans	Garner
	Light Stand ( Portable )	2	N. Orleans	Garner
	Coppus Blower	1	N. Orleans	Garner
	Chain Saw	1	N. Orleans	Garner
	Tank Truck Emergency Transfer Valve	1	N. Orleans	Garner
	Tank/Railcar Injector Vessel	1	N. Orleans	Garner
	Tank/Railcar Wash Head System	1	N. Orleans	Garner
	Tank / Railcar Manifold	1	N. Orleans	Garner
	Air Horn, 6"	1	N. Orleans	Garner
	Fan Ventilation, 48"	1	N. Orleans	Garner
	Fan Ventilation, 16" Port A Cool with water Mister	1	N. Orleans	Garner
	Digital Cameras	4	N. Orleans	Garner

<b>A</b>	Auger/Screw	<b>D</b>	Diesel
<b>C</b>	Fire	<b>E</b>	Electric
<b>P</b>	Parastolic	<b>G</b>	Gasoline
<b>R</b>	Reciprocating	<b>H</b>	Hydraulic
<b>I</b>	Rotary/Flexible impeller	<b>P</b>	Pneumatic
<b>OT</b>	Other	<b>OT</b>	Other

PUMP EQUIPMENT								
Name of Manufacturer	Model Number	Pump Type Code	Drive Type Code	Suction/ Discharge	Mfg. Pump Rate (gpm)	Quantity	Storage Location	Owner

Corporate	Response Equipment Listing	Equipment Listing
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				Size (inches)				
Honda	WXT-20	C	G	2.0	180	4	Deer Park	Garner
Yanmar	LD-40/2	C	D	2.0	180	2	Deer Park	Garner
Honda	WXT-30	C	G	3.0	275	1	Deer Park	Garner
Wilden	Model M	OT	P	3.0	240	5	Deer Park	Garner
Honda	WXT-20	C	G	2.0	180	3	La Marque	Garner
Yanmar	LD-40/2	C	D	2.0	180	5	La Marque	Garner
Wilden	Model M	OT	P	3.0	240	7	La Marque	Garner
Acme Products Co., Inc.	FS-150A	I	G	1.5	275	1	Port Arthur	Garner
Honda	WXT-20	C	G	2.0	180	6	Port Arthur	Garner
Yanmar	LD-40/3	C	D	2.0	200	2	Port Arthur	Garner
Versa-Matic		OT	P	2.0	140	1	N. Orleans	Garner
Versa-Matic		OT	P	1.5	140	1	N. Orleans	Garner
Honda	EPT2	C	G	3.0	275	1	N. Orleans	Garner
Honda	FLOTO	C	G	2.0	180	2	N. Orleans	Garner
Wisconsin/Multi Quip		C	D	3.0	185	1	N. Orleans	Garner
Yamada	POLY	C	P	3.0	200	1	N. Orleans	Garner
Various		C	D	2.0	200	5	N. Orleans	Garner
Various		C	G	2.0	190	2	N. Orleans	Garner
Versamatic	STAINLESS	C	P	2.0	140	2	N. Orleans	Garner

<b>RESPONSE BOAT TYPE CODES</b>		<b>TRANSPORTATION METHOD CODES</b>	
<b>BAY</b>	Bay Waters	<b>NT</b>	Normal Trailer
<b>JB</b>	Jon Boat	<b>WO</b>	Water Only
<b>LFB</b>	Large Flat Bottom	<b>WL</b>	Wide load Trailer
<b>OFF</b>	Offshore	<b>OT</b>	Other
<b>PRO</b>	Protected Waters		
<b>TC</b>	Towing Capable		
<b>OT</b>	Other		

## RESPONSE BOATS

Corporate	Response Equipment Listing	Equipment Listing
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Name of Manufacturer	Model Number	Boat Type Code	Horse Power	Normal Crew Size	Length / Beam	Draft Limit	Number of Boats	Transport Method Code	Storage Location	Owner
Alumacraft	12	PRO	0	1	12	1'	2	NT	Deer Park	Garner
Custom Flat	1650	JB	25	2	16'	1'	4	NT	Deer Park	Garner
Custom Flat	20	LFB	40	2	20' / 6'	2'	1	NT	Deer Park	Garner
Custom Build	30	LFB	400	3	30' x 10'	1'	1	WL	Deer Park	Garner
Custom Build	30	BAY	400	3	30' / 8'	2'	1	NT	Deer Park	Garner
Alumaweld	1650	JB	25	3	16' / 6'	1'	4	NT	La Marque	Garner
Custom Boat Mfg.	1649R	JB	30	2	16' / 6'	2'	1	NT	La Marque	Garner
Alumaweld	24	JB	40	2	24' / 6'	1.6	1	NT	La Marque	Garner
Broadhead	24	BAY	150	3	24' / 8'	2'	1	NT	La Marque	Garner
Alumaweld	1650	JB	25	2	16' / 6'	1'	5	NT	Port Arthur	Garner
Alumaweld	20	BAY	40	2	20' / 0'	2'	1	NT	Port Arthur	Garner
Alumaweld	1450	JB	25	2	14' / 0"	2"	1	NT	Port Arthur	Garner
Lobell	28'	BAY	200	3	28' / 8'	2'	1	NT	Port Arthur	Garner
Silver Ships	30'	BAY	400	3	30' / 8'	2	1	NT	N. Orleans	Garner
Custom Boat Mfg.	1650	JB	25	2	16' / 6'	1'	6	NT	N. Orleans	Garner
Deck Barge Boat	30'	OT	150	3	30' / 10'	1'	1	WL	N. Orleans	Garner
Duracraft	21'	LFB	40	3	21' / 6'	1'	1	NT	N. Orleans	Garner
Pirogue	12'	OT	0	1	12' / 2"	3"	2	NT	N. Orleans	Garner
Various	12'	JB	25	1	12' / 3"	1'	2	NT	N. Orleans	Garner

#### SKIMMER TYPE CODES

<b>FS</b>	Floating Suction	<b>HIP</b>	Hydrodynamic Inclined Plane
<b>IV</b>	Induced Vortex	<b>OB</b>	Oleophilic Belt
<b>OD</b>	Oleophilic Disk	<b>OR</b>	Oleophilic Rod
<b>PW</b>	Paddle-Wheel	<b>SK</b>	Sock
<b>W</b>	Weir	<b>OT</b>	Other

#### SKIMMER EQUIPMENT

Name of Manufacturer	Model Number	Skimmer Type Code	Number of Units	Mfg. Recovery Rate (gpm)	Hose Size Suction/Discharge (inches)	Time to Deploy	Storage Location	Owner
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Corporate	Response Equipment Listing	Equipment Listing
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Acme Products Co., Inc.	FS400ASK-39T	W	3	275	3.0	1.5	Deer Park	Garner
Douglas Engineering	4200SH Skim-Pak	FS	2	5 - 68	2.0	5	Deer Park	Garner
DiscOil Company	DISCOIL	OD	1	70	2.0	.5	Deer Park	Garner
Crucial Inc.	1D18P-23	OT	2	25	2.0	.5	Deer Park	Garner
Crucial Inc.	1D18P-36	OT	3	36	2.0	.5	Deer Park	Garner
Marco	Sidewinder 14	OB	1	70	3.0	.5	Deer Park	Garner
De Smithske (DESMI)	D-2	FS	3	500	6.0	1.5	Deer Park	Garner/DEMS
Crucial Inc.	VSP-3"	W	2	550	3.0	1.5	Deer Park	Garner
Crucial Inc.	RF-Floating Head	W	1	200	3.0	1	Deer Park	Garner
Acme Products Co., Inc.	FS400ASK-39T	W	1	275	3.0	1.0	La Marque	Garner
DiscOil Company	DISCOIL	OD	1	70	2.0	.5	La Marque	Garner
Crucial Inc.	1D18P-23	OT	3	25	2.0	.5	La Marque	Garner
Acme Products Co., Inc.	FS400ASK-39T	W	1	275	3.0	.5	Port Arthur	Garner
Crucial Inc.	1D18P-23	OT	2	25	2.0	.5	Port Arthur	Garner
De Smithske (DESMI)	D-2	FS	2	500	6.0	1.5	Port Arthur	Garner
DiscOil Company	DISCOIL	OD	1	70	2.0	.5	N. Orleans	Garner
Douglas Engineering	4200SH Skim-Pak	FS	2	5 - 68	2.0	.5	N. Orleans	Garner
Marco	Harbor 28	OB	1	70	2.0	.5	N. Orleans	Garner
Elastec	Mini Max, 20"	OT	1	20	2.0	1.	N. Orleans	Garner
De Smithske (DESMI)	D-2	FS	1	500	6.0	1.5	N. Orleans	Garner/DEMS

PU	Portable Vacuum Pump Units	D	Diesel
SS	Super Sucker	E	Electric
VT	Vacuum Truck	G	Gasoline
OT	Other	H	Hydraulic
		P	Pneumatic
		OT	Other

## VACUUM SYSTEM EQUIPMENT

Name of Manufacturer	Model Number	System Type Code	Drive Type Code	Suction (inches)	Number of Units	Mfg. Recovery Rate (gpm)	Storage Capacity (gallon)	Hose Invent (feet)	Storage Location	Owner
Safety Vac	449222	OT	D	14	1	40	150	200	Deer Park	Garner
Keith/Huber	LN8000	VT	D	27.0	6	80	3000	3200	La Marque	Garner

Corporate Operations	Response Equipment Listing					Equipment Listing				
						Rev. 04/05				

Ford	Meyers	OT	D		2	80	3000	500	La Marque	Garner
Super Products & Guzzler	5027	SS	D		1	450	3000	500	La Marque	Garner
Keith/Huber	LN8000	VT	D	27.0	1	80	3000	500	Port Arthur	Garner
Dual Venturi Vacuum Heads					2				N. Orleans	Garner

SORBENT TYPE CODE		COMPOSITION CODE	
<b>B</b>	Boom	<b>M</b>	Mineral
<b>PAD</b>	Pad	<b>NO</b>	Natural
<b>PT</b>	Particulate	<b>S</b>	Organic
<b>ST</b>	Sheet	<b>OT</b>	Synthetic
<b>SW</b>	Sweep		Other
<b>OT</b>	Other		

SORBENTS										
Name of Manufacturer	Model Number	Sorbet Type Code	Composition Type Code	Normal Inventory	Special Appl. Equip. Needed		Special Rcvg. Equip. Needed		Storage Location	Owner
					Yes	No	Yes	No		
Crucial, Inc.	OS-15	OT	S	1000		X		X	Deer Park	Garner
Complete Environmental Products	GES-P100	PAD	S	1000		X		X	Deer Park	Garner
Complete Environmental Products	GES-P200	PAD	S	250		X		X	Deer Park	Garner
Complete Environmental Products	GES-EP100	PAD	S	500		X		X	Deer Park	Garner
Complete Environmental Products	GES-P50	PAD	S	150		X		X	Deer Park	Garner
Complete Environmental Products	GES-B510	B	S	300		X		X	Deer Park	Garner
Complete Environmental Products	GES-B810	B	S	500		X		X	Deer Park	Garner
Complete Environmental Products	GES-R144	ST	S	150		X		X	Deer Park	Garner
Complete Environmental Products	GES-SW100	SW	S	300		X		X	Deer Park	Garner
Complete Environmental Products	GES-PART25	PT	S	10		X		X	Deer Park	Garner
Crucial, Inc.	OS-15	OT	S	150		X		X	La Marque	Garner
Complete Environmental Products	GES-P00	PAD	S	250		X		X	La Marque	Garner
Complete Environmental Products	GES-P200	PAD	S	100		X		X	La Marque	Garner
Complete Environmental Products	GES-P50	PAD	S	100		X		X	La Marque	Garner

Corporate Operations	Response Equipment Listing					Equipment Listing				
						Rev. 04/05				

Complete Environmental Products	GES-B510	B	S	100		X		X	La Marque	Garner
Complete Environmental Products	GES-B810	B	S	125		X		X	La Marque	Garner
Complete Environmental Products	GES-R144	ST	S	125		X		X	La Marque	Garner
Complete Environmental Products	GES-SW100	SW	S	150		X		X	La Marque	Garner
Complete Environmental Products	GES-PART25	P	S	10		X		X	La Marque	Garner

### SORBENTS

Name of Manufacturer	Model Number	Sorbent Type Code	Composition Type Code	Normal Inventory	Special Appl. Equip. Needed		Special Rcvg. Equip. Needed		Storage Location	Owner
					Yes	No	Yes	No		
Crucial, Inc.	OS-15	OT	S	150		X		X	Port Arthur	Garner
Complete Environmental Products	GES-P100	PAD	S	100		X		X	Port Arthur	Garner
Complete Environmental Products	GES-P200	PAD	S	75		X		X	Port Arthur	Garner
Complete Environmental Products	GES-B510	B	S	100		X		X	Port Arthur	Garner
Complete Environmental Products	GES-B810	B	S	50		X		X	Port Arthur	Garner
Complete Environmental Products	GES-R144	ST	S	25		X		X	Port Arthur	Garner
Complete Environmental Products	GES-SW100	SW	S	50		X		X	Port Arthur	Garner
Crucial, Inc.	OS-15	OT	S	250		X		X	N. Orleans	Garner
Complete Environmental Products	GES-P100	PAD	S	325		X		X	N. Orleans	Garner
Complete Environmental Products	GES-P200	PAD	S	200		X		X	N. Orleans	Garner
Complete Environmental Products	GES-EP100	PAD	S	500		X		X	N. Orleans	Garner
Complete Environmental Products	GES-B510	B	S	100		X		X	N. Orleans	Garner
Complete Environmental Products	GES-B810	B	S	150		X		X	N. Orleans	Garner
Complete Environmental Products	GES-R144	ST	S	50		X		X	N. Orleans	Garner
Complete Environmental Products	GES-SW100	SW	S	100		X		X	N. Orleans	Garner



# **T&T MARINE SALVAGE, INC.**

## **Houston COTP Zone**



"Kelly M. Telchman"  
<KellyT@tandmarine.com>

03/05/2007 02:46 PM

To <kevin.campbell@oiltanking.com>

cc

bcc

Subject T & T Master Service Agreement

Kevin-

Attached is the Master Service Agreement for T & T Marine Salvage. As mentioned this agreement covers all services offered by T & T. Please let me know if you have any questions on this document. In the time that you are reviewing this agreement T & T Marine will respond to any request, based on equipment and personnel availability. A formal letter will be sent for "Intent to Respond" when we deliver the 200' of containment boom to your dock.

We would like to schedule dropping the containment boom at your facility Wednesday. Please contact me via e-mail or Ronnie Rouse at 409-739-3412 to set up a time and contact information. Also, do we need to send our team through the training facility to get access badges to the dock?

Regards,



Kelly Telchman Master Services Contract Original.doc

PHMSA 000049214  
**T&T Marine Salvage, Inc.**  
**Master Services Contract**

This agreement is entered between T&T Marine Salvage, Inc. 9723 Teichman Road, Galveston, TX 77554 ("T&T") and

Name: Oiltanking Texas City, L.P.

Address: 2800 Loop 197 South (P.O. Box 29)

Texas City, Texas 77592

Telephone #: 409-797-1700

Telefax #: 409-797-1701

Email: kevin.campbell@oiltanking.com

("Client"). T&T is an independent contractor engaged in providing marine salvage, marine diving, marine heavy lift, marine firefighting, oil spill and hazardous material spill response, emergency response consulting and management and other equipment and services. Client either now requires or may in the future require goods and/or services from T&T. The parties intend that this contract shall govern the provision of goods and services by T&T to Client. This contract supercedes all prior contracts, oral agreements and negotiations between the parties. In the event the terms of this contract disagree with the terms of any purchase order or similar document, the terms of this contract shall control, unless the parties hereto expressly agree to vary the terms hereof in a writing signed by an authorized representative of Client and an officer of T&T. *This is a time and materials contract.* If the parties hereto execute a flat rate contract, no cure-no pay, heavy lift or similar contract for a particular job or project, then the terms of that contract shall control for that job or project to the extent inconsistent with this document. The execution of an agreement to vary the terms hereof or the use of a different form of agreement for a particular project shall not be construed to vary the terms hereof for any other ongoing or future project(s), nor shall there be any implication by course of dealing that the parties intended for any terms other than those set out in this contract to apply to any particular project, in the absence an agreement so stating signed in advance of the project.

**1. Authority to act on behalf of Client.** The person signing below hereby warrants that he or she is authorized to execute this document on behalf of Client. In order to facilitate the provision of services to client by T&T under urgent or emergency circumstances, T&T is authorized to provide goods and services to Client pursuant to the terms hereof upon the oral or written request of any Qualified Individual listed in any vessel or facility response plan of Client, any officer of Client and the following persons or classes of persons. If none, so state:

In the event a person purporting to be an authorized representative of Client requests that T&T provide goods and services, T&T may call Client's office at (Tel #) 409-797-1760. If the party answering that number verifies the authority of the person requesting goods or services, T&T is authorized to respond on behalf of Client and Client agrees to be bound hereby for all goods and services provided. (CROSS OUT THIS SECTION IF NOT APPLICABLE.)

**2. Rates.** Client agrees to pay T&T for goods and services in accordance with the rate sheet of T&T in effect as of the commencement of any discrete project for client. A copy of the current rate sheet is attached hereto. T&T may amend its rate sheet from time to time in its sole discretion. If a project is ongoing for Client at the time of a rate sheet amendment, no changed rates will be applicable to goods and services provided from T&T inventory on said ongoing project until after Client shall have had 30 days actual notice

of amendment. Rate changes for goods or services obtained from third parties will be effective as they occur, since T&T cannot guarantee the rates of its vendors or subcontractors.

**3. Availability and Mobilization.** This agreement does not obligate Client to use T&T for any particular project, nor does it obligate T&T to respond to any particular request for goods and services. Availability of all equipment and personnel is subject to prior commitments. With respect to any particular project, T&T agrees to use due diligence to mobilize personnel and equipment in accordance with the timetable agreed with Client's representative requesting the same. For planning purposes, T&T is capable of having any equipment listed on the attached price sheet and adequate personnel to deploy and operate it mobilized and en route to an oil spill within two hours of notification at an average speed of at least 35 miles per hour for equipment traveling over land and 5 knots for equipment traveling by water. It is expressly understood that the foregoing is a planning standard, not a performance standard or warranty. Due to weather, traffic, and other variables, T&T does not guarantee response within any particular time.

**4. Performance of Services.** In those circumstances where T&T has accepted an assignment from Client, it will use due diligence to achieve the objectives agreed upon with Client for that project, but cannot guarantee whether a particular result can or will be achieved or achieved in any particular time. Client acknowledges that despite the due diligence of T&T, the project undertaken may not be successful or the situation could become worse. Except to the extent caused by the gross negligence or willful misconduct of T&T, T&T will not be responsible for the failure of its efforts to achieve the desired results or for any damage arising from its efforts. Payment for the goods and services provided by T&T will be due as stated herein regardless of the results obtained. Client retains the right to instruct T&T to discontinue its services at any time and for any reason or for no reason at all. However, if T&T mobilizes personnel and equipment at Client's request, Client will remain obligated to pay for such personnel and services on a portal to portal basis in accordance with T&T's current price list, even if T&T is ordered to discontinue its efforts before any services have been performed on site.

**5. Information to be Provided by Client.** When requesting services for a particular project, Client shall provide T&T with the following information:

- Names and contact information for Client's authorized representative(s) for the project
- Location of the project and any staging areas.
- For spill response, the chemical and trade names of all substances involved and Material Safety Data Sheets (MSDSs) for the same.
- Any information within Client's knowledge relating to site safety or risks to the safety or health of T&T's employees responding to the project, including, without limitation, information concerning toxic or hazardous material exposure threats and personal protective equipment requirements.
- The nature of the goods and services requested.

Client agrees to promptly advise T&T of any additional information becoming available to it or changes or corrections to information previously provided, it being understood that T&T will be relying on this information to assist it in ensuring the safety of its personnel and others at the work site.

**6. Access to Work Site(s).** Client remains responsible for providing T&T suitable access to all work sites, including locations at which T&T may stage equipment, at no cost to T&T. Client will be responsible for all property damage resulting from insufficient roads and/or staging areas and the reasonable activities of T&T in gaining

access or attempting to gain access to the work site(s). If T&T is engaged to provide emergency response services and Client has not secured access to the work site(s) or staging areas from which the work site may be reached by land or water, T&T may make arrangements that are reasonable under the circumstances with docks, landowners, marinas or other facilities to provide such access and these will be billed to Client on a cost plus basis. It is expressly understood that under exigent circumstances, facility owners may demand premium compensation for permitting such access.

**7. Independent Contractor.** The parties affirm that T&T is an independent contractor. T&T will at all times have the authority to and shall control the details of the work to be performed by it. All T&T personnel shall at all times be under the sole direction of T&T.

**8. Waste Disposal.** Client agrees that it is the owner of all wastes generated as a consequence of any project covered by this agreement, including, without limitation, oil, oily wastes, oily sorbents, hazardous wastes, hazardous substances or other contaminated materials. T&T shall not be considered a generator, transporter, storer, treater or disposal facility with respect to hazardous materials or hazardous wastes as those terms are used in the Resource Conservation and Recovery Act (RCRA), as amended, the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), or as those or similar terms are used in any similar state law governing transportation, treatment, storage and disposal of wastes. Client agrees it will be considered the generator of all wastes and will remain responsible at all times for the handling, transportation, treatment, storage and disposal of said wastes. Client will direct T&T as to how its wastes are to be handled. Upon Client's request, T&T will assist client in arranging for the characterization of wastes and their transportation, treatment, storage and/or disposal. The failure of Client to instruct T&T as to the disposition of wastes within 7 days of T&T's written request for instructions, shall constitute Client's appointment of T&T as its authorized agent to execute any required documents and manifests in Client's name and make arrangements for the transportation, treatment, storage and disposal of Client's wastes on Client's behalf and at Client's expense and Client agrees to pay the reasonable costs and attorneys fees incurred by T&T in connection therewith. *Client agrees to indemnify, defend and hold T&T harmless from all costs, claims and liability associated with the handling, transportation, treatment, storage and disposal of wastes associated with any project covered by this agreement.* The provisions of this section shall survive the termination of this agreement and will continue to bind Client, its successors and assigns.

**9. Payment, Security, Interest and Fees.** Unless otherwise agreed in a writing signed by an officer of T&T, all invoices for goods and services presented by T&T hereunder will be payable in full without discount 30 days from the date of the invoice. If all sums are not paid when due, interest will be payable on any unpaid balance at the rate of 1.5% per month, commencing as of date of the invoice. Client's obligation to pay for goods and services provided hereunder is not conditioned upon Client's recovery from any third party or underwriter, nor will T&T look directly to any third party or underwriter for payment in the absence of a written agreement to do so signed by an officer of T&T. In the event the total amount payable to T&T for any particular project (or several projects in the aggregate) reasonably appears likely to exceed \$\_\_\_\_\_

T&T may condition its continued provision of goods and services to Client on immediate payment of outstanding charges and/or the provision of security by or on behalf of Client for payment of T&T's outstanding and expected future charges, such security to be in a form acceptable to T&T in its sole discretion. In the absence of such security, T&T may demobilize its equipment at Client's expense or contract it to another party or governmental entity for future operations. In the event T&T provides necessary goods and services on a vessel hereunder, it is expressly agreed that T&T shall be entitled to a maritime lien against said vessel to secure payment for necessities provided. Notwithstanding any clause herein to the contrary, T&T may at any time demand adequate security in lieu of

action to enforce any type of maritime lien(s) it holds and may, in the absence of security acceptable to T&T, take judicial action to secure and/or enforce its lien(s). In the event T&T is required to retain counsel to enforce its rights hereunder or as a result of Client's breach of this agreement, Client agrees to pay T&T's reasonable costs associated therewith, including, without limitation, its attorneys' fees.

**10. Indemnity.** Nothing herein shall be construed to deprive T&T the protection of any "responder immunity" provided under state or federal law. This section in no way limits the indemnity provisions of Section 8 dealing with waste disposal.

(A.) T&T hereby agrees to indemnify, defend and hold harmless Client to the extent allowed by law for lawsuits, claims, damages or losses arising under any theory of law, including strict liability, unseaworthiness of any vessel, regardless of whether it is caused by the sole or concurrent negligence of Client, asserted by employees of T&T, its parent, subsidiary and related companies and all of their subcontractors in connection with any personal injury, illness or death arising out of or in connection with T&T's provision of goods and services to Client hereunder.

(B.) Client agrees to indemnify, defend and hold harmless T&T, its parent, subsidiary and related companies and all of their subcontractors to the extent allowed by law for lawsuits, claims, damages or losses arising under any theory of law, including strict liability, unseaworthiness of any vessel, regardless of whether it is caused by the sole or concurrent negligence of T&T, asserted by employees of Client, its parent, subsidiary and related companies or any of their other contractors and subcontractors, in connection with any personal injury, illness or death arising out of or in connection with T&T's provision of goods and services to Client hereunder. *Client shall maintain insurance for the liabilities assumed herein and will provide a certificate to T&T evidencing such insurance, with liability limits as set forth on Exhibit A entitled T&T Marine Salvage Inc. Insurance Requirements. Such insurance will be endorsed to name T&T its parent, subsidiary and related companies and all of their subcontractors as an additional assured with a waiver of subrogation to the extent of the contractual liabilities assumed by Client herein and such endorsement shall additionally provide that Client's insurance shall be primary to any policy of T&T covering the same risk.*

Claims for property damage, claims for personal injury and death of other persons and all claims not otherwise addressed herein shall be determined at law.

**11. Limitation on Damages.** It is expressly agreed that in any action arising out of this contract, neither party shall be entitled to recover incidental, consequential or indirect damages, including, without limitation, loss of use or profits or lost business opportunities.

**12. Waiver.** No failure of either party to require strict compliance with any term or requirement of this contract in any particular instance will be deemed a waiver of that party's right to insist on strict compliance on any other instance.

**13. Term.** This contract shall remain in effect until terminated by either party upon 30 days written notice to the other. Termination of this contract will not affect the liability of either party hereunder for their obligations arising hereunder prior to the termination hereof or for the expenses of demobilizing any personnel or equipment in use at the time of termination and any required equipment cleaning, even if undertaken following termination.

Signed as of the 7th day of March, 2007 by:

T&T MARINE SALVAGE, INC.

Signature: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Title: \_\_\_\_\_

Client: \_\_\_\_\_

Signature: \_\_\_\_\_

Printed Name: \_\_\_\_\_

Title: \_\_\_\_\_

Oiltanking Texas City, L.P.

Kevin Campbell

Operations Manager

## **APPENDIX D**

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### **EVACUATION PLAN**

Evacuation Plan .....	D-2
Evacuation Diagram.....	D-5

## **EVACUATION PLAN**

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In case of an emergency within the Facility that would necessitate evacuation, some or all of the following steps are taken, depending on type of emergency and circumstances:

### ***Initial Response***

- Sound an alarm or give verbal alarm.
- Call 911.
- Shut down loading and pipeline receiving operations.
- Evacuate trucks from facility (provided that a safe operating environment exists).
- Divert incoming trucks to a safe distance away.
- Evacuate all personnel to staging area.

### ***Internal Alarms***

- The Facility has a plant radio system and a Audio Alarm system to notify employees for required evacuations and preferred routes.

### ***Evacuation Diagram***

- An evacuation diagram is posted in the office and on the following page, showing evacuation routes from different areas of the Facility.

### ***Muster Points and Roll Call***

- The main exits are the five (5) gates:
- The Primary Muster Point is Gate B Parking Area – Security Guard Station, southeast corner of the terminal, main entrance to the terminal by the Parking Lot by Main Office. If an evacuation is required, a roll call would be taken at the Muster Point area to account for all personnel. It is vital to the safety of emergency personnel to be able to quickly determine whether someone has been left at the emergency site.
- The Secondary Muster Point is Gate A – North side Pipeline Junction area, near B301, northwest corner of the terminal on the north side with egress on Seawall Rd.
- If the preferred evacuation procedure is to shelter in place all personnel will be directed to report to the Main Office. Once all personnel are accounted for the office windows and doors will be sealed and any outside air source eliminated. (i.e. HVAC make up air).
- If conditions permit, the initial command center will be established in the Main Office.

### ***External Notification***

- All emergency response units (fire, police, ambulance) Police can be reached by calling 911. The primary arrival route of emergency response personnel and response equipment is Loop 197 South (from North or South) based on the wind direction.

## **EVACUATION PLAN (Cont'd)**

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**Location of Stored Materials and Hazardous Imposed by Stored Materials:** The Facility stores a variety of hazardous materials (petroleum products) in the bulk storage tanks that comprise the majority of the Facility. All personnel should be aware of the contents of the tanks and the hazards they may pose during an incident (including fire, suffocating of irritating vapors and chemical or thermal burns). The person directing the evacuation should consider these hazards, and those that may arise as a result of the incident, when choosing the safest evacuation route.

**Spill Flow Direction:** The predicted overall direction of a spill from each of the facilities is indicated on the Drainage Diagram in Appendix H. During an incident the person directing the evacuation will determine the actual direction of the spill and direct the use of alternate evacuation route if necessary.

**Prevailing Wind Speed and Direction at the Facility:** The prevailing winds at the facility are normally from the south or southeast at seven to ten miles per hour. However, changing in weather condition require that the person directing any evacuation be cognizant of the wind direction and speed. A shift in the wind direction may expose personnel to smoke or fumes. An increase in wind speed may accelerate and spread a fire.

**Water Currents Tides, or Wave Conditions:** The water conditions at the docks should not effect the evacuation required by any incident at the non-transportation related portion of the facility.

**Arrival Routes of Response Personnel and Equipment:** Response equipment will arrive from Dock Road. Response contractors are instructed to report to the Qualified Individual or designated field operation personnel for instruction on deployment.

**Alternate Evacuation Routes:** Alternate routes are discussed above.

**Transportation Route of Injured person to Nearest Hospital:** The nearest hospital is Mainland Medical Center located at 6801 Emmett F. Lowry Exwy. approximately 9 miles away. Local EMS Services or a commercial ambulance service will transport injured personnel to the hospital.

**Directions to Mainland Medical Center:**

6801 Emmett  
F. Lowry Exwy.

Take Texas City Port Blvd./TX-197 Loop South.  
Turn right on HWY 3 going North.

## EVACUATION PLAN (Cont'd)

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**Location of Alarms/Notifying System:** The Facility does not have an evacuation alarm system. All employees will be notified of required evacuations and preferred routes via hand held radios issued to all operators.

**Mitigation Control Center:** The initial mitigation control center will be established at the Main Office.

**Shelter in Place:** If the preferred evacuation procedure is to shelter in place all personnel will be directed to report to the office buildings of the Facility at which they are located. Once all personnel are accounted for the office windows and doors will be sealed and any outside air source eliminated. (i.e. HVAC make up air)

**Evacuation of the Surrounding Community:** If the Qualified Individual or Manager in Charge determines that the incident warrants evacuation of the surrounding community, he/she will contact the Fire Department or Police to coordinate the recommended evacuation. All community evacuations will be ordered and directed by the appropriate public emergency response officials from the affected jurisdictions. Oiltanking will cooperate fully with all requests from these agencies.



(b) (7)(F)



## EVACUATION DIAGRAM

(b) (7)(F)



## APPENDIX E

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### FOLLOW-UP INVESTIGATION

# SAMPLE

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## **FOLLOW-UP INVESTIGATION/REPORTING GUIDELINES**

### ***Purpose of Follow-Up***

A critique following a spill response (even a spill response exercise) is beneficial to evaluate the actions taken or omitted. Recommendations and modifications should be made to prepare for the possibility of another product spill.

### ***Outline of Post Spill Critique***

Given below are items a team composed of outside people knowledgeable in spill response and key members of the response teams should examine. These questions are intended as guidelines only; many other questions are likely to be appropriate at each stage of a critique.

### ***Detection***

Was the spill detected promptly?

How was it detected?

By whom?

Could it have been detected earlier? How?

Are any instruments or procedures available to consider which might aid in spill detection?

### ***Notification***

Were proper procedures followed in notifying government agencies? Were notifications prompt?

Was management notified promptly?

Was management response appropriate?

Was the Facility/company notified promptly? If so, why, how, and who? If not, why not?

### ***Assessment/Evaluation***

Was the magnitude of the problem assessed correctly at the start?

What means were used for this assessment?

Are any guides or aids needed to assist spill evaluation?

What sources of information were available on winds and on water currents?

Is our information adequate?

## ***Assessment/Evaluation (Cont'd)***

Was this information useful (and used) for spill trajectory forecasts? Were such forecasts realistic?

Do we have adequate information on product properties?

Do we need additional information on changes of product properties with time, i.e., as a result of weathering and other processes?

## ***Mobilization***

What steps were taken to mobilize spill countermeasures?

What resources were used?

Was mobilization prompt?

Could it have been speeded up or should it have been?

What about mobilization of manpower resources?

Was the local spill cooperative used appropriately?

How could this be improved?

Was it appropriate to mobilize the Facility/company resources and was this promptly initiated?

What other corporate resources are available and have they been identified and used adequately?

## ***Response - Strategy***

Is there an adequate spill response plan for the location?

Is it flexible enough to cope with unexpected spill events?

Does the plan include clear understanding of local environmental sensitivities?

What was the initial strategy for response to this spill?

Is this strategy defined in the spill plan?

How did the strategy evolve and change during this spill and how were these changes implemented?

What caused such changes?

Are there improvements needed? More training?

## ***Response - Resources Used***

What resources were mobilized?

How were they mobilized?

How did resource utilization change with time? Why?

Were resources used effectively?

- Contractors
- Government agencies
- Company resources
- Cooperatives
- Volunteers
- Consultants
- Other (e.g., bird rescue centers)

What changes would have been useful?

Do we have adequate knowledge of resource availability?

Do we have adequate knowledge of waste disposal capabilities?

## ***Response - Effectiveness***

Was containment effective and prompt?

How could it have been improved?

Should the location or the local cooperative have additional resources for containment?

Was recovery effective and prompt?

How could it have been improved?

Should the location or the local cooperative have additional resources for recovery of spilled product?

Was contaminated equipment disposed of promptly and safely?

Was there adequate in-house product separation, recovery, and disposal?

How could it have been improved?

Was there adequate outside disposal resources available?

## ***Command Structure***

Who was initially in charge of spill response?  
 What sort of organization was initially set up?  
 How did this change with time? Why?  
 What changes would have been useful?  
 Was there adequate surveillance?  
 Should there be any changes?  
 Were communications adequate?  
 What improvements are needed? Hardware, procedures, etc.  
 Was support from financial services adequate? Prompt?  
 Should there be any changes?  
 Is more planning needed?  
 Should financial procedures be developed to handle such incidents?

## ***Measurement***

Was there adequate measurement or estimation of the volume of product spilled?  
 Was there adequate measurement or estimation of the volume of product recovered?  
 Was there adequate measurement or estimation of the volume of product disposed of?  
 Should better measurement procedures be developed for either phase of operations?  
 If so, what would be appropriate and acceptable?

## ***Government Relations***

What are the roles and effects of the various government agencies which were involved?  
 Was there a single focal point among the government agencies for contact?  
 Should there have been better focus of communications to the agencies?  
 Were government agencies adequately informed at all stages?  
 Were too many agencies involved?  
 Are any changes needed in procedures to manage government relations?



## ***Government Relations (Cont'd)***

Examples of affected U.S. agencies (there may be others):

- U.S. Coast Guard
- Environmental Protection Agency
- National Oceanographic Atmospheric Administration
- Dept of Fish and Wildlife
- State Parks
- Harbors and Marinas
- States
- Cities
- Counties

Was there adequate agreement with the government agencies on disposal methods?

Was there adequate agreement with the government agencies on criteria for cleanup?

How was this agreement developed?

Were we too agreeable with the agencies in accepting their requests for specific action items (e.g., degree of cleanup)?

Should there be advance planning of criteria for cleanup, aimed at specific local environmentally sensitive areas? (Such criteria should probably also be designed for different types of product.)

## ***Public Relations***

How were relations with the media handled?

What problems were encountered?

Are improvements needed?

How could public outcry have been reduced? Was it serious?

Would it be useful to undertake a public information effort to "educate" reporters about product and effects to it if spilled?

These areas should be investigated shortly after the incident to assure that actions taken are fresh in peoples' minds.

## APPENDIX F

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### DISPOSAL PLAN

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## WASTE MANAGEMENT

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### OVERVIEW

A major oil spill response would generate significant quantities of waste materials ranging from oily debris and sorbent materials to sanitation water and used batteries. All these wastes need to be classified and separated (i.e., oily, liquid, etc.), transported from the site, and treated and/or disposed of at approved disposal sites. Each of these activities demands that certain health and safety precautions be taken, which are strictly controlled by federal and state laws and regulations. This section provides an overview of the applicable state regulations governing waste disposal, and a discussion of various waste classification, handling, transfer, storage, and disposal techniques. It is the responsibility of the Company's designated Disposal Specialist to manage waste disposal needs during an oil spill cleanup.

### WASTE CLASSIFICATION

#### ***Solid Wastes***

A solid waste is defined as any discarded material provided that it is not specifically excluded under the regulations. These exclusions cover materials such as domestic sewage and mixtures of sewage discharged through a sewer system or industrial wastewater point source discharges.

A discarded material is any material which is abandoned (disposed of, burned or incinerated) or accumulated, stored or treated prior to being abandoned. A discarded material is also any material recycled or any material considered inherently wastelike. Recycled material is considered solid waste when used in a manner constituting disposal, placed on land or burned for energy recovery.

A solid waste may be considered a hazardous waste. A solid waste, as defined above, may be a hazardous waste if it is not excluded from regulation and is either a listed hazardous waste or exhibits the characteristics of a hazardous waste. A solid waste exhibits the characteristics of a hazardous waste if it exceeds the thresholds established in determining the following:

- 1) ignitability
- 2) corrosivity
- 3) reactivity
- 4) toxicity

A solid waste may also become a hazardous waste if it is mixed with a listed hazardous waste or, in the case of any other waste (including mixtures), when the waste exhibits any of the characteristics identified above.

#### ***Oily - Liquid Wastes***

Oily liquid wastes (i.e., oily water and emulsions) that would be handled, stored, and disposed of during response operations are very similar to those handled during routine storage and transfer operations. The largest volume of oily liquid wastes would be produced by recovery operations

## **WASTE CLASSIFICATION (Cont'd)**

### ***Oily - Liquid Wastes (Cont'd)***

(e.g., through the use of vacuum devices or skimmers). In addition, oily water and emulsions would be generated by vehicle operations (e.g., spent motor oils, lubricants, etc.), and equipment cleaning operations.

### ***Non-Oily - Liquid Wastes***

Response operations would also produce considerable quantities of non-oily liquid wastes. Water and other non-oily liquid wastes would be generated by the storage area and stormwater collection systems, vessel and equipment cleaning (i.e., water contaminated with cleaning agents), and office and field operations (i.e., sewage, construction activities).

### ***Oily - Solid/Semi-Solid Wastes***

Oily solid/semi-solid wastes that would be generated by containment and recovery operations include damaged or worn-out booms, disposable/soiled equipment, used sorbent materials, saturated soils, contaminated beach sediments, driftwood, and other debris.

### ***Non-Oily - Solid/Semi-Solid Wastes***

Non-oily solid/semi-solid wastes would be generated by emergency construction operations (e.g., scrap, wood, pipe, and wiring) and office and field operations (i.e., refuse). Vessel, vehicle, and aircraft operations also produce solid wastes.

## **WASTE HANDLING**

A primary concern in the handling of recovered oil and oily debris is contaminating unaffected areas or recontaminating already cleaned areas. Oily wastes generated during the response operations would need to be separated by type and transferred to temporary storage areas and/or transported to incineration or disposal sites. Proper handling of oil and oily wastes is imperative to ensure personnel health and safety.

### ***Safety Considerations***

Care would be taken to avoid or minimize direct contact with oily wastes. All personnel handling or coming into contact with oily wastes would wear protective clothing. A barrier cream can be applied prior to putting on gloves to further reduce the possibility of oily waste absorption. Safety goggles would be worn by personnel involved in waste handling activities where splashing might occur. Any portion of the skin exposed to oily waste would be washed with soap and water as soon as possible. Decontamination zones would be set up during response operations to ensure personnel are treated for oil exposure.

### ***Waste Transfer***

During response operations, it may be necessary to transfer recovered oil and oily debris from one point to another several times before the oil and oily debris are ultimately recycled, incinerated or disposed of at an appropriate disposal site. Depending on the location of response operations, any or all of the following transfer operations may occur:

## WASTE HANDLING (Cont'd)

### *Waste Transfer (Cont'd)*

- From portable or vessel-mounted skimmers into flexible bladder tanks, storage tanks of the skimming vessel itself, or a barge.
- Directly into the storage tank of a vacuum device.
- From a skimming vessel or flexible bladder to a barge.
- From a vacuum device storage tank to a barge.
- From a barge to a tank truck.
- From a tank truck to a processing system (e.g., oil/water separator).
- From a processing system to a recovery system and/or incinerator.
- Directly into impermeable bags that, in turn, are placed in impermeable containers.
- From containers to trucks.

There are four general classes of transfer systems that may be employed to affect oily waste transfer operations:

- **Pumps:** Rotary pumps, such as centrifugal pumps, may be used when transferring large volumes of oil, but they may not be appropriate for pumping mixtures of oil and water. The extreme shearing action of centrifugal pumps tends to emulsify oil and water, thereby increasing the viscosity of the mixture and causing low, inefficient transfer rates. The resultant emulsion would also be more difficult to separate into oil and water fractions. Lobe or "positive displacement" pumps work well on heavy, viscous oils, and do not emulsify the oil/water mixture. Double-acting piston and double acting diaphragm pumps are reciprocating pumps that may also be used to pump oily wastes.
- **Vacuum Systems:** A vacuum truck may be used to transfer viscous oils but they usually pick up a very high water/oil ratio.
- **Belt/Screw Conveyors:** Conveyors may be used to transfer oily wastes containing a large amount of debris. These systems can transfer weathered debris laden oil either horizontally or vertically for short distances (i.e., 10 feet) but are bulky and difficult to set up and operate.
- **Wheeled Vehicles:** Wheeled vehicles may be used to transfer liquid wastes or oily debris to storage or disposal sites. These vehicles have a limited transfer volume (i.e., 100 barrels) and require good site access.

Table F-1 provides a comparative evaluation of 15 types of transfer systems that could be available for transfer operations.

## WASTE STORAGE

Interim storage of recovered oil, oily and non-oily waste would be considered to be an available means of holding the wastes until a final management method is selected. In addition, the segregation of wastes according to type would facilitate the appropriate method of disposal. The storage method used would depend upon:

## WASTE STORAGE (Cont'd)

- The type and volume of material to be stored.
- The duration of storage.
- Access.

During an oil spill incident, the volume of oil that can be recovered and dealt with effectively depends upon the available storage capacity. Typical short-term storage options are summarized in Table F-2. The majority of these options can be used either onshore or offshore. If storage containers such as bags or drums are used, the container must be clearly marked and/or color-coded to indicate the type of material/waste contained and/or the ultimate disposal option. Bladder or pillow tanks would be acceptable, if the available space can support the weight of both the container and the product.

Fuel barges may be the best option for temporary storage of oil recovered in open waters. Depending on size, these vessels may be able to hold up to 6,000 barrels of oil and water. The barge deck can be used as a platform for operating oil spill clean-up equipment and storing containment boom.

Empty barges have four to six feet draft which would increase when these barges are filled with oil or loaded with cargo. Consequently, they may not be able to enter shallow, nearshore waters.

It may be difficult to offload recovered oil stored inside barges. Due to natural forces which affect spilled oil, recovered oil may be very viscous or emulsified, rather than free-flowing. It may be necessary to use steam to heat viscous oil before pumping it from the barge.

Steel or rubber tanks can be used to store oil recovered near the shoreline. To facilitate offloading, demulsifiers may be used to break emulsions prior to placing the recovered substance into the barges or storage tanks.

Use of any site for storage is dependent on the approval of the local authorities. The following elements affect the choice of a potential storage site:

- Geology.
- Ground water.
- Soil.
- Flooding.
- Surface water.
- Slope.
- Covered material.
- Capacity.
- Climatic factors.
- Land use.
- Toxic air emissions.
- Security.
- Access.
- Public contact.

## WASTE STORAGE (Cont'd)

Temporary storage sites should use the best achievable technology to protect the environment and human health. They should be set up to prevent leakage, contact, and subsequent absorption of oil by the soil. The sites should be bermed (1 to 1.5 meters high) and double lined with plastic or visqueen sheets 6-10 millimeters or greater in thickness, without joints, prior to receiving loose and bagged debris. The edges of the sheet should be weighted with stones or earth to prevent damage by wind, and the sheet should be placed on a sand layer or an underfelt thick enough to prevent piercing. A reinforced access area for vehicles at the edge of the site should be provided. In addition, the oily debris should be covered by secured visqueen or tarps and an adequate stormwater runoff collection system for the size and location of the site would be utilized. Additionally, the sites should be at least 3 meters above mean sea level.

Oily debris can be hauled to approved temporary storage sites in visqueen lined trucks or other vehicles. Burnable, non-burnable, treatable and re-usable materials can be placed in well defined separate areas at temporary storage sites.

When the last of the oily debris leaves a temporary storage site, the ground protection would be removed and disposed of with the rest of the oily debris. Any surrounding soil which has become contaminated with oil would also be removed for disposal or treatment. If the soils were removed for treatment, they may be replaced if testing proves acceptable levels have been achieved. Treatment and remediation is encouraged when feasible. The temporary storage should be returned to its original condition.

## WASTE DISPOSAL

### *Techniques for Disposal of Recovered Oil*

Recovery, reuse, and recycling are the best choices for remediation of a spill, thereby reducing the amount of oily debris to be bermed onsite or disposed of at a solid waste landfill. Treatment is the next best alternative, but incineration and burning for energy recovery have more options within the state. There are some limitations and considerations in incinerating for disposal. Environmental quality of incineration varies with the type and age of the facility. Therefore, when incineration becomes an option during an event, local air quality authorities would be contacted for advice about efficiency and emissions of facilities within their authority. Approval of the local air authorities is a requirement for any incineration option. Landfilling is the last option. Final disposal at a solid or dangerous waste landfill is the least environmentally sound method of dealing with a waste problem such as oily debris.

During an oil spill incident, the Company would consult with the federal and state On Scene Coordinator (OSC) to identify the acceptable disposal methods and sites appropriately authorized to receive such wastes. The Company maintains a list of approved disposal sites that the Company satisfy local, state, and federal regulations and company requirements. This identification of suitable waste treatment and disposal sites would be prepared by a Disposal Specialist of the Company Spill Management Team in the form of an Incident Disposal Plan which must be authorized by the U.S. Coast Guard and/or the EPA. An Incident Disposal Plan would include predesignated interim storage sites, segregation strategies, methods of treatment and disposal for various types of debris, and the locations/contacts of all treatment and disposal site selections. Onsite treatment/disposal will be preferred.

## **WASTE DISPOSAL (Cont'd)**

### ***Techniques for Disposal of Recovered Oil (Cont'd)***

In order to obtain the best overall Incident Disposal Plan, a combination of methods should be used. There is no template or combination of methods that can be used in every spill situation. Each incident should be reviewed carefully to ensure an appropriate combination of disposal methods are employed.

The different types of wastes generated during response operations would require different disposal methods. To facilitate the disposal of wastes, they should be separated by type for temporary storage, transport and disposal. Table F-3 lists some of the options that would be available to segregate oily wastes. The table also depicts methods that may be employed to separate free and/or emulsified water from the oily liquid waste.

Table F-4 lists disposal sites available to receive RCRA Hazardous Waste.

The following is a brief discussion of some disposal techniques available for recovered oil and oily debris.

### ***Recycling***

This technique entails removing water from the oil and blending the oil with uncontaminated oil. Recovered oil can be shipped to refineries provided that it is exempt from hazardous waste regulations. There it can be treated to remove water and debris, and then blended and sold as a commercial product.

The Disposal Specialist is responsible for ensuring that all waste materials be disposed of at a company approved disposal site.

### ***Incineration***

This technique entails the complete destruction of the recovered oil by high temperature thermal oxidation reactions. There are licensed incineration facilities as well as portable incinerators that may be brought to a spill site. Incineration may require the approval of the local Air Pollution Control Authority. Factors to consider when selecting an appropriate site for onsite incineration would include:

- Proximity to recovery locations.
- Access to recovery locations.
- Adequate fire control.
- Approval of the local air pollution control authorities.

### ***In Situ Burning/Open Burning***

Burning techniques entail igniting oil or oiled debris and allowing it to burn under ambient conditions. These disposal techniques are subject to restrictions and permit requirements established by federal, state and local laws. They would not be used to burn PCBs, waste oil containing more than 1,000 parts per million of halogenated solvents, or other substances regulated by the EPA. Permission for *in situ* burning may be difficult to obtain when the burn takes place near populated areas.



## WASTE DISPOSAL (Cont'd)

As a general rule, *in situ* burning would be appropriate only when atmospheric conditions will allow the smoke to rise several hundred feet and rapidly dissipate. Smoke from burning oil will normally rise until its temperature drops to equal the ambient temperature. Afterwards, it will travel in a horizontal direction under the influence of prevailing winds.

### ***Landfill Disposal***

This technique entails burying the recovered oil in an approved landfill in accordance with regulatory procedures. Landfill disposal of free liquids is prohibited by federal law in the United States.

With local health department approval, non-burnable debris which consists of oiled plastics, gravel and oiled seaweed, kelp, and other organic material may be transported to a licensed, lined, approved municipal or private landfill and disposed of in accordance with the landfill guidelines and regulations. Landfill designation would be planned only for those wastes that have been found to be unacceptable by each of the other disposal options (e.g., waste reduction, recycling, energy recovery). Wastes would be disposed of only at company approved disposal facilities. The Disposal Specialist is responsible for ensuring that all waste materials are disposed of at a company approved disposal site. Disposal at a non-approved facility would require approval by the Disposal Specialist prior to sending any waste to such a facility.

TABLE F-1

## COMPARATIVE EVALUATION OF OIL SPILL TRANSFER SYSTEMS

CHARACTERISTICS OF TRANSFER SYSTEMS	CENTRIFUGAL PUMP	LOBE PUMP	GEAR PUMP	INTERMESHING SCREW	VALVE PUMP	FLEXIBLE IMPELLER	SCREW/AUGER PUMP	PROGRESSING CAVITY	PISTON PUMP	DIAPHRAGM PUMP	AIR CONVEYOR	VACUUM TRUCK	PORTABLE VACUUM PUMP	CONVEYOR BELT	SCREW CONVEYOR	WHEELED VEHICLES
High Viscosity Fluids	1	5	5	5	3	2	5	5	5	3	5	4	4	5	4	5
Low Viscosity Fluids	5	2	2	2	3	4	1	3	3	4	5	5	5	1	1	5
Transfer Rate	5	2	1	1	3	4	1	2	2	3	4	5	3	2	2	2
Debris Tolerance																
° Silt/Sand	5	3	1	1	1	4	5	5	3	4	5	5	5	5	5	5
° Gravel/Particulate	5	2	1	1	1	2	5	3	2	3	5	5	4	5	4	5
° Seaweed/Stringy Matter	2	3	4	3	2	2	4	4	3	3	4	4	3	5	4	5
Tendency to Emulsify Fluids	1	4	3	3	3	3	5	5	2	5	5	5	5	5	5	5
Ability to Run Dry	5	3	2	1	2	3	4	3	3	2	5	5	5	4	3	
Ability to Operate Continuously	5	3	2	2	2	3	3	3	4	4	3	3	3	3	2	4
Self Priming	1	3	2	2	2	5	1	5	4	4	5	5	5	5	5	
Suction/Head	2	3	2	2	3	4	1	5	5	2	5	4	3			
Back Pressure/Head	1	5	5	5	4	3	4	5	2	4	1	1	1	3	3	
Portability	5	3	3	2	4	4	3	2					2	1	1	
Ease of Repair	5	3	2	2	3	4	3	2	3	5	1	1	2	3	2	3
Cost	5	B	2	2	3	3	1	2	3	5	1	1	2	2	2	3
Comments	E,J	B	B	B,J		F	A	B	B,D	A,C,D	F,G,I	F,G,I	F,G			G,H,I

KEY TO RATINGS:  
KEY TO COMMENTS:

5 = Best; 1 = Worst

- A. Normally require remote power sources, thus are safe around flammable fluids.
- B. Should have a relief valve in the outlet line to prevent bursting hoses.
- C. Air powered units tend to freeze up in sub-freezing temperatures.
- D. Units with work ball valves are difficult to prime.
- E. Some remotely powered types are designed to fit in a tanker's butterworth hatch.
- F. Can also pump air at low pressure.
- G. Transfer is batch-wise rather than continuous.
- H. Waste must be in separate container for efficient transfer.
- I. Transportable with its own prime mover.
- J. High shear action tends to emulsify oil and water mixtures.

**TABLE F-2**  
**TEMPORARY STORAGE METHODS**

CONTAINER	ONSHORE	OFFSHORE	SOLIDS	LIQUIDS	NOTES
Barrels	x	x	x	x	May require handling devices. Covered and clearly marked.
Tank Trucks	x	x		x	Consider road access. Barge-mounted offshore.
Dump/Flat Bed Trucks	x		x		May require impermeable liner and cover. Consider flammability of vapors at mufflers.
Barges		x	x	x	Liquids only in tanks. Consider venting of tanks.
Oil Storage Tanks	x	x		x	Consider problems of large volumes of water in oil.
Bladders	x	x		x	May require special hoses or pumps for oil transfer.

**TABLE F-3****OILY WASTE SEPARATION AND DISPOSAL METHODS**

<b>TYPE OF MATERIAL</b>	<b>SEPARATION METHODS</b>	<b>DISPOSAL METHODS</b>
<b>LIQUIDS</b>		
Non-emulsified oils	Gravity separation of free water	Incineration  Use of recovered oil as refinery/production facility feedstock
Emulsified oils	Emulsion broken to release water by: <ul style="list-style-type: none"> <li>● heat treatment</li> <li>● emulsion breaking</li> <li>● chemicals</li> <li>● mixing with sand</li> <li>● centrifuge</li> <li>● filter/belt press</li> </ul>	Use of recovered oil as refinery/production facility feedstock
<b>SOLIDS</b>		
Oil mixed with sand	Collection of liquid oil leaching from sand during temporary storage  Extraction of oil from sand by washing with water or solvent  Removal of solid oils by sieving	Incineration  Use of recovered oil as refinery/production facility feedstock  Direct disposal  Stabilization with inorganic material  Degradation through land farming or composting
<b>TYPE OF MATERIAL</b>	<b>SEPARATION METHODS</b>	<b>DISPOSAL METHODS</b>
Oil mixed with cobbles or pebbles	Screening  Collection of liquid oil leaching from materials during temporary storage  Extraction of oil from materials by washing with water or solvent	Incineration  Direct Disposal  Use of recovered oil as refinery/production facility feedstock
Oil mixed with wood, seaweed and sorbents	Screening  Collection of liquid oil leaching from debris during temporary storage  Flushing of oil from debris with water	Incineration  Direct disposal  Degradation through land farming or composting for oil mixed with seaweed or natural sorbents
Tar balls	Separation from sand by sieving	Incineration  Direct disposal

**TABLE F-4****OFF-SITE RECEIVING FACILITIES OF RCRA HAZARDOUS WASTE – 12/14/1999**

<b>TEXAS</b>		
<b>COMPANY</b>	<b>CITY</b>	<b>EPA ID</b>
Allwaste Recovery Systems	Dallas	TXD102599339
Alpha Omega Recycling Inc.	Longview	TXD981514383
Basic Chemicals Co.	Houston	TXD008099079
Chemical Reclamation Services	Avalon	TXD046844700
Chemical Waste Management, Inc.	Port Arthur	TXD000838896
Destara Chemicals Inc.	Waller	TXD987984382
Detrex Chemical Industries	Arlington	TXD980626154
Disposal Systems, Inc.	Deer Park	TXD000719518
Disposal Systems of Corpus Christi	Corpus Christi	TXD000761254
Disposal Systems of Corpus Christi	Corpus Christi	TXD000001016
DuraTherm Inc.	San Leon	TXD981053770
Eltex Chemical & Supply Co.	Houston	TXD074196338
Empak	Deer Park	TXD097673149
Encycle Texas, Inc.	Corpus Christi	TXD008117186
Eurecat U.S. Incorporated	Pasadena	TXD106829963
GNB Battery Technologies [Exempt]	Frisco	TXD006451090
Gulf Chem. & Metallurgical Corp [Exempt]	Freeport	TXD074195678
Heat Energy Adv. Technology (Heat)	Dallas	TXD980624035
Safety-Kleen La Porte Inc.	LaPorte	TXD982290140
Malone Service Co.	Texas City	TXD005948740
Olin Corp.	Beaumont	TXD008097487

**TABLE F-4 (Cont'd)****OFF-SITE RECEIVING FACILITIES OF RCRA HAZARDOUS WASTE – 12/14/1999**

<b>TEXAS</b>		
<b>COMPANY</b>	<b>CITY</b>	<b>EPA ID</b>
Parkans Intl.	Houston	TXD008105959
Phibro-Tech	Garland	TXD047823265
Portawash Systems	Houston	TXD982561375
Pure Solve Inc.	Longview	TXD988084265
Recovery and Reclamation	Pecos	TXD988077640
Recovery Services, Inc.	Houston	TXD982560294
Safety-Kleen Corp.	Longview	TXD000747378
Safety-Kleen Corp.	El Paso	TXD000747394
Safety-Kleen Corp.	Corpus Christi	TXD000747402
Safety-Kleen Corp.	Amarillo	TXD000747410
Safety-Kleen Corp.	Lubbock	TXD000747436
Safety-Kleen Corp.	San Antonio	TXD000729400
Safety-Kleen Corp.	Pasadena	TXD000747386
Safety-Kleen Corp.	Wichita Falls	TXD000747428
Safety-Kleen Corp.	Missouri City	TXD010803203
Safety-Kleen Corp.	Orange	TXD061290276
Safety-Kleen Corp.	Abilene	TXD062287883
Safety-Kleen Corp.	Denton	TXD077603371
Safety-Kleen Corp.	McAllen	TXD083145656
Safety-Kleen Corp.	Waco	TXD980876015
Safety-Kleen Corp.	Irving	TXD981052061
Safety-Kleen Corp.	Fort Worth	TXD981053416
Safety-Kleen Corp.	Midland	TXD981056690

**TABLE F-4 (Cont'd)****OFF-SITE RECEIVING FACILITIES OF RCRA HAZARDOUS WASTE – 12/14/1999**

<b>TEXAS</b>		
<b>COMPANY</b>	<b>CITY</b>	<b>EPA ID</b>
Safety-Kleen Corp.	Deer Park	TXD055141378
Safety-Kleen Corp.	San Antonio	TXD052649027
Texas Ecologists, Inc.	Robstown	TXD069452340
Treatment One	Houston	TXD055135388
TXI Inc. [CK]	Midlothian	TXD007349327
Waste Control Specialists	Pasadena	TXD988088464
ZTT Minerals Inc.	Caldwell	TXD987995941

## APPENDIX G

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### WORST CASE DISCHARGE ANALYSIS AND SCENARIOS

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## INTRODUCTION

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The Company - Texas City Terminal is classified as a “Complex Facility” which operates in a High Volume Port Area.

“**Complex**” means a facility possessing a combination of transportation-related and non-transportation-related components that is subject to the jurisdiction of more than one Federal agency under section 311(j) of the Clean Water Act (CWA).

Complexes must perform discharge calculations for each jurisdictional agency and plan for the largest Worst Case Discharge Volume pursuant to the respective regulations. The USCG and EPA discharge volume calculations are described as follows:

### USCG Discharge Volume Calculation

- **Worst Case Discharge (WCD)**  
*Discharge from all piping carrying oil between the marine transfer manifold and the non-transportation-related portion of the Facility. The discharge from each pipe is calculated as follows:*  

$$\{[Maximum\ Discovery\ Time\ (hrs) = Maximum\ Shutdown\ Time\ (hrs.)] * Maximum\ Flow\ Rate\ (Bbls/Hr)\} = Total\ Line\ Fill\ (Bbls) = WCD\ (Bbls)$$
- **Maximum Most Probable Discharge (MMPD)**  
*1,200 Bbls or 10% of the WCD, whichever is less*
- **Average Most Probable Discharge (AMPD)**  
*50 Bbls or 1% of the WCD, whichever is less*

### EPA Discharge Volume Calculation

- **Worst Case Discharge**  
*100% of the largest single tank plus the volume of all tanks without adequate secondary containment.*
- **Medium Discharge**  
*Discharge greater than 2,100 gallons (50 Bbls) and less than or equal to 36,000 gallons (857 Bbls) or 10% of the capacity of the largest tank, whichever is less and not to exceed the WCD.*
- **Small Discharge**  
*Discharge of less than or equal to 2,100 gallons (50 Bbls), not to exceed the WCD.*

## INTRODUCTION (Cont'd)

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The following planning volume calculations must be performed to determine the required response resources for a Worst Case Discharge:

### ***Planning Volume for On-Shore Recovery (OSR)***

$$\text{OSR} = \text{WCD} * \% \text{ Oil On Shore} * \text{Emulsification Factor}$$

### ***Planning Volume for On-Water Recovery (OWR)***

$$\text{OWR} = \text{WCD} * \% \text{ Recovered Floating Oil} * \text{Emulsification Factor}$$

### ***Recovery Capacity (RC)***

$$\text{RC} = \text{OWR} * \text{On-Water Recovery Resource Mobilization Factors}$$

The recovery capacity determined by these equations is compared to the appropriate response capability caps from the EPA tables, the actual contracted response amount is the lesser of the two values. If the calculated capacity exceeds the capability caps, sufficient response resources should be available for twice the amount of the caps or up to the total planning volume, whichever is less. These response capability caps increased in 1998 and will potentially again in 2003.

### ***Scenario Types***

The occurrence of a Small, Medium, or Worst Case Discharge could be the result of any number of scenarios at the Facility including:

- Tank overfill and/or failure.
- Piping rupture.
- Piping leak, under pressure and not under pressure.
- Explosion or fire.
- Equipment failure (e.g. pumping system failure, relief valve failure, or other general equipment relevant to operational activities associated with internal or external facility transfers).

The response actions to each of these scenarios are outlined in Section 3.1 and Figures 3.1, 3.2, and 3.3. The response resources are identified in a quick reference format in Figure 5.1 with additional detail on equipment and manpower provided in Appendix C. Facility response personnel list/telephone numbers and other internal/external resources telephone numbers are detailed in Figures 2.2 and 2.5.

**EPA TABLES  
FOR WORST CASE DISCHARGE RESPONSE RESOURCES DETERMINATION  
AND REMOVAL CAPACITY PLANNING**

Spill Location	(1) Rivers & Canals			(2) Nearshore/Inland/Great Lakes		
	3 Days			4 Days		
Sustainability of on-water oil recovery		D	E		D	E
Oil Group	% Natural Dissipation	% Recovered Floating Oil	% Oil On Shore	% Natural Dissipation	% Recovered Floating Oil	% Oil On Shore
I. Non-persistent oils	80	10	10	80	20	10
II. Light crudes	40	15	45	50	50	30
III. Medium crudes and fuels	20	15	65	30	50	50
IV. Heavy crudes and fuels	5	20	75	10	50	70

**EMULSION FACTORS**

F	
<u>NON-PERSISTENT OIL</u>	
Group I	1.0
<u>PERSISTENT OIL</u>	
Group II	1.8
Group III	2.0
Group IV	1.4
Group V	1.0

**RESPONSE CAPABILITY CAPS (bbls/day)  
(Maximum Required Recovery levels)**

AREA	TIER 1	TIER 2	TIER 3
Rivers and Canals	1,875	3,750	7,500
Great Lakes	6,350	12,300	25,000
Inland/Nearshore	12,500	25,000	50,000

**ON-WATER OIL RECOVERY RESOURCE MOBILIZATION FACTORS**

AREA	TIER 1	TIER 2	TIER 3
River	.30	.40	.60
Inland/Nearshore Great Lakes	.15	.25	.40

NOTE: These mobilization factors are for total resources mobilized, not incremental response resources.

**RESPONSE TIME (hours)**

AREA	TIER 1	TIER 2	TIER 3
Higher volume port area	6	30	54
All Other	12	36	60

## RESPONSE CAPABILITY SCENARIOS

### Small/Average Most Probable Discharge = 50 Bbls EPA/20 Bbls USCG

A Small/Average Most Probable Discharge at this Terminal is considered to be a discharge that does not exceed 50 barrels (2,100 gallons).

#### **DESCRIPTION**

This size discharge would most likely occur due to minor equipment failures or human error. Examples may include, but not limited to,

- Pump seal leak
- Truck loading rack hose rupture
- Valve leak
- Container rupture
- Storage spill.

The most likely location for a discharge of this size would be leaking Facility piping and would be a naphtha product.

This size discharge would likely be noticed quickly and appropriate clean up measures taken since product transfers are monitored by Facility personnel. These types of small spills are typically contained on the grounds of the Facility (earthen material or concrete). Adverse weather conditions would not hinder response efforts during a small/average most probable discharge.

#### **PREVENTION**

Several steps can be taken to limit the number of occurrences and the amount of discharges. In particular, employees receive training periodically on the proper procedures for the loading of product to trucks. In addition, preventive maintenance of equipment is performed at regularly scheduled intervals to ensure that any weaknesses are discovered. Also, old or worn parts are replaced as needed. Annual product transfer and pipeline testing is the most important of these measures.

#### **ADDITIONAL COMMENTS**

While the Facility's OSRO or spill contractor would be notified and the best method for containment determined, such discharges that are contained at the Facility could be diverted to the product tanks that are not at maximum capacity.

The closest body of navigable water is Galveston Bay (see Figure 6.1). The storage tanks and the truck loading rack have adequate secondary containment so it is unlikely that a spill would reach the bay. Therefore, the threat to sensitive areas (see Section 6) is minimal. Finally, this type of spill is not one that would result in a chain reaction of failures of other equipment.

## RESPONSE CAPABILITY SCENARIOS

### Small /Average Most Probable Discharge = 50 Bbls EPA/ 20 Bbls USCG

#### **Response Requirement**

The Facility must identify sufficient resources, by contract or other approved means, to respond to a small discharge. The response resources must include at a minimum:

- 1,000' of containment boom or twice the length of the largest vessel that regularly conducts oil transfers to or from the Facility, whichever is greater, and the means of deploying and anchoring the boom at the Facility within one (1) hour of the detection of a spill.
- Oil recovery devices with an effective daily recovery capacity equal to the amount of oil discharged in a *Small /Average Most Probable Discharge* or greater which is available at the Facility within two (2) hours of the detection of an oil discharge.
- Oil storage capacity for recovered oily material equivalent to twice the effective daily recovery rate.

#### **Facility Response Resources/Capability**

The Facility will respond to a **Small Discharge/Average Most Probable Discharge** with the manpower detailed in Figures 2.2 and 4.1 as well as local contract resources as detailed in Figure 2.5, 5.1, and Appendix C.

- A fifty (50) barrel discharge typically will not escape the containment of the Facility. Severe rain and associated flooding would increase the chances.
- Surface drainage is towards the bay.
- If a fifty (50) barrel discharge escaped the Facility or occurred as the result of a marine transfer operation, response operations would be implemented immediately upon discovery.
- Oil containment and recovery devices can be secured from contract resources (with a minimum effective daily recovery capacity of fifty (50) barrels) and can be implemented at the Facility, as the situation demands.
- A minimum of 100 barrels of oil storage capacity for recovered oily material can be secured from contractor resources or made available within the Facility's storage facilities, as the situation demands.
- Additional recovery and storage equipment may be secured from other Company and contract resources, as the situation demands.

#### **Notes:**

- Equipment and manpower resources are detailed in Sections 4.0, 5.0, Figure 5.1, and Appendix C.
- Telephone references are provided in Figures 2.2 and 2.5.

## RESPONSE CAPABILITY SCENARIOS (Cont'd)

### Medium/Maximum Most Probable Discharge = 857 Bbls EPA / 202 Bbls USCG

A Medium/Maximum Most Probable Discharge at this Facility is considered to be a discharge that does not exceed 857 barrels (36,000 gallons).

#### **DESCRIPTION**

This size discharge would most likely occur due to a major equipment failure or during product transfer. Examples may include, but not limited to,

- Line or flange rupture
- Valve rupture
- Tank failure
- Tank overfill or failure
- Pipeline manifold rupture.

Because of dikes and other containment located throughout the Facility, it is very unlikely that the discharge would leave the Facility property or reach a navigable waterway before a spill containment could begin. Adverse weather conditions would increase the chances of a discharge entering Galveston Bay; however, the following response actions would minimize the impacts on sensitive areas.

#### **PREVENTION**

Several steps can be taken to limit the number of occurrences and the amount of discharges. In particular, employees receive training periodically on the proper procedures for transfers to and from tanks (e.g. proper tank gauging procedures). This training includes what to do in the event of an unusual occurrence such as equipment rupture (i.e. how to transfer spilled material to the miscellaneous tank or product tanks).

In addition, preventive maintenance of equipment is performed at regularly scheduled intervals to ensure that any weaknesses are discovered, such as tank inspections and hydrostatic testings. Old or worn parts are replaced as needed. Storage tank ages can be referenced in Appendix H.

#### **IMMEDIATE ACTION**

In the event of a medium size discharge, the OSRO or spill contractor would be notified. While waiting for the OSRO to arrive, qualified Facility personnel would complete internal and external notifications. Diked area containment of large spills can be handled with the use of contractor vacuum trucks. Medium/maximum most probable discharges resulting from tank failure would more than likely be contained by the dike.

The Facility sits in close proximity to Galveston Bay (see Figure 6.1) so the potential exists for a spill to reach navigable water. However, there are no environmentally sensitive areas in close proximity (see Figure 6.1) to the Facility, so damage to sensitive habitat would be minimal. Finally, the most likely chain reaction of failure would be fires resulting from accidental spark or downed power lines.



## RESPONSE CAPABILITY SCENARIOS (Cont'd)

### Medium/Maximum Most Probable Discharge = 857 Bbls EPA / 202 Bbls CG

#### ***Response Requirement***

The Facility shall identify sufficient response resources, by contract or other approved means, to respond to a Medium/Maximum Most Probable Discharge. The response resources shall, as appropriate, include:

- Oil recovery devices with an effective daily recovery capacity equal to 50% of the *Medium/Maximum Most Probable Discharge* volume must be capable of arriving on scene within 6 hours.
- Sufficient quantity of containment boom must arrive within 6 hours for oil collection and containment and for protection of fish and wildlife and sensitive environments, as appropriate.
- Temporary storage capacity equal to twice the daily recovery capacity must be available.

#### ***Facility Response Resources/Capability***

The Facility will initially respond to a ***Medium/Maximum Most Probable Discharge*** with a similar response to the Small Discharge. Additional response resources will be activated from an Oil Spill Removal Organization(s) (OSRO) as detailed in Figures 2.5, 5.1, and Appendix C and will arrive within 6 hours.

- An 857-barrel discharge could occur from Facility piping. Severe rain and associated flooding would increase the chances of an oil spill leaving the property.
- Surface drainage is towards the bay.
- Oil recovery devices with an effective daily recovery capacity of 600 Bbls (50% of the Medium/Maximum Most Probable Discharge volume) secured from the OSRO(s) will be on scene within 6 hours.
- 857 Bbls of oil storage capacity for recovered oily material will be secured from the OSRO(s) and/or made available within the Facility's storage facilities.
- Containment boom for oil collection and containment and for protection of fish and wildlife and sensitive areas will be secured from the OSRO(s) in the event that the spill escapes the boundaries of the Facility and impacts the storm water drainage channels and/or Galveston Bay.

#### ***Notes:***

- Equipment and manpower resources are detailed in Sections 4.0, 5.0, Figure 5.1, and Appendix C.
- Telephone references are provided in Figure 2.2 and 2.5.

**RESPONSE CAPABILITY SCENARIOS (Cont'd)****Worst Case Discharge = (b) (7)(F)**

A worst case discharge at this Facility is considered to be a discharge that does not exceed (b) (7)(F)

**Description**

This size discharge would most likely occur due to a natural disaster or catastrophic event. Examples may include, but not be limited to:

- Tank fire
- Catastrophic tank shell failure
- Hurricane/Tornado-induced spills
- Pipeline manifold rupture

The type of material that could be discharged is currently a naphtha product in the largest tank (22).

A sudden failure of a transfer line from the manifolds to the dock is the most likely cause for a release of product to enter Galveston Bay.

Diking and containment areas are located throughout the Facility. For a discharge of this size to reach a navigable waterway, or leave the Facility property, diking would have to be damaged or destroyed (breached).

This spill type is one that would result in a chain reaction of failures of other equipment.

**Prevention**

For a worst case discharge caused by a natural disaster, preparedness is more appropriate than prevention. The Facility employees receive training periodically on the proper procedures to deal with a natural disaster. Employees are also trained in steps to follow if the Facility must be evacuated (due to a tank fire or other emergency).

In addition, prevention maintenance of tanks is performed at regularly scheduled intervals (to ensure that any weaknesses are discovered). Note that tanks can be expected, due to their shape and due to product weight, to fare very well during severe weather.

**Worst Case Discharge and Adverse Weather**

Calculation of response equipment needs for a worst case discharge are given later in this Appendix. These calculations take into account adverse weather. Severe rain events and associated flooding would also increase the chances of an oil spill from leaving the property.

Nevertheless, boom could be deployed as an initial measure to reduce the potential for any off-site drainage from a spill that may unfortunately occur concurrently with a severe rain event, associated flooding, or a hurricane.



## RESPONSE CAPABILITY SCENARIOS (Cont'd)

### Worst Case Discharge = (b) (7)(F)

#### **Response Requirement**

The Facility shall identify sufficient response resources, by contract or other approved means, to respond to a worst case discharge to the maximum extent practicable. The response resources shall, as appropriate, include:

- All resources shall be capable of arriving at the Facility within the applicable response tier requirements (Tier 1 = 6 hours; Tier 2 = 30 hours; Tier 3 = 54 hours).
- Oil recovery devices with an effective daily recovery capacity equal to the lesser of 50% of the WCD or the response caps. If the daily recovery rate exceeds the applicable contracting caps (see Table) then the Facility must identify additional resources equal to twice the cap or the amount necessary to reach the calculated planning volume.
- Temporary storage capacity equal to twice the daily recovery capacity.
- At least 20% of the on-water response equipment should be capable of operating in water of 6 feet or less depth.
- Containment boom for oil collection and containment and for protection of areas of environmental sensitivity or economic importance.
- Identify resources capable of responding to a shoreline clean-up operation involving the calculated volume of oil and emulsified oil that might impact the affected shoreline.

#### **Facility Response Resources/Capability**

The Facility will respond to a **Worst Case Discharge (WCD)** initially with a similar response as identified for a Small/Average Most Probable or Medium/Maximum Most Probable Discharge. Additional OSRO(s) will be activated as the situation demands. The response resources will be capable of arriving within the required response tiers and will include:

- Oil recovery devices with an effective daily recovery capacity equal to the lesser of 50% of the WCD or the response caps will be secured from the OSRO(s) and other Company resources. Any amount in excess of the required caps will be contracted for and responded to as part of the same response effort.
- Temporary storage capacity equal to twice the daily recovery capacity will be secured from OSRO(s), other Company resources, or made available within the Facility's storage facilities.
- At least 20% of the on-water response equipment secured from the OSRO(s) and other Company resources will be capable of operating in water of 6 feet or less depth.
- Containment boom for oil collection and containment and for protection of fish and wildlife and sensitive environments and socio-economic sensitivities will be secured from the OSRO(s) and other Company resources.
- Resources capable of responding to a shoreline clean-up operation involving the calculated volume of oil and emulsified oil that might impact the shoreline will be secured from the OSRO(s) and other Company resources.
- Overall response operations will be conducted under the Incident Command System with adequate Facility and Contract Response personnel to continue operations for a minimum of seven (7) days.

**RESPONSE CAPABILITY SCENARIOS (Cont'd)****Worst Case Discharge = (b) (7)(F)*****Facility Response Resources/Capability (Cont'd)***

In the unlikely event of a spill leaving the property, it would probably enter navigable water at Galveston Bay.

***Notes:***

- Equipment and manpower resources are detailed in Sections 4.0, 5.0, Figure 5.1, and Appendix C.
- Telephone references are provided in Figures 2.2 and 2.5.

**RESPONSE CAPABILITY SCENARIOS (Cont'd)**

<b>U.S. Environmental Protection Agency Discharge Calculations</b>	
<b><i>Worst Case Discharge (WCD) Calculations</i></b>	
<b>WCD</b>	= 100 % of the largest single tank = 100% of Tank 22 (b) (7)(F) = (b) (7)(F)
<b><i>Medium Discharge (MD) Calculations</i></b>	
<b>MD</b>	= Greater than 50 Bbls and less than or equal to 857 Bbls <or> 10% of the capacity of the largest tank (whichever is less) = >50 Bbls and # 857 Bbls <or> (b) (7)(F) = 857 Bbls
<b><i>Small Discharge (SD) Calculations</i></b>	
<b>SD</b>	= Less than or equal to 50 Bbls = 50 Bbls

**RESPONSE CAPABILITY SCENARIOS (Cont'd)**

## U.S. Coast Guard Discharge Calculations

### *Worst Case Discharge (WCD) Calculations:*

Line Fill Data:

Maximum time to discover release  
Maximum time to shut down  
Maximum flow rate (historical)  
Maximum line fill

(b) (7)(F)

Total Line Fill Volume = TLFV

Simultaneous Line Operations = SLO

Maximum Discovery Time = MDT

Maximum Shut Down Time = MSDT

Maximum Flow Rate = MFR

$$\text{WCD} = [(\text{MDT} + \text{MSDT}) * \text{MFR} * \text{SLO}] + \text{TLFV}$$

= (b) (7)(F)

$$\text{MMPD} = 1,200 \text{ Bbls} <\text{or}> 10\% \text{ of the WCD (whichever is less)}$$

= 1,200 Bbls &lt;or&gt; (b) (7)(F)

= 1,200 Bbls &lt;or&gt;

= (b) (7)(F)

$$\text{AMPD} = 50 \text{ Bbls} <\text{or}> 1\% \text{ of the WCD (whichever is less)}$$

= 50 Bbls &lt;or&gt; (b) (7)(F)

= (b) (7)(F)

**RESPONSE CAPABILITY SCENARIOS (Cont'd)**

**U.S. DOT PHMSA  
Discharge Volume Calculations**

***DOT Pipelines***

The worst case discharge is calculated by using the method identified under 49 CFR 194.105(b)(1) - The pipeline's maximum release time in hours, plus the maximum shutdown response time in hours, multiplied by the maximum flow rate expressed in barrels per hour, plus the largest line drainage volume after shutdown of the line section. The following calculations are used to determine the worst case discharge:

(b) (7)(F)

***DOT Breakout Tank (Not Applicable)***

The Facility does not have DOT breakout tanks. Where applicable, permissible reductions are allowed for breakout tank worst case discharge volumes:

<u>Spill Prevention Measures</u>	<u>Percent Reduction Allowed</u>
Secondary containment capacity greater than 100% capacity of tank and designed according to NFPA 30.	50%
Built/repared to API Std 620/650/653.	10%
Overfill protection according to API RP 2350	5%
Testing/cathodic protection designed according to API Std 650/651/653.	5%
Tertiary containment/drainage/treatment NFPA 30	5%
Maximum allowable credit	75%

**RESPONSE CAPABILITY SCENARIOS (Cont'd)****Planning Distance Calculation**  
***"Oil Transport on Tidal - Influence Areas"***

- Non-persistent oils - planning distance = 5 miles ebb and flood tide.

## Texas City Terminal Response Planning Volume Calculations

Location Data			
Location Type	Nearshore/Inland		
Port Type	High Volume Port		
WCD Product Type	Naphtha		
Product Group	1		
Capacity of the Largest Single Tank (bbls)	(b) (7)(F)		
Discharge Volumes/Calculations			
Average Most Probable or Small Discharge (bbls)	(b) (7)(F)		
Maximum Most Probable or Medium Discharge (bbls)	(b) (7)(F)		
<b>Worst Case Discharge - Based on EPA criteria (bbls)</b>	(b) (7)(F)		
EPA WCD Calculation: 100% * Capacity of the Largest Single Tank			
Selected Calculation Factors (Based on EPA Tables)			
Removal Capacity Planning Volume - Percent Natural Dissipation	80%		
Removal Capacity Planning Volume - Percent Recovered Floating Oil	20%		
Removal Capacity Planning Volume - Percent Oil Onshore	10%		
Emulsification Factor	1.0		
Tier 1 - On Water Oil Recovery Resource Mobilization Factor	15%		
Tier 2 - On Water Oil Recovery Resource Mobilization Factor	25%		
Tier 3 - On Water Oil Recovery Resource Mobilization Factor	40%		
Response Planning Volume Calculation			
On-Water Recovery Volume (bbls)	(b) (7)(F)		
Shoreline Recovery Volume (bbls)	(b) (7)(F)		
Shoreline Cleanup Volume (bbls)	(b) (7)(F)		
	Tier 1	Tier 2	Tier 3
On-Water Recovery Cpcty (bbls/day)	6,633	11,056	17,689
Shallow Water Resp Cpblty (bbls/day)	1,327	2,211	3,538
Storage Capacity (bbls/day)	13,267	22,111	35,378
On-Water Response Caps (bbls/day)	12,500	25,000	50,000
Additional Response Req'd (bbls/day)	0	0	0
Response Time (hrs)	6	30	54

## APPENDIX H

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### HAZARD EVALUATION

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## Hazard Identification

### ***Loading / Unloading of Transportation Vehicles***

The Facility conducts loading of tank trucks and vessels operations. These operations are typically conducted as follows:

TRUCK LOADING	
<b>Loading Bays:</b>	14
<b>Loading Rate:</b>	600 gpm ( <i>per truck/per loading spot</i> )
<b>Truck Capacity:</b>	9,000 gallons ( <i>maximum</i> )
<b>Simultaneous Operations:</b>	52 loading at a time
<b>Loads per day:</b>	32 trucks per day ( <i>average</i> )
<b>Products:</b>	Naphthas, Distillates, Organic Chemicals

RAIL LOADING	
<b>Loading Spots:</b>	19
<b>Loading Rate:</b>	600 gpm ( <i>per rail/per loading spot</i> )
<b>Rail Capacity:</b>	23,000 gallons ( <i>maximum</i> )
<b>Simultaneous Operations:</b>	18 loading at a time
<b>Loads per day:</b>	10 tank cars per day ( <i>average</i> )
<b>Products:</b>	Naphthas, Distillates, Organic Chemicals

MARINE OPERATIONS	
<b>Transfer Points:</b>	12
<b>Offloading Rate:</b>	5,000 Bbls/Hr ( <i>maximum</i> )
<b>Simultaneous Operations:</b>	(12) operation ( <i>maximum</i> )
<b>Transfers per day:</b>	12 vessels/barges
<b>Products:</b>	Naphthas, Distillates, Organic Chemicals

## Hazard Identification (Cont'd)

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### ***Day-to-Day Operations***

The day-to-day operations at the Facility that may present a risk of discharging oil or releasing a hazardous substance are:

- Pipeline transfer operations
- Truck loading/unloading operations
- Marine loading/unloading operations

Work such as piping replacement/repair is rare, and would only be done on portions of the system that are isolated from the active system.

### ***Secondary Containment Volumes***

More detailed information regarding secondary containment volumes is provided in the SPCC Plan, which is maintained separately.

#### **Tanks:**

Secondary Containment volumes associated with each tank and/or transfer point are detailed on the "Hazard Identification Tanks" form located in this Appendix.

#### **Truck/Rail Containment:**

Drip pans are used at tank truck and tank car loading/unloading areas.

### ***Normal Daily Throughput***

The Normal Daily Throughput for the Facility:

Normal Daily Throughput	Average Daily Storage	Total Storage
3,500 Bbls/Day (Oil)	(b) (7)(F)	

The rate of flow from the pipeline system to tankage and the filling rate of the trucks is essentially fixed, and not a function of daily throughput. Thus changes in daily throughput would have no effect on potential discharge volumes.

The Facility has sufficient tank volume to handle any potential increase in pipeline throughput and the truck rack has sufficient capability to handle any potential increase in transfer capacity.

## HAZARD IDENTIFICATION TANKS

(Tank = any container that stores oil)

Container I.D.	Substance Stored (Oil & Haz. Substance)	Average Quantity Stored (Gallons)	Maximum Capacity (Gallons)	Container Type (i.e. floating roof, fixed roof, etc.)	Year Built	Potential Failure (Leak/Rupture/Overflow)	Rate of Flow	Failure / Cause (Record cause and date of any Tank failure which has resulted in a loss of tank contents)	Direction of Flow	Secondary Containment Capacity (Volume - Gallons) (Construction Material) (Drainage Type)
<b>South Tank Farm</b>										
E1	Gasoline/Fuel Oil/Refined Petroleum Products	(b) (7)(F)		IFR	2006	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	(b) (7)(F)
E2	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	2006	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
14	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1971	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
15	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1971	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
16	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1971	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
17	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1971	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
30	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	2008	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
31	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	2008	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
32	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	2008	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
33	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	2008	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3770	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1967	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
BW5	Oil Service			IFR	1968	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
BW6	Oil Service			IFR	1968	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
BW10	Oil Service			IFR	1966	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
BW11	Oil Service			IFR	1966	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
BW12	Oil Service			IFR	1966	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
213	Oil Service			IFR	1960	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
21	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1964	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
22	Napthas			EFR	1975	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
23	Napthas			IFR	1976	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
24	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	2006	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
25	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	2006	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
26	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1963	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	

Texas City Terminal

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Integrated Contingency Plan  
September 2010

## HAZARD IDENTIFICATION TANKS

(Tank = any container that stores oil)

Container I.D.	Substance Stored (Oil & Haz. Substance)	Average Quantity Stored (Gallons)	Maximum Capacity (Gallons)	Container Type (i.e. floating roof, fixed roof, etc.)	Year Built	Potential Failure (Leak/Rupture / Overflow)	Rate of Flow	Failure / Cause (Record cause and date of any Tank failure which has resulted in a loss of tank contents)	Direction of Flow	Secondary Containment Capacity (Volume - Gallons) (Construction Material) (Drainage Type)
South Tank Farm (Cont'd)										
27	Gasoline/Fuel Oil/Refined Petroleum Products	(b) (7)(F)		IFR	2006	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	(b) (7)(F)
28	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	2006	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
29	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	2006	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
960	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1954	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
18	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1964	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3724	Gasoline/Fuel Oil/Refined Petroleum Products			Fixed	1964	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3725	Gasoline/Fuel Oil/Refined Petroleum Products			Fixed	1964	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3726	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1964	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3727	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1964	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3728	Gasoline/Fuel Oil/Refined Petroleum Products			Fixed	1964	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3729	Gasoline/Fuel Oil/Refined Petroleum Products			Fixed	1964	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3744	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1965	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3745	Gasoline/Fuel Oil/Refined Petroleum Products			Fixed	1964	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3746	Gasoline/Fuel Oil/Refined Petroleum Products			Fixed	1975	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3747	Gasoline/Fuel Oil/Refined Petroleum Products			Fixed	1965	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3752	Gasoline/Fuel Oil/Refined Petroleum Products			Fixed	1964	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3760	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1965	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3761	Gasoline/Fuel Oil/Refined Petroleum Products			Fixed	1972	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3762	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1972	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3763	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1966	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	

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## HAZARD IDENTIFICATION TANKS

(Tank = any container that stores oil)

Container I.D.	Substance Stored (Oil & Haz. Substance)	Average Quantity Stored (Gallons)	Maximum Capacity (Gallons)	Container Type (i.e. floating roof, fixed roof, etc.)	Year Built	Potential Failure (Leak/Rupture/Overflow)	Rate of Flow	Failure / Cause (Record cause and date of any Tank failure which has resulted in a loss of tank contents)	Direction of Flow	Secondary Containment Capacity (Volume - Gallons) (Construction Material) (Drainage Type)
<b>South Tank Farm (Cont'd)</b>										
3764	Gasoline/Fuel Oil/Refined Petroleum Products	(b) (7)(F)		Fixed	1966	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	(b) (7)(F)
3765	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1967	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3766	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1975	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3767	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1975	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3768	Gasoline/Fuel Oil/Refined Petroleum Products			Fixed	1974	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3730	Gasoline/Fuel Oil/Refined Petroleum Products			Fixed	1963	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3773	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1976	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3775	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1976	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3776	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1976	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3777	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1975	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3741	Gasoline/Fuel Oil/Refined Petroleum Products			Fixed	1963	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3734	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1963	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
3736	Gasoline/Fuel Oil/Refined Petroleum Products			IFR	1963	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
D-66	Diesel Fuel			Horizontal	Unk	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
D-67	Diesel Fuel			Horizontal	Unk	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
PAT 3	Oily Water			Fixed	Unk	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
Fire Water Pump #4	Diesel			Fixed	1972	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
Fire Water Pump #66 Dock	Diesel			Fixed	1972	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
Fire Water Pump #67 Dock	Diesel			Fixed	1972	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	n/a	*	
	<b>Total Oil Storage Capacity</b>									

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September 2010

## HAZARD IDENTIFICATION TANKS

(Tank = any container that stores oil)

Container I.D.	Substance Stored (Oil & Haz. Substance)	Average Quantity Stored (Gallons)	Maximum Capacity (Gallons)	Container Type (i.e. floating roof, fixed roof, etc.)	Year Built	Potential Failure (Leak/Rupture/Overflow)	Rate of Flow	Failure / Cause (Record cause and date of any Tank failure which has resulted in a loss of tank contents)	Direction of Flow	Secondary Containment Capacity (Volume - Gallons) (Construction Material) (Drainage Type)
Mobile Storage										
L-Con Construction (The Hill)	Diesel	(b) (7)(F)		Mobile	Unk	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	na	*	(b) (7)(F)
L-Con Construction (The Hill)	Gasoline			Mobile	Unk	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	na	*	
L-Con Construction (flat bed trailer) (The Hill)	Diesel			Mobile	Unk	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	na	*	
L-Con Construction (Skid) (The Hill)	Diesel			Mobile	Unk	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	na	*	
Anchor Paint Contractor (Skid) (The Hill)	Diesel			Mobile	Unk	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	na	*	
Oiltanking new maintenance area	Gas			Mobile	2008	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	na	*	
Oiltanking new maintenance area	Diesel			Mobile	2008	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	na	*	
Oiltanking Locomotive Diesel (Rack 7 Area)	Diesel			Mobile	2008	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	na	*	
				Mobile Storage Areas						
Maintenance Shop	Various Petroleum Products			Drum (3-ave.)	Varies	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	na	*	
Bldg. 331	Used Oil			Drum (3-ave.)	Varies	Leak/Rupture/Overflow	Pinhole leak to catastrophic failure	na	*	

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POTENTIAL SPILL SOURCES AND CONTAINER IDENTIFICATION (Any container that stores oil)											
Equipment I.D.	Substation / Location	Substance Stored (Oil & Haz. Substance)	Average Quantity Stored (Gallons)	Maximum Capacity (Gallons)	Equipment Type (i.e. transformer, oil-filled equipment, etc.)	Year Built	Potential Failure	Rate of Flow	Failure / Cause (Record cause and date of any Tank failure which has resulted in a loss of tank contents)	Direction of Flow	Secondary Containment Capacity
TRANSFORMERS											
Westinghouse	M/T	Univolt Oil	(b) (7)(F)		Transformer	Unk.	N/A	Ground	N/A	Drainage Diagram	----
Westinghouse	M/T	Univolt Oil			Transformer	Unk.	N/A	Ground	N/A		----
Westinghouse	M/T	Univolt Oil			Transformer	Unk.	N/A	Ground	N/A		----
Westinghouse	M/T	Univolt Oil			Transformer	Unk.	N/A	Process Sewer	N/A		----
Westinghouse	M/T	Univolt Oil			Transformer	Unk.	N/A	Ground	N/A		----
Ferranti	M/T	Univolt Oil			Transformer	Unk.	N/A	Ground	N/A		----
Westinghouse	M/T	Univolt Oil			Transformer	Unk.	N/A	Ground	N/A		----
Westinghouse	M/T	Univolt Oil			Transformer	Unk.	N/A	Dike	N/A		(b) (7)(F)
Niagara	M/T	Univolt Oil			Transformer	Unk.	N/A	Ground	N/A		----
Hevi Duty	M/T	Univolt Oil			Transformer	Unk.	N/A	Dike	N/A		----
Westinghouse	M/T	Univolt Oil			Transformer	Unk.	N/A	Ground	N/A		----
Standard	M/T	Univolt Oil			Transformer	Unk.	N/A	Ground	N/A		----
Vantran	M/T	Univolt Oil			Transformer	Unk.	N/A	Ground	N/A		----
Delta Star	M/T	Univolt Oil			Transformer	Unk.	N/A	Ground	N/A		----
Delta Star	M/T	Univolt Oil			Transformer	Unk.	N/A	Process Sewer	N/A		----
Esco	M/T	Univolt Oil			Transformer	Unk.	N/A	Process Sewer	N/A		----
Westinghouse	M/T	Univolt Oil			Transformer	Unk.	N/A	Process Sewer	N/A		----
Westinghouse	M/T	Univolt Oil			Transformer	Unk.	N/A	Process Sewer	N/A		----
Westinghouse	M/T	Univolt Oil			Transformer	Unk.	N/A	Process Sewer	N/A		----
Westinghouse	M/T	Univolt Oil			Transformer	Unk.	N/A	Process Sewer	N/A		----

Texas City Terminal

HAZARD IDENTIFICATION SURFACE IMPOUNDMENTS (SI) (Surface Impoundment = natural topographic depression, man-made excavation, or diked area)						
SI Number	Substance Stored	Quantity Stored (Gallons)	Maximum Capacity (Gallons)	Surface Area	Year Built	Failure / Cause (Record cause and date of any IS failure which has resulted in the loss of IS contents)
		There are no surface impoundments used for product storage at this Facility				

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HAZARD IDENTIFICATION TANKS UNDERGROUND TANKS							
Tank Number	Substance Stored (Oil & Haz. Substance)	Quantity Stored (Gallons)	Maximum Capacity (Gallons)	Tank Type (ie. floating roof, fixed roof, etc.)	Year Built	Failure / Cause (Record cause and date of any Tank failure which has resulted in the loss of IS contents)	Containment Capacity (Gallons)
		There are no underground storage tanks at this Facility					



## Vulnerability Analysis

---

### ***Introduction***

The vulnerability analysis addresses the potential effects (i.e., to human health, property, or the environment) of an oil spill originating from the Facility. Section 6.0 of this Plan provides general guidance to the responder for "Spill Impact Considerations", addressing response options for many of the specific sensitivities detailed below.

The area potentially affected by a spill originating from the Facility has a number of characteristics, which require consideration in the event of a discharge.

- The Facility is located in an Industrial Area of Texas City, TX.
- Topography is slightly sloping to the bay.

(b) (7)(F)



### ***Schools***

According to the EPA's Oil Mapper software, the schools identified in Figure 6.1 are not anticipated to be impacted by a release from the Facility.

### ***Medical Facilities***

According to the EPA's Oil Mapper software, the medical facilities identified in Figure 6.1 are not anticipated to be impacted by a release from the Facility.

### ***Residential Areas***

Residential areas could potentially be impacted by emergency response activities disrupting traffic.

## Vulnerability Analysis (Cont'd)

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### ***Businesses***

Businesses in the vicinity could be impacted by emergency response activities disrupting traffic. Phone numbers for these businesses can be found in Figure 2.5.

NAME OF BUSINESS	
Applied Industrial Materials	1 Industrial Canal Rd. Texas City, TX 77592
Intercoastal Terminal	159 Levee Rd. Texas City, TX 77592
Stan Trans City Terminal	201 Dock Rd. Texas City, TX 77592
Valero	1301 Loop 197 South Texas City, TX 77592

### ***Major Transportation Routes***

Depending on the magnitude of the spill, waterway traffic could potentially be impacted in Galveston Bay.

### ***Fish and Wildlife, Wetlands, and other Sensitive Environments***

The shoreline and general environment in the area of the Facility is highly commercialized. The wildlife population is limited. The area surrounding the Facility is detailed in the applicable ACP. The maps in Figure 6.1 detail shoreline types and sensitive areas.

Flora and fauna are always present and are sensitive to the effects of a pollution incident. All environmental areas deserve protection from pollution, but they must be prioritized during a response so as to protect the most sensitive and susceptible areas to pollution.

During a response situation the USFWS and applicable state agencies should be contacted for information regarding wetlands and other sensitive environments. Upon contact the agencies will be able to:

- Identify and establish priorities for fish and wildlife, wetlands, and other sensitive environments requiring protection from any direct or indirect effects from a discharge.
- Identify potential environmental effects on fish and wildlife, wetlands, and other sensitive environments resulting from removal actions or countermeasures.

### ***Lakes and Streams***

A spill at the dock would flow into Galveston Bay.

The creeks and streams that may be potentially impacted by a discharge originating at the Facility are identified on the maps in Figure 6.1.

## **Vulnerability Analysis (Cont'd)**

---

### ***Endangered Flora and Fauna***

The endangered flora and fauna that may be potentially impacted by a discharge originating at the Facility are detailed in Figure 6.2.

### ***Recreational Areas***

The recreational areas that may be potentially impacted by a discharge originating at the Facility are detailed in Figure 6.1.

### ***Utilities***

No utilities were identified that could potentially be impacted by a release from the Facility.

### ***Other Areas of Economic Importance***

- Fishing could be impacted by a release.

## Analysis of the Potential for a Spill

---

The potential for a significant spill at the Facility is minimal due to the spill prevention measures that are in place and the operating procedures followed by facility personnel. The potential for a spill of sufficient magnitude to escape the Facility is very remote due to the spill mitigation measures inherent in the facility design.

The Facility's vulnerability to natural disaster is:

- Texas averages 124 tornadoes a year.
- Texas had 36 hurricanes between 1900 and 1996.

Spill prevention measures include a number of discharge detection methods and various inspection procedures described further in the SPCC Plan.

All personnel responsible for facility operations are qualified. New personnel receive on-the-job training working with experienced operating personnel as well as training in the areas of safety, spill prevention, emergency response, and applicable pollution prevention laws, rules and regulations. They become qualified prior to assuming unsupervised operating responsibilities.

Spill mitigation measures include facility designs intended to direct releases to containment areas where they can be promptly controlled and cleaned up.

## Reportable Oil Spill History

---

The Facility maintains a separate Oil Spill History file in the Facility office. The Facility's file contains the below listed information to the extent that such information is reasonably identifiable.

- Date of discharge.
- Location of discharge.
- Discharge cause(s).
- Material(s) discharged.
- Amount discharged.
- Amount of discharge that reached navigable waters.
- Amount recovered.
- Effectiveness and capacity of secondary containment.
- Clean-up actions taken.
- Steps taken to reduce possibility of recurrence.
- Total storage capacity of the tank(s) or impoundment(s) from which the material discharged.
- Enforcement actions.
- Effectiveness of monitoring equipment.
- Description of how spill was detected.

According to NRC reports the Facility has experienced no reportable spills as defined by 40 CFR 110 since being purchased by Oiltanking.

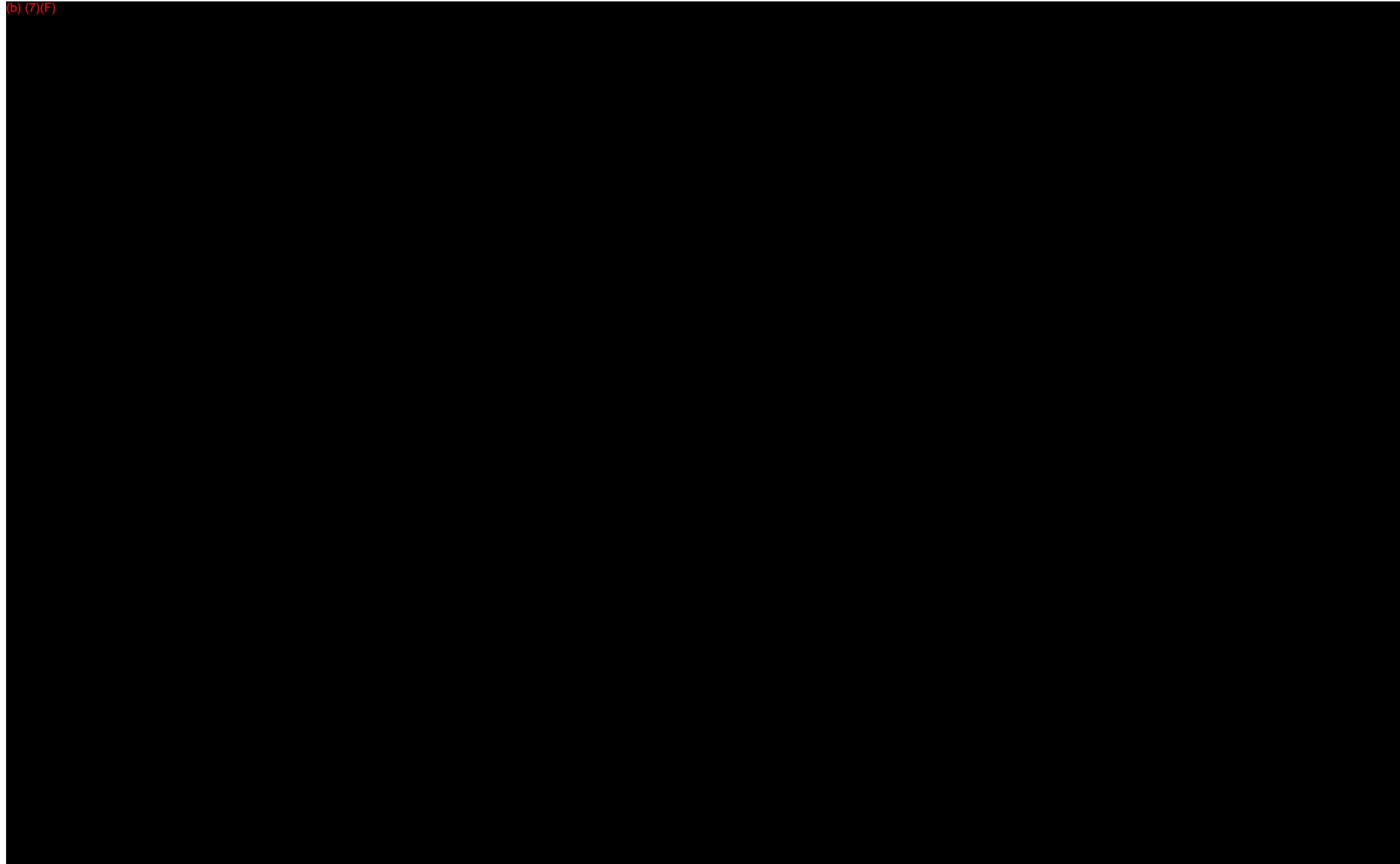
## Example Reportable Oil Spill History

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<b><i>Date of discharge.</i></b>	
<b><i>Location of discharge.</i></b>	
<b><i>Discharge cause(s).</i></b>	
<b><i>Material(s) discharged.</i></b>	
<b><i>Amount discharged.</i></b>	
<b><i>Amount of discharge that reached navigable waters.</i></b>	
<b><i>Amount recovered.</i></b>	
<b><i>Effectiveness and capacity of secondary containment.</i></b>	
<b><i>Clean-up actions taken.</i></b>	
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	
<b><i>Total storage capacity of the tank(s) or impoundment(s) from which the material discharged.</i></b>	
<b><i>Enforcement actions.</i></b>	
<b><i>Effectiveness of monitoring equipment.</i></b>	
<b><i>Description of how spill was detected.</i></b>	

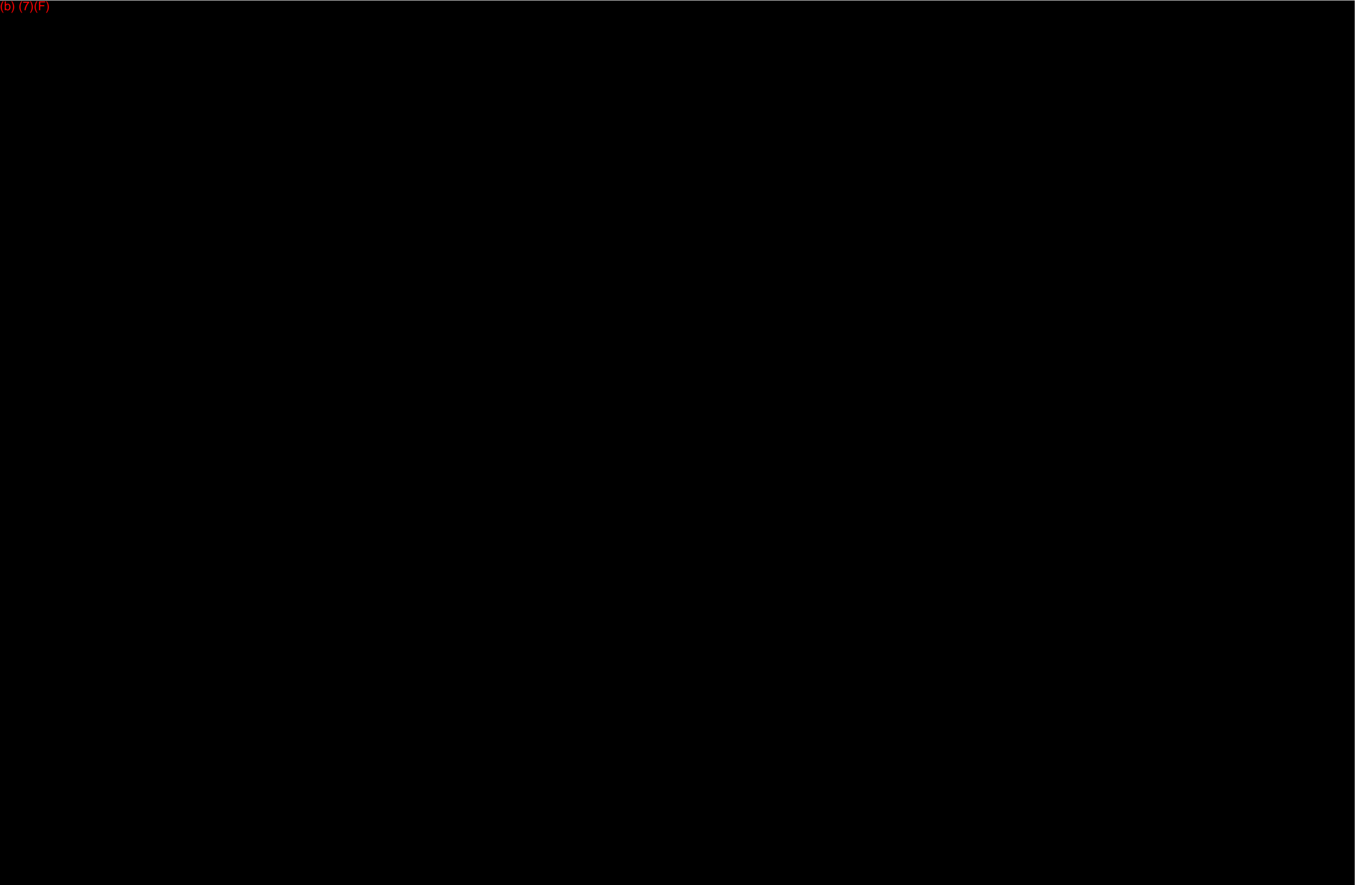
## **DRAINAGE DIAGRAM**

(b) (7)(F)





(b) (7)(F)



## APPENDIX I

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### DISCHARGE DETECTION SYSTEMS AND FACILITY SELF INSPECTIONS

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## **Discharge Detection**

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The Facility's discharge detection is by personnel. The Facility maintains separately from this Plan the following document which is related to Discharge Detection:

- Spill Prevention, Control, and Countermeasure (SPCC) Plan

The following is a summary of the instructions and procedures as detailed in the above listed document.

### ***Detection by Personnel***

- Daily Visual Inspections (including tanks, truck rack, secondary containment, aboveground piping, etc.) during operating personnel rounds.
- The entire terminal is adequately illuminated to provide security and safe operations at night.

### ***Automated Detection Systems***

- No automated system is in-place.

### ***Containment and Drainage Planning***

- Spill control is provided by drainage ditches, sumps, and the Pollution Abatement Tank (PAT) system.
- The loading/unloading racks are equipped with sumps which direct any spills to the PAT system.
- The drainage ditches are earthen or concrete.
- There are seven (7) sumps with an approximate volume of 750 gallons each.

## Security

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- (b) (7)(F) [REDACTED]
- [REDACTED]
- [REDACTED]

## Tank Inspection Checklist

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Facility Tanks are visually inspected daily and are thoroughly inspected as detailed in the Facility's SPCC Plan. The tanks are inspected against the following checklist at a minimum:

- Check tanks for leaks, specifically looking for:
  - Drip marks
  - Discoloration of tanks
  - Puddles containing spilled or leaked material
  - Corrosion
  - Cracks
  - Localized dead vegetation
  
- Check foundation for:
  - Cracks
  - Discoloration
  - Puddles containing spilled or leaked material
  - Settling
  - Gaps between tank and foundations
  - Damage caused by vegetation roots
  
- Check piping for:
  - Droplets of stored material
  - Discoloration
  - Corrosion
  - Bowing of pipe between supports
  - Evidence of stored material seepage from valves or seals
  - Localized dead vegetation

Records of the annual inspection are maintained as part of the Facility's SPCC Plan. These records are available for review at any time at the Facility Office.

## Secondary Containment Inspection Checklist

---

Facility Secondary Containment systems are visually inspected daily. The Secondary Containment systems are inspected against the following checklist:

- Dike or berm system
  - Level of precipitation in dike/available capacity
  - Operational status of drainage valves
  - Dike or berm permeability
  - Debris
  - Erosion
  - Permeability of the earthen floor of diked area
  - Location/status of pipes, inlets, drainage beneath tanks, etc.
- Secondary containment
  - Cracks
  - Discoloration
  - Presence of spilled or leaked material (standing liquid)
  - Corrosion
  - Valve conditions

Records of the daily and annual inspection are maintained in the Facility. These records are available for review at any time at the Facility Office.

## APPENDIX J

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### NATIONAL RESPONSE SYSTEM

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## **NATIONAL RESPONSE SYSTEM**

### **National Contingency Plan**

In 1968, the National Oil and Hazardous Substance Pollution Contingency Plan (NCP) was established to coordinate Federal activities for preventing oil spills and mitigating environmental damages when spills occur. During June 1970, this plan was incorporated as part of the Code of Federal Regulations and applied to all navigable waters and adjoining shorelines of the United States. The plan was recently modified (September 1994) to implement changes made to the Clean Water Act by the Oil Pollution Act of 1990.

To ensure adequate preplanning and provisions for responding to oil spills, the National Contingency Plan established the National Response Center, the National Response Team, the Regional Response Center, Regional Response Teams and the On-Scene Coordinator (Figure J1.1).

### **National Response Team (NRT)**

National planning and coordination for oil spill response is the responsibility of the National Response Team (NRT). The NRT is responsible for evaluating methods for responding to oil spills and hazardous substances spills, and recommending changes to the National Contingency Plan. The NRT also develops procedures to coordinate activities for federal, state and local governments, and private response organizations.

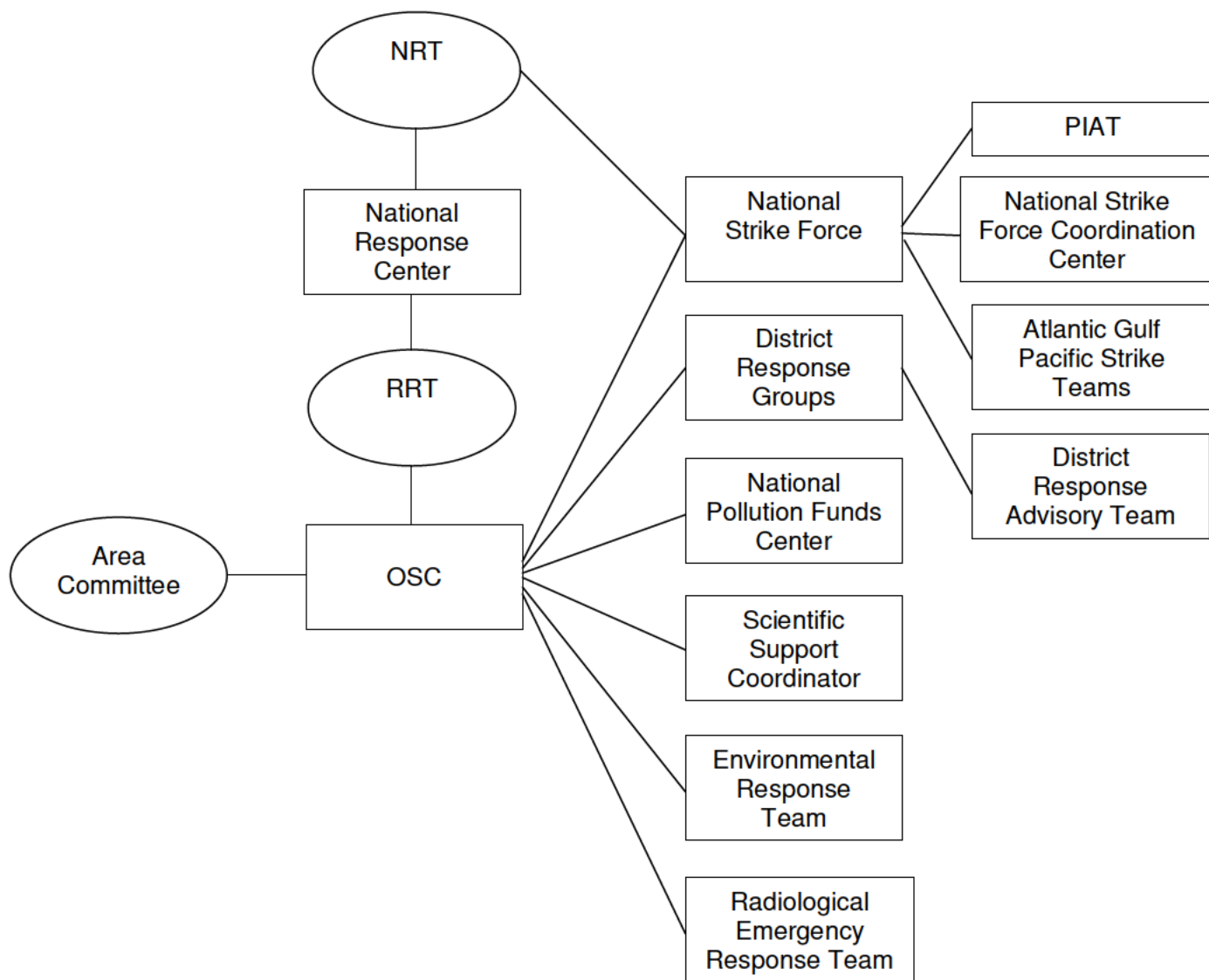
The NRT consists of representatives from each of the agencies shown in Figure J1.2. Normally, the NRT is chaired by the EPA representative while the USCG representative serves as the vice-chairman. If it is activated for spills within the coastal zone of the United States, the USCG representative will hold the chair.

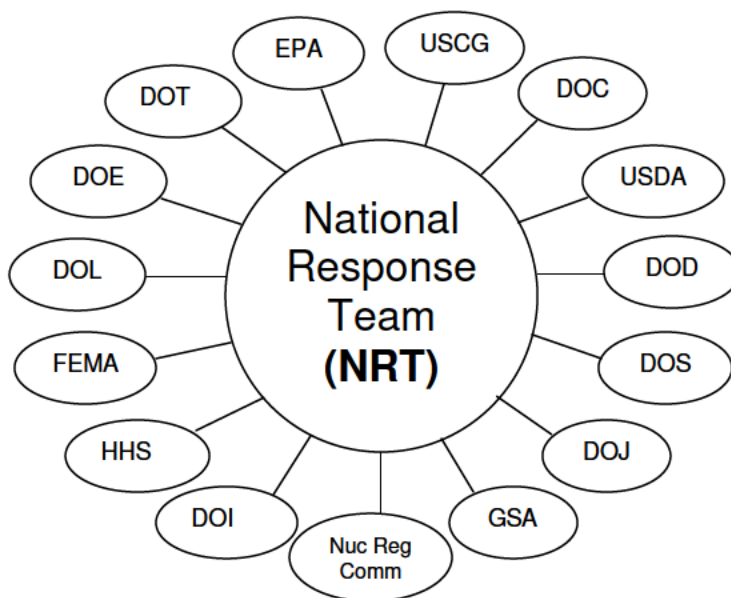
The NRT can be activated when an oil spill exceeds the capability of the Regional Response Team in which it occurs, crosses national boundaries, or presents a significant threat to a population, national policy, property, or national resources; or when requested by any NRT member.

Once activated, the NRT may:

1. Monitor the spill, evaluate reports from the On-Scene Coordinator (OSC), and recommend appropriate actions for abating the spill.
2. Request oil spill response resources from federal, state, and local governments or private agencies.
3. Coordinate the supply of equipment, personnel, or technical advice to the affected region from other regions or districts.



**FIGURE J-1.1****NATIONAL RESPONSE SYSTEM ORGANIZATION**

**FIGURE J-1.2****FEDERAL REPRESENTATION ON NATIONAL RESPONSE TEAM**

DOC	Department of Commerce Scientific expertise from NOAA for marine mammals & oil spill response	DOT	Department of Transportation Expertise on all modes of transporting oil & hazardous substances
DOD	Department of Defense Oil spill response equipment, ship salvage, and boarding & diving	EPA	Environmental Protection Agency Information on environmental impact of spills & provide scientific support coordination
DOE	Department of Energy Removal & disposal of radioactive contamination	FEMA	Federal Emergency Management Agency Coordinate civil emergency planning & mitigation efforts
DOH	Department of Health Assess health hazards associated with response operation & recommend steps for worker & public safety	GSA	General Services Administration Provides logistical and telecommunications support to federal agencies
DOI	Department of Interior Expertise on fish & wildlife	HHS	Department of Health and Human Services Assists with the assessment, preservation, and protection of human health and helps ensure the availability of essential human services
DOJ	Department of Justice Answer legal questions on spills & response actions	USCG	United States Coast Guard Establishes spill contingency planning requirements for vessels and facilities, and OSC responsibilities for wasteful zone
DOL	Department of Labor Expertise needed to minimize exposure to hazardous material during response operation	USDA	United States Department of Agriculture Input on the effect of soil contamination by hazardous and oil spills
DOS	Department of State Coordinates international response efforts when discharges cross international boundaries.	Nuc Reg Comm	Lead Federal agency during radiological events involving commercial reactors and provides technical assistance during other radiological events.

## **National Response Center (NRC)**

The National Response Center (NRC) receives and distributes reports regarding oil and hazardous substances spills. It is located at the USCG Headquarters in Washington, D.C., and can be contacted by dialing the phone number listed in Figure 2.5.

All oil spills must be reported to the National Response Center. If a direct report to the National Response Center is not practical, reports may be made to the USCG or EPA predesignated OSC for the geographic area where the spill occurs. If it is not possible to immediately notify the National Response Center or the predesignated OSC, reports may be made immediately to the nearest USCG unit provided that the spiller notifies the NRC as soon as possible. Once the NRC receives notification of a spill, it will promptly notify the appropriate OSC and authorize him to proceed with the appropriate response actions as outlined in the National Contingency Plan.

## **Regional Response Team (RRT)**

The Regional Response Team (RRT) develops oil spill response contingency plans for specific regions of the United States. This team is staffed by representatives from the agencies shown in Figure J1.2 and may include representatives of local governments as agreed upon by the specific State in which the RRT is operative.

The RRT is jointly chaired by the EPA and USCG representatives. See Figures J1.3 and J1.4 for the EPA Regions and the USCG Districts respectively. When activated for inland spills, the EPA representative will be the chairperson. If activated for offshore spills, the USCG representative shall be the chairperson.

The RRT includes two (2) components: a standing team and an incident-specific team. The standing team:

1. reviews regional and local responses to various spills, recommends revisions to the National Contingency Plan, encourages state and local communities to improve their preparedness for oil spill response activities, and reviews actions performed by the On-Scene Coordinator.
2. performs advanced planning for dispersants, surface collection agents, burning agents, biological additives, or other chemical agents that are authorized by the National Contingency Plan.

The incident-specific response team can be activated if an oil spill exceeds the response capability available to the On-Scene Coordinator, if the spill crosses regional boundaries, or if a spill presents a substantial threat to human health and welfare, the environment, or significant amounts of property. It can be activated during a pollution emergency when requested by the Federal On-Scene Coordinator.

The incident-specific response team may:

1. monitor and evaluate reports from the On-Scene Coordinator and recommend specific actions for improving the response operation.

## **Regional Response Team (Cont'd)**

2. request federal, state or local governments, or private organizations to provide resources for responding to the spill.
3. help the On-Scene Coordinator prepare information releases for the public.
4. recommend that a different OSC be designated for the response operation.
5. provide information that will assist the OSC to make timely and appropriate decisions for the response operations.

## **On-Scene Coordinators**

On-Scene Coordinators (OSC) are predesignated by the U.S. Coast Guard or Environmental Protection Agency. The OSC collects pertinent facts about the spill, its source and cause, and the parties responsible for the spill. The OSC also determines the potential impact the spill could have on human health and welfare, and whether it presents a significant threat to the environment. In addition, the OSC establishes priorities for minimizing the impact of oil spills.

If the spiller assumes responsibility for the spill, the OSC will monitor the clean-up activity. Otherwise, the OSC will initiate the response operation and hire commercial contractors as required to clean up the spill as quickly as possible. If commercial resources are not available, the OSC will deploy federal resources. Reimbursement of any federal will be sought from the spiller expenditures after the response. Federal personnel and equipment can be obtained from the National Strike Force and the U.S. Navy.

When a spill report is received, the OSC will:

1. notify the Regional Response Team and National Response Center.
2. investigate the report to determine pertinent information such as the threat posed to public health and welfare, or the environment.
3. officially classify the size of the discharge and determine the course of action to be followed.
4. determine whether the spiller is properly carrying out the clean-up operation.
5. determine whether the State or local government has the capability to carry out response actions and if a contract or cooperative agreement has been established with the appropriate Fund Administrator for this purpose.
6. notify the Regional Response Team and the trustees of the affected natural resources in accordance with the applicable regional plan.

Within 60 days after a major oil spill, the OSC shall submit to the RRT a complete report on the response operation and the actions taken. A copy of this report will be submitted to the National Response Team. The format for this report is provided in the National Contingency Plan.

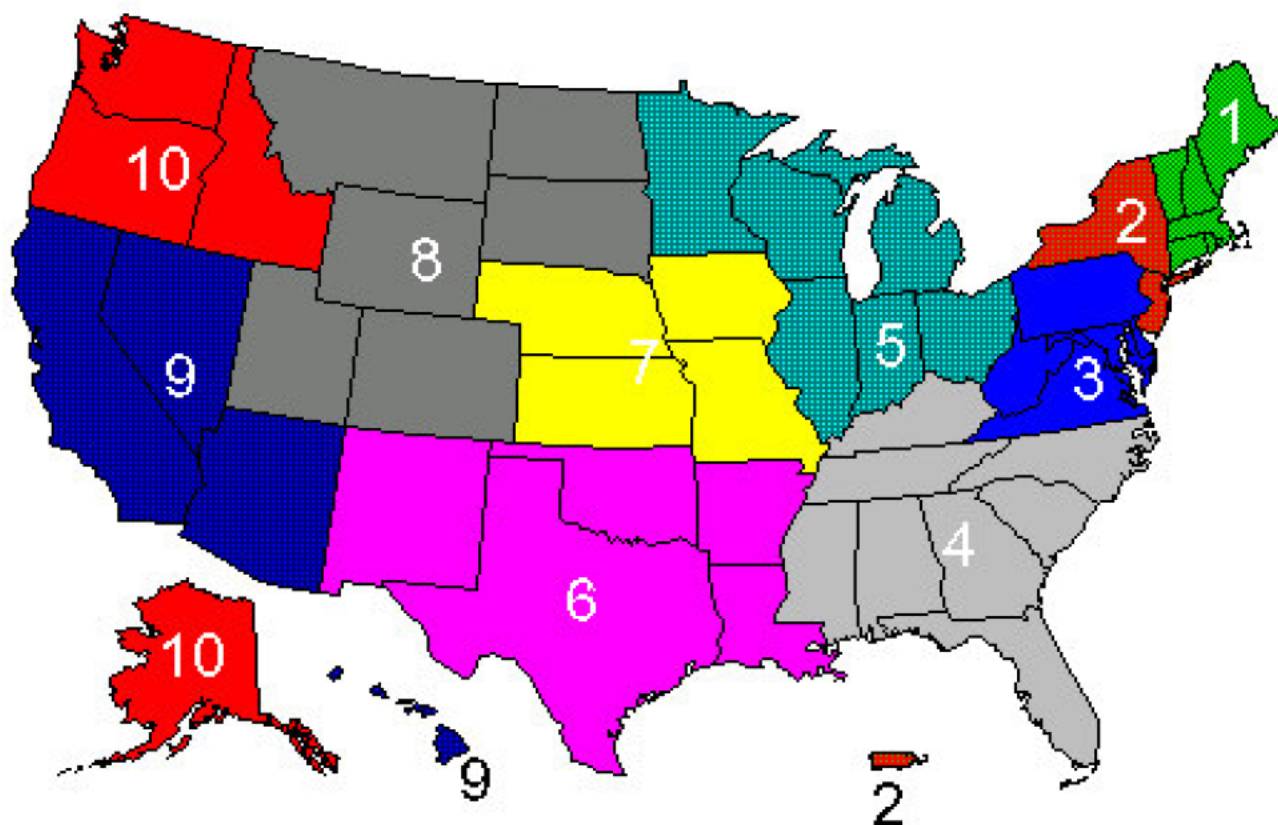
**On-Scene Coordinators (Cont'd)**

Each OSC is responsible for developing and updating Area Contingency Plans. Each plan should be a multi-agency effort involving all agencies that would have a role in the local response effort.

**National Strike Force (NSF)**

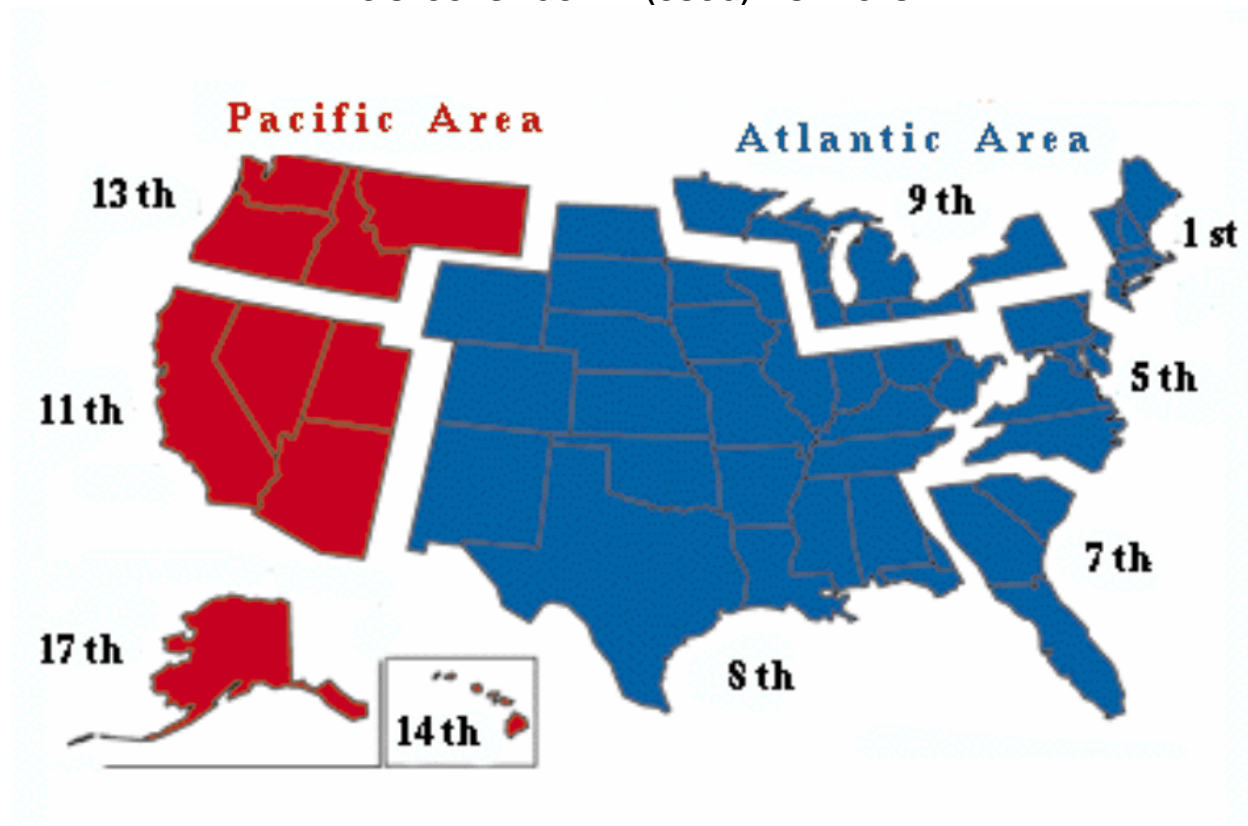
The National Strike Force (NSF) was formed in 1973 after the U.S. Coast Guard was charged with oversight and responsibilities for offshore oil spills under the Federal Water Pollution Control Act. The NSF consists of the Pacific, Gulf and the Atlantic Area Strike Teams. These teams provide experienced personnel and equipment necessary for assisting the OSC in responding to spills in U.S. waters.

The NSF is always on call and maintains a stock of specialized equipment for deployment anywhere in the nation and, in some cases, overseas. This equipment includes open water oil containment and recovery systems, high capacity pumps for transferring oil and chemicals, and protective clothing for working with hazardous materials. Most of this equipment is designed to fit into Coast Guard C-130 cargo planes or load onto flatbed trucks for fast response.

**FIGURE J-1.3****U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA) REGIONAL OFFICES**

EPA Region 1 Office 1 Congress Street, Suite 1100 Boston, MA 02114-2023	EPA Region 2 Office 290 Broadway, 19 <sup>th</sup> Floor New York, NY 10007-1866	EPA Region 3 Office 1650 Arch Street Philadelphia, PA 19103-2029
EPA Region 4 Office 61 Forsythe Street, SW, 11 <sup>th</sup> Floor Atlanta, GA 30303-3104	EPA Region 5 Office 77 West Jackson Blvd. Chicago, IL 60604	EPA Region 6 Office 1445 Ross Avenue, Suite 1200 Dallas, TX 75202
EPA Region 7 Office 901 N. 5 <sup>th</sup> Street Kansas City, KS 66101	EPA Region 8 Office 999 18 <sup>th</sup> Street, Suite 300 Denver, CO 80202-2466	EPA Region 9 Office Public Information Center 75 Hawthorne Street San Francisco, CA 94105
EPA Region 10 Office 1200 6 <sup>th</sup> Avenue Seattle, WA 98101	U.S. EPA Office of Solid Waste 401 M Street SW Washington, DC 20460-5101	RCRA / Superfund Hotline (800) 424-9346 (in Washington, DC, (202) 879-2693)

\* Note: These addresses may differ from those listed on the Distribution List.

**FIGURE J-1.4****U.S. COAST GUARD (USCG) DISTRICTS**

1st Coast Guard District Commander 408 Atlantic Avenue Boston, MA 02110-3350 (617) 223-8125	11th Coast Guard District Coast Guard Island Building 51-1 Alameda, CA 94501-5100 (510) 437-3700
5th Coast Guard District Federal Building 431 Crawford Street Portsmouth, VA 23704-5004 (804) 398-6272	13th Coast Guard District Jackson Federal Building 915 2nd Avenue, Suite #3352 Seattle, WA 98174-1067 (206) 220-7237
7th Coast Guard District Federal Building 909 S.E. 1st Ave., Room #954 Miami, FL 33131-3050 (305) 536-5641	14th Coast Guard District Prince PJKK Federal Building 300 Ala Moana Blvd., Room 9212 Honolulu, HI 96850-4982 (808) 541-2121
8th Coast Guard District Hale Boggs Federal Building 501 Magazine Street, Room 1328 New Orleans, LA 70130-3396 (504) 589-6198	17th Coast Guard District P.O. Box 25517 Juneau, AK 99802 (907) 463-2065-5517
9th Coast Guard District 1240 E. 9th Street Cleveland, OH 44199-2060 (216) 902-6020	

\* Note: These addresses may differ from those listed on the Distribution List.

## APPENDIX K

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### MISCELLANEOUS FORMS

Page

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Qualified Individual (QI) Notification Exercise - Internal Exercise Documentation .....	K-31
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Equipment Deployment Exercise - Internal Exercise Documentation Form .....	K-34
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Personnel Response Training Log .....	K-40
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Response Equipment Inspection Log.....	K-42
PHMSA F 7000-1 Accident Report - Hazardous Liquid Pipeline Systems Form .....	K-43 a,b,c

#### Forms and Exercise Documentation File Maintenance Procedures

- Forms and exercise documentation records should be maintained in a separate file in the Facility's office filing system.
- These files must be available for presentation upon request by regulatory agency personnel.



- Remove and discard obsolete pages.
- Replace obsolete pages with the updated pages.
- Initial once completed.

Integrated Contingency Plan  
December 2004

Date: \_\_\_\_\_

NRC Incident No. # \_\_\_\_\_

**SITE SAFETY PLAN****I. General - Spill / Release**☐ Land ☐ Air ☐ Water ☐ HAZMAT ☐ Other: \_\_\_\_\_

Facility: \_\_\_\_\_

Location: \_\_\_\_\_

Objectives: \_\_\_\_\_

Operational Period: Date \_\_\_\_\_ Time: \_\_\_\_\_ to \_\_\_\_\_

**II. Hazards to be Evaluated**

<b>Y</b>	<b>N</b>		<b>Y</b>	<b>N</b>	
<input type="checkbox"/>	<input type="checkbox"/>	Oxygen Deficient/Enriched	<input type="checkbox"/>	<input type="checkbox"/>	Chemical/MSDS # _____
<input type="checkbox"/>	<input type="checkbox"/>	Flammable Atmosphere	<input type="checkbox"/>	<input type="checkbox"/>	Physical Site Hazard _____
<input type="checkbox"/>	<input type="checkbox"/>	Toxic Atmosphere: _____	<input type="checkbox"/>	<input type="checkbox"/>	Traffic _____
<input type="checkbox"/>	<input type="checkbox"/>	Boat Operations	<input type="checkbox"/>	<input type="checkbox"/>	Other* (see comments) _____

**III. Weather**

Skies: \_\_\_\_\_ Tide: \_\_\_\_\_ Water Temperature: \_\_\_\_\_

Temperature: \_\_\_\_\_ Current: \_\_\_\_\_ Kts. Current Direction: \_\_\_\_\_

Wind Velocity: \_\_\_\_\_ Wind Direction: \_\_\_\_\_

**IV. Control Measures**

Isolation &amp; Lockout (Identify items to be locked out): \_\_\_\_\_

Decon: \_\_\_\_\_

Ventilation: ☐ Natural ☐ Mechanical: \_\_\_\_\_ Continuous: ☐ No ☐ Yes

Flagman/Watchman: \_\_\_\_\_

**V. Testing & Monitoring (Check required items)***Tests are to be performed in the order listed.*

<b>Y</b>	<b>N</b>		<b>Continuous</b>	<b>Frequency</b>
<input type="checkbox"/>	<input type="checkbox"/>	Oxygen Level	<input type="checkbox"/> Y <input type="checkbox"/> N	_____ every _____
<input type="checkbox"/>	<input type="checkbox"/>	LEL	<input type="checkbox"/> Y <input type="checkbox"/> N	_____ every _____
<input type="checkbox"/>	<input type="checkbox"/>	Hydrogen Sulfide	<input type="checkbox"/> Y <input type="checkbox"/> N	_____ every _____
<input type="checkbox"/>	<input type="checkbox"/>	Benzene	<input type="checkbox"/> Y <input type="checkbox"/> N	_____ every _____
<input type="checkbox"/>	<input type="checkbox"/>	VOC: _____	<input type="checkbox"/> Y <input type="checkbox"/> N	_____ every _____
<input type="checkbox"/>	<input type="checkbox"/>	Other: _____	<input type="checkbox"/> Y <input type="checkbox"/> N	_____ every _____

**ACCEPTABLE ENTRY CONDITIONS**

19.5 – 22.0% in air*	< 19.5% or 22.0% in air*	< 16.0 or ≥ 23.5% in air
< 10% in air	≥ 10.0 but < 20.0% in air†	≥ 20.0% in air
< 10 ppm	≥ 10 but < 100 ppm	≥ 100 ppm
< 1 ppm	> 1 but < 3000 ppm	> 3000 ppm

As allowed by applicable standard(s) \*Acceptable for 5325 feet of elevation and below.

†Hot work is not permitted when LEL is greater than 10% in air.

**VI. Required Personal Protective Equipment (Check for required use)**

<b>General</b>	<b>Eye Prot.</b>	<b>Respiratory Prot.</b>	<b>Hearing Prot.</b>	<b>Gloves</b>	<b>Footwear</b>	<b>Clothing</b>
<input type="checkbox"/> Hard Hat	<input type="checkbox"/> Safety Glasses	<input type="checkbox"/> SCBA/Air Line w/Escapes	<input type="checkbox"/> Ear Plugs	<input type="checkbox"/> Leather	<input type="checkbox"/> Steel-toes	<input type="checkbox"/> FR Coveralls
<input type="checkbox"/> Safety Harness	<input type="checkbox"/> Goggles	<input type="checkbox"/> Air Line	<input type="checkbox"/> Ear Muffs	<input type="checkbox"/> Rubber	<input type="checkbox"/> Rubber	<input type="checkbox"/> Level A
<input type="checkbox"/> PFD	<input type="checkbox"/> Face-shield	<input type="checkbox"/> Air Purifying (Full Mask)	<input type="checkbox"/> Combination	<input type="checkbox"/> Nitrile	<input type="checkbox"/> Hip-boots	<input type="checkbox"/> Level B
	<input type="checkbox"/> Tinted Lens	Cartridge Type: <input type="checkbox"/> OV <input type="checkbox"/> Hepa-OVV		<input type="checkbox"/> PVC	<input type="checkbox"/> Chemical Resistant	<input type="checkbox"/> Level C
				<input type="checkbox"/> _____	<input type="checkbox"/> _____	<input type="checkbox"/> Level D

Any other special PPE: \_\_\_\_\_

**VII. Emergency Information and Rescue Services**

Emergency Contact Person: \_\_\_\_\_ Contact by: \_\_\_\_\_

Fire Department: \_\_\_\_\_ Contact by: \_\_\_\_\_

Ambulance: \_\_\_\_\_ Contact by: \_\_\_\_\_

Hospital: \_\_\_\_\_ Contact by: \_\_\_\_\_

Rescue Services: \_\_\_\_\_ Contact by: \_\_\_\_\_

(if not provided by above)

**VIII. Required Safety & Rescue Equipment (on site)**

<input type="checkbox"/> Lights	<input type="checkbox"/> Fall Protection	<input type="checkbox"/> First Aid Kit	<input type="checkbox"/> Drinking Water	<input type="checkbox"/> Fire Extinguisher	<input type="checkbox"/> Tripod	<input type="checkbox"/> Other: _____
<input type="checkbox"/> Ladder	<input type="checkbox"/> Retrieval Lines	<input type="checkbox"/> Defibrillator	<input type="checkbox"/> Communication Method _____			

Date: \_\_\_\_\_

NRC Incident No. # \_\_\_\_\_

**IX. Comments or Special Work Procedures**


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**X. Report All Injuries Immediately - "Notify Site Safety Officer"**

Radio Channel: \_\_\_\_\_ Radio Frequency: \_\_\_\_\_ Telephone No. \_\_\_\_\_

***Call 911 if life threatening***

<b>XI. Monitoring Results</b>	Zone														
Oxygen	Time														
	Level														
	By														
LEL	Time														
	Level														
	By														
Hydrogen Sulfide	Time														
	Level														
	By														
Benzene	Time														
	Level														
	By														
VOC	Time														
	Level														
	By														
	Time														
	Level														
	By														
	Time														
	Level														
	By														
	Time														
	Level														
	By														
	Time														
	Level														
	By														

Equipment: \_\_\_\_\_ Type: \_\_\_\_\_  
Type: \_\_\_\_\_Mnfr: \_\_\_\_\_  
Mnfr: \_\_\_\_\_Calibration / Expiration: \_\_\_\_\_  
Calibration / Expiration: \_\_\_\_\_

Date: \_\_\_\_\_

NRC Incident No. # \_\_\_\_\_

**XII. Work Area Diagram**

*Please include wind direction, exclusion zone, support zone, decon area and significant landmarks.*

The diagram area is a large rectangle defined by a grid of 20 columns and 20 rows of small squares. The top and bottom edges of the grid have tick marks every 1 unit. The left and right edges of the grid have tick marks every 1 unit. The grid is intended for drawing a work area diagram, including wind direction, exclusion zone, support zone, decon area, and significant landmarks.

[illegible]

#### **XIV. Authorizing Signature**

**Site Manager:**    **Printed Name:** \_\_\_\_\_                      **Signature:** \_\_\_\_\_

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# **INCIDENT ACTION PLAN (SELECTED FORMS)**

<b>1. Incident Name</b>	<b>2. Operational Period (Date/Time)</b> From:                      To:	<b>INCIDENT OBJECTIVES</b> <b>ICS 202-OS</b>
<b>3. Overall Incident Objective(s)</b>		
<b>4. Objectives for specified Operational Period</b>		
<b>5. Safety Message for Specified Operational Period</b>		
Approved Site Safety Plan Located at:		
<b>6. Weather</b>	See Attached Weather Sheet	
<b>7. Tides/Currents</b>	See Attached Tide/Current Data	
<b>8. Time of Sunrise</b>	Time of Sunset	
<b>9. Attachments (mark "X" if attached)</b>		
<input type="checkbox"/> Organization List (ICS 203-OS)	<input type="checkbox"/> Medical Plan (ICS 206-OS)	<input type="checkbox"/> Resource at Risk Summary (ICS 232-OS)
<input type="checkbox"/> Assignment List (ICS 204-OS)	<input type="checkbox"/> Incident Map(s)	<input type="checkbox"/> _____
<input type="checkbox"/> Communications List (ICS 205-OS)	<input type="checkbox"/> Traffic Plan	<input type="checkbox"/> _____
<b>10. Prepared by: (Planning Section Chief)</b>		<b>Date/Time</b>
INCIDENT OBJECTIVES		ICS 202-OS

1. Incident Name		2. Operational Period (Date/Time) From:                      To:		ORGANIZATION ASSIGNMENT LIST ICS 203-OS	
<b>3. Incident Commander and Staff</b> <div style="display: flex; justify-content: space-between;"> <span>Primary</span> <span>Deputy</span> </div> Federal: <input type="text"/> <input type="text"/> State: <input type="text"/> <input type="text"/> RP(s): <input type="text"/> <input type="text"/> Safety Officer: <input type="text"/> Information Officer: <input type="text"/> Liaison Officer: <input type="text"/>				<b>7. OPERATION SECTION</b>  <div style="display: flex; justify-content: space-between;"> <span>Chief</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Deputy</span> <input type="text"/> </div> <b>a. Branch I – Division Groups</b> <div style="display: flex; justify-content: space-between;"> <span>Branch Director</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Deputy</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Division/Group</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Division/Group</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Division Group</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Division Group</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Division Group</span> <input type="text"/> </div> <b>b. Branch II – Division/Groups</b> <div style="display: flex; justify-content: space-between;"> <span>Branch Director</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Deputy</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Division/Group</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Division/Group</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Division/Group</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Division/Group</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Division/Group</span> <input type="text"/> </div> <b>c. Branch III – Division/Groups</b> <div style="display: flex; justify-content: space-between;"> <span>Branch Director</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Deputy</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Division/Group</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Division/Group</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Division/Group</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Division/Group</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Division/Group</span> <input type="text"/> </div> <b>d. Air Operations Branch</b> <div style="display: flex; justify-content: space-between;"> <span>Air Operations Br. Dir</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Air Tactical Supervisor</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Air Support Supervisor</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Helicopter Coordinator</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Fixed Wing Coordinator</span> <input type="text"/> </div>	
<b>4. Agency Representatives</b> <div style="display: flex;"> <div style="width: 10%;">Agency</div> <div style="width: 90%;">Name</div> </div> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>					
<b>5. PLANNING SECTION</b> <div style="display: flex; justify-content: space-between;"> <span>Chief</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Deputy</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Resources Unit</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Situation Unit</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Environmental Unit</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Documentation Unit</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Demobilization Unit</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Technical Specialists</span> <input type="text"/> </div> <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>					
<b>6. LOGISTICS SECTION</b> <div style="display: flex; justify-content: space-between;"> <span>Chief</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Deputy</span> <input type="text"/> </div> <b>a. Support Branch</b> <div style="display: flex; justify-content: space-between;"> <span>Director</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Supply Unit</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Facilities Unit</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Transportation Unit</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Vessel Support Unit</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Ground Support Unit</span> <input type="text"/> </div> <b>Service Branch</b> <div style="display: flex; justify-content: space-between;"> <span>Director</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Communications Unit</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Medical Unit</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Food Unit</span> <input type="text"/> </div>					
<b>8. FINANCE/ADMINISTRATION SECTION</b>  <div style="display: flex; justify-content: space-between;"> <span>Chief</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Deputy</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Time Unit</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Procurement Unit</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Compensation/Claims Unit</span> <input type="text"/> </div> <div style="display: flex; justify-content: space-between;"> <span>Cost Unit</span> <input type="text"/> </div>					
<b>9. Prepared By: (Resources Unit)</b>				<b>Date/Time</b>	
ORGANIZATION ASSIGNMENT LIST				ICS 203-OS	





Texas City Terminal

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Integrated Contingency Plan  
December 2004

1. Incident Name		2. Operational Period (Date / Time) From: To:			INCIDENT RADIO COMMUNICATIONS PLAN ICS 205-OS	
3. BASIC RADIO CHANNEL USE						
SYSTEM / CACHE	CHANNEL	FUNCTION	FREQUENCY	ASSIGNMENT	REMARKS	
4. Prepared by: (Communications Unit)				Date / Time		
INCIDENT RADIO COMMUNICATIONS PLAN		June 2000		ICS 205-OS		

<b>1. Incident Name</b>		<b>2. Operational Period (Date / Time)</b> From: _____ To: _____		<b>MEDICAL PLAN ICS 206-OS</b>		
<b>3. Medical Aid Stations</b>						
Name	Location	Contact #	Paramedics On site (Y/N)			
<b>4. Transportation</b>						
Ambulance Service	Address	Contact #	Paramedics On board (Y/N)			
<b>5. Hospitals</b>						
Hospital Name	Address	Contact #	Travel Time		Burn Ctr?	Heli-Pad?
			Air	Ground		
<b>6. Special Medical Emergency Procedures</b>						
<b>7. Prepared by: (Medical Unit Leader)</b>		<b>Date/Time</b>		<b>8. Reviewed by: (Safety Officer)</b>		<b>Date/Time</b>
MEDICAL PLAN		June 2000		ICS 206-OS		







[illegible]

[illegible]



Texas City Terminal

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Integrated Contingency Plan  
December 2004

1. Incident Name		2. Operational Period (Date / Time) From: _____ To: _____				<b>AIR OPERATIONS SUMMARY</b> ICS 220-OS					
3. Distribution <input type="checkbox"/> Fixed-Wing Bases _____ <input type="checkbox"/> Helibase _____											
4. Personnel and Communications						5. Remarks (Spec. Instructions, Safety Notes, Hazards, Priorities)					
		Air Operations Director		Air / Air Frequency						Air / Ground Frequency	
Air Operations Director		_____		_____						_____	
Air Tactical Supervisor		_____		_____						_____	
Air Support Supervisor		_____		_____						_____	
Helicopter Coordinator		_____		_____						_____	
Fixed-Wing Coordinator		_____		_____		_____					
6. Location / Function	7. Assignment		8. Fixed-Wing		9. Helicopter		10. Time		11. Aircraft Assigned	12. Operating Base	
			NO.	TYPE	NO.	TYPE	Available	Commence			
		13. TOTALS									
14. Air Operation Support Equipment						15. Prepared by _____ Date / Time _____					
AIR OPERATIONS SUMMARY						June 2000		ICS 220-OS			

<b>1. Incident Name</b>	<b>2. Operational Period (Date / Time)</b> From: _____ To: _____	<b>DEMOB. CHECK-OUT</b> <b>ICS 221-OS</b>
<b>3. Unit / Personnel Released</b>		<b>4. Release Date / Time</b>
<b>5. Unit / Personnel</b>  You and your resources have been released, subject to signoff from the following: (Demob. Unit Leader "X" appropriate box(es))  <div style="margin-left: 20px;">Logistics Section</div> <div style="margin-left: 20px;"> <input type="checkbox"/> Supply Unit _____  <input type="checkbox"/> Communications Unit _____  <input type="checkbox"/> Facilities Unit _____  <input type="checkbox"/> Ground Unit _____         </div> <div style="margin-left: 20px; margin-top: 20px;">Planning Section</div> <div style="margin-left: 20px;"> <input type="checkbox"/> Documentation Unit _____         </div> <div style="margin-left: 20px; margin-top: 20px;">Finance / Admin. Section</div> <div style="margin-left: 20px;"> <input type="checkbox"/> Time Unit _____         </div> <div style="margin-left: 20px; margin-top: 20px;">Other</div> <div style="margin-left: 20px;"> <input type="checkbox"/> _____  <input type="checkbox"/> _____  <input type="checkbox"/> _____         </div>		
<b>6. Remarks</b>  _____ _____ _____ _____		
<b>7. Prepared by:</b> _____		<b>Date / Time</b> _____
DEMOB. CHECK-OUT		ICS 221-OS

<b>1. Incident Name</b>		<b>2. Operational Period (Date/Time)</b> From: _____ To: _____		<b>DAILY MEETING SCHEDULE</b> <b>ICS 230-OS</b>	
<b>3. Meeting Schedule (Commonly-held meetings are included)</b>					
<b>Date/ Time</b>	<b>Meeting Name</b>	<b>Purpose</b>	<b>Attendees</b>	<b>Location</b>	
	Tactics Meeting	Develop primary and alternate Strategies to meet Incident Objectives for the next Operational Period.	PSC, OPS, LSC, EUL, RUL & SUL		
	Planning Meeting	Review status and finalize strategies and assignments to meet Incident Objectives for the next Operational Period.	Determined by the IC/UC		
	Operations Briefing	Present IAP and assignments to the Supervisors / Leaders for the next Operational Period.	IC/UC, Command Staff, General Staff, Branch Directors, Div. Sups., Task Force/Strike Team Leaders and Unit Leaders		
	Unified Command Objectives Meeting	Review/ identify objectives for the next operational period.	Unified Command members		
<b>4. Prepared by: (Situation Unit Leader)</b>			<b>Date/Time</b>		
<b>DAILY MEETING SCHEDULE</b>		June 2000		<b>ICS 230-OS</b>	

1. Incident Name	2. Meeting Date/Time	MEETING SUMMARY ICS 231-OS
3. Meeting Name		
4. Meeting Location		
5. Facilitator		
6. Attendees		
7. Notes (with summary of decisions and action items)		
8. Prepared by: _____ Date/Time _____		
MEETING SUMMARY	June 2000	ICS 231-OS

<b>1. Incident Name</b>		<b>2. Operational Period (Date/Time)</b> From:                      To:		<b>RESOURCES AT RISK SUMMARY</b> <b>ICS 232-OS</b>	
<b>3. Environmentally-Sensitive Areas and Wildlife Issues</b>					
Site #	Priority	Site Name and/or Physical Location	Site Issues		
Narrative					
<b>4. Archaeo-cultural and Socio-economic Issues</b>					
Site #	Priority	Site Name and/or Physical Location	Site Issues		
Narrative					
<b>5. Prepared by: (Environmental Unit Leader)</b>			<b>Date/Time</b>		
RESOURCES AT RISK SUMMARY		June 2000	ICS 232-OS		

<b>1. Incident Name</b>	<b>2. Operational Period (Date/Time)</b> From: _____ To: _____	<b>EXECUTIVE SUMMARY</b>
<b>3. Operations:</b>		
<b>4. Environmental</b>		
<b>5. Planning</b>		
<b>6. Other</b>		
<b>7. Prepared by:</b>		<b>Date/Time</b>
EXECUTIVE SUMMARY		June 2000

<b>1. Incident Name</b>						<b>GENERAL PLAN</b>													
<b>2. Prepared By</b>						<b>Date/Time Prepared</b>						<b>3. Operational Period (Date/Time)</b> From:                      To:							
<b>4. Notification (Date and time completed)</b>						<b>5. Response Initiation (Date and time completed)</b>													
<b>6. Plan Item</b>		<b>Timeframe ==&gt; (Enter days or weeks)</b>																	
Site Characterization, Forecasts, and Analysis																			
Site Safety																			
Site Security																			
Source Stabilization, Salvage, and Lightering																			
Surveillance																			
On Water Containment and Recovery																			
Sensitive Areas / Resources at Risk																			
Alternative Response Technology																			
Shoreline Protection and Recovery																			
Wildlife Protection and Rehabilitation																			
Logistics Support																			
Response Organization																			
Communications																			
Public Information																			
Financial Management and Cost Documentation																			
NRDA and Claims																			
Training																			
Information Management																			
Restoration / Mitigation																			
Waste Management																			
Demobilization																			
				June 2000										GENERAL PLAN					

<b>1. Incident Name</b>	<b>2. Operational Period to be covered by IAP (Date/Time)</b> From: _____ To: _____	<b>IAP COVER SHEET</b>
<b>3. Approved by:</b> <div style="margin-top: 10px;"> FOSC _____  SOSC _____  RPIC _____  _____  _____ </div>		
<h2 style="margin: 0;">INCIDENT ACTION PLAN</h2> <p style="margin: 10px 0;">The items checked below are included in this Incident Action Plan:</p> <div style="margin-top: 20px;"> <input type="checkbox"/> ICS 202-OS (Response Objectives)  <hr/> <input type="checkbox"/> ICS 203-OS (Organization List) – OR – ICS 207-OS (Organization Chart)  <hr/> <input type="checkbox"/> ICS 204-OSs (Assignment Lists)  One Copy each of any ICS 204-OS attachments: <div style="margin-left: 20px;"> <input type="checkbox"/> Map  <input type="checkbox"/> Weather forecast  <input type="checkbox"/> Tides  <input type="checkbox"/> Shoreline Cleanup Assessment Team Report for location  <input type="checkbox"/> Previous day's progress, problems for location </div> <hr/> <input type="checkbox"/> ICS 205-OS (Communications List)  <hr/> <input type="checkbox"/> ICS 206-OS (Medical Plan)  <input type="checkbox"/> _____  <input type="checkbox"/> _____  <input type="checkbox"/> _____  <input type="checkbox"/> _____  <input type="checkbox"/> _____  <input type="checkbox"/> _____ </div>		
<b>4. Prepared by:</b> _____ <b>Date/Time</b> _____		
IAP COVER SHEET <span style="float: right;">June 2000</span>		



<b>INITIAL INCIDENT INFORMATION</b>		<b>INCIDENT NAME</b>		<b>Information as of:</b>	
				Date	Time
NAME OF PERSON REPORTING THE INCIDENT					
Call-Back Number(s) of person reporting the incident:					
<b>VESSEL/FACILITY INFORMATION AND POINTS OF CONTACT</b>					
Vessel / Facility Name:			Number of people onboard/on site:		
Location:					
Type of Vessel / Facility:					
Contact / Agent:			Phone:		
Owner:			Phone:		
Operator / Charterer:			Phone:		
<b>VESSEL SPECIFIC INFORMATION</b>					
Last Port of Call:		Destination:		Flag:	
Particulars:	Length:	Ft.	Tonnage (Gross/Net/DWT):	Draft Fwd:	Aft:
Year Built:					
Type of Hull: <input type="checkbox"/> Single <input type="checkbox"/> Double <input type="checkbox"/> Double-Bottom <input type="checkbox"/> Double-Sided					
Hull Material:					
Type of Propulsion: <input type="checkbox"/> Diesel <input type="checkbox"/> Steam <input type="checkbox"/> Gas Turbine <input type="checkbox"/> Nuclear <input type="checkbox"/> Other					
Petroleum Products or Crude Oil <input type="checkbox"/> Yes <input type="checkbox"/> No					
Type of Cargo:			Total Number of Tanks on Vessel:		
Total Quantity:	Barrels x 42 =	Gallons	Total Capacity:	Barrels	
Type of Fuel:	Quantity on Board:			Barrels	
<b>INCIDENT INFORMATION</b>					
Location:			Lat/Long:		
Type of Casualty: <input type="checkbox"/> Grounding <input type="checkbox"/> Collision <input type="checkbox"/> Allision <input type="checkbox"/> Explosion <input type="checkbox"/> Fire <input type="checkbox"/> Other					
Number of Tanks Impacted:			Total Capacity of Affected Tanks:		
Material(s) Spilled:			Viscosity:		
Estimated Quantity Spilled: ( <input type="checkbox"/> Gallons/ <input type="checkbox"/> Barrels)			Classification: <input type="checkbox"/> Minor <input type="checkbox"/> Medium <input type="checkbox"/> Major		
Source Secured?: <input type="checkbox"/> Yes <input type="checkbox"/> No			If Not, Estimated Spill Rate: <input type="checkbox"/> Barrels <input type="checkbox"/> Gallons / Hour		
Notes:					
<b>INCIDENT STATUS</b>					
Injuries/Casualties:			<input type="checkbox"/> SAR Underway		
Vessel Status: <input type="checkbox"/> Sunk <input type="checkbox"/> Aground <input type="checkbox"/> Dead in Water					
Set and Drift:			Estimated Time to Dock / Anchor:		
<input type="checkbox"/> Anchored <input type="checkbox"/> Berthed <input type="checkbox"/> Under Tow			Estimated Time of Arrival:		
<input type="checkbox"/> Enroute to Anchorage / Berth Under Own Power			Approximate Size of Hole:		
<input type="checkbox"/> Holed: <input type="checkbox"/> Above Waterline <input type="checkbox"/> Below Waterline <input type="checkbox"/> At Waterline			Approximate Size of Hole:		
<input type="checkbox"/> Fire: <input type="checkbox"/> Extinguished <input type="checkbox"/> Burning			<input type="checkbox"/> Assistance Enroute <input type="checkbox"/> Assistance On-Scene		
<input type="checkbox"/> Flooding: <input type="checkbox"/> Dewatering <input type="checkbox"/> Lightering			<input type="checkbox"/> Assistance Enroute <input type="checkbox"/> Assistance On-Scene		
<input type="checkbox"/> List: <input type="checkbox"/> Port <input type="checkbox"/> Starboard Degrees:			<input type="checkbox"/> Trim: <input type="checkbox"/> Bow <input type="checkbox"/> Stern Degrees:		
<b>ENVIRONMENTAL INFORMATION</b>					
Wind Speed:	Knots	Wind Direction:	Air Temperature:	F°	Water Temperature:
Wave Height:	Feet	Wave Direction:	Conditions:		Tide: <input type="checkbox"/> Slack <input type="checkbox"/> Flood <input type="checkbox"/> Ebb
Current:	Knots	Current Direction:			High Tide at: Hours
Swell Height:	Feet	Swell Direction:			Low Tide at: Hours
Prepared By:			Date / Time Prepared		
			June 2000 INITIAL INCIDENT INFORMATION		

<b>1. Incident Name</b>	<b>2. Prepared by:</b> (name)  Date _____ Time: _____	INCIDENT BRIEFING ICS 201-OS (pg 1 of 4)
<b>3. Map/Sketch</b> (include maps drawn here or attached, showing the total area of operations, the incident site/area, overflight results, trajectories, Impacted shorelines, or other graphics depicting situational and response status)		
INCIDENT BRIEFING June 2000 ICS 201-OS (pg 1 of 4)		



<b>1. Incident Name</b>	<b>2. Prepared by: (name)</b> Date _____ Time: _____	<b>INCIDENT BRIEFING</b> ICS 201-OS (pg 3 of 4)
<b>3. Current Organization</b>		
<div style="display: flex; justify-content: space-between; align-items: flex-start;"> <div style="width: 30%;"> <pre> graph TD     UC[Unified Command] --- SO[Safety Officer]     UC --- LO[Liaison Officer]     UC --- IO[Information Officer]     UC --- OS[Operations Section]     UC --- PS[Planning Section]     UC --- LS[Logistics Section]     UC --- FS[Finance Section]     OS --- DG1[Div./Group]     OS --- DG2[Div./Group]     OS --- DG3[Div./Group]     OS --- DG4[Div./Group]     OS --- DG5[Div./Group]           </pre> </div> <div style="width: 65%;"> <div style="margin-bottom: 10px;">             FOSC _____              SOSC _____              RPIC _____              _____              _____           </div> <div style="margin-bottom: 10px;">             Safety Officer _____              Liaison Officer _____              Information Officer _____           </div> <div style="display: flex; justify-content: space-around;"> <div style="border: 1px solid black; padding: 5px; width: 22%;">Operations Section</div> <div style="border: 1px solid black; padding: 5px; width: 22%;">Planning Section</div> <div style="border: 1px solid black; padding: 5px; width: 22%;">Logistics Section</div> <div style="border: 1px solid black; padding: 5px; width: 22%;">Finance Section</div> </div> <div style="margin-top: 10px;"> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Div./Group</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Div./Group</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Div./Group</div> <div style="border: 1px solid black; padding: 5px; margin-bottom: 5px;">Div./Group</div> <div style="border: 1px solid black; padding: 5px;">Div./Group</div> </div> </div> </div>		
<div style="display: flex; justify-content: space-between;"> <span>INCIDENT BRIEFING</span> <span>June 2000</span> <span>ICS 201-OS (pg 3 of 4)</span> </div>		



1. Date performed: \_\_\_\_\_
2. Exercise or actual response: \_\_\_\_\_
3. Person initiating exercise: \_\_\_\_\_
4. Name of person notified: \_\_\_\_\_  
Is this person identified in the response plan as the:     ☐ QI   ☐ AQI
5. Time initiated: \_\_\_\_\_  
Time QI or AQI responded: \_\_\_\_\_
6. Method used to contact:  
☐ Telephone                               ☐ Pager                               ☐ Radio  
☐ Other \_\_\_\_\_
7. Description of notification procedure:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
8. Identify which components of your response plan were exercised during this particular exercise:

- ☐ Notifications
- ☐ Staff mobilization
- ☐ Ability to operate within the response management system described in the plan

- ☐ Communications
- ☐ Transportation
- ☐ Personnel support
- ☐ Equipment maintenance and support
- ☐ Procurement
- ☐ Documentation

- ☐ Discharge control
- ☐ Assessment of discharge
- ☐ Containment of discharge
- ☐ Recovery of spilled material
- ☐ Protection of economically and environmentally sensitive areas
- ☐ Disposal of recovered product

Texas City Terminal

# Response Team Tabletop Exercise

## Internal Exercise Documentation

1. Date(s) performed: \_\_\_\_\_
2. Exercise or actual response: \_\_\_\_\_  
 Exercise type: ☐ Announced ☐ Unannounced
3. Location of exercise: \_\_\_\_\_
4. Time started: \_\_\_\_\_  
 Time completed: \_\_\_\_\_
5. Response plan scenario used (check one):  
☐ Small ☐ Medium ☐ Worst case discharge  
 Size of (simulated) spill \_\_\_\_\_ Bbls
6. Describe how the following objectives were exercised:

a) Response Team's knowledge of oil spill response plan:

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b) Proper notifications:

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c) Communications System:

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## Response Team Tabletop Exercise

### Internal Exercise Documentation (Cont'd)

- d) Response Team's ability to access contracted OSRO:

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- e) Response Team's ability to coordinate spill response with OSC, state and applicable agencies:

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- f) Response Team's ability to access sensitive site and resource information in Area Contingency Plan:

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7. Identify which components of your response plan were exercised:

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8. Attach description of lesson(s) learned and person(s) responsible for follow up of corrective measures.

Certifying Signature: \_\_\_\_\_ Name (Printed): \_\_\_\_\_

Date: \_\_\_\_\_





## Internal Exercise Documentation Form (Semiannual)

### Equipment Deployment Exercise (Cont'd)

9. For deployment of OSRO - owned equipment, was a representative sample (at least 1000 feet of each boom type and at least one of each skimmer type) deployed?

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Was the equipment deployed in its intended operating environment?

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10. Are all facility personnel that are responsible for response operations involved in a comprehensive training program, and all pollution response equipment involved in a comprehensive maintenance program? \_\_\_\_\_

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If so, describe the program: \_\_\_\_\_

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Date of last equipment inspection: \_\_\_\_\_

11. Was the equipment deployed by personnel responsible for its deployment in the event of an actual spill? \_\_\_\_\_

12. Was all deployed equipment operational? If not, why not?

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### Response Equipment Inspection Log

Inspector	Date	Comments

**NOTIFICATION DATA SHEET**

Date: \_\_\_\_\_ Time: \_\_\_\_\_

**INCIDENT DESCRIPTION**

Reporter's Full Name: \_\_\_\_\_ Position: \_\_\_\_\_  
 Day Phone Number: \_\_\_\_\_ Evening Phone Number: \_\_\_\_\_  
 Company: \_\_\_\_\_ Organization Type: \_\_\_\_\_  
 Facility Address: \_\_\_\_\_ Owner's Address: \_\_\_\_\_

Facility Latitude: \_\_\_\_\_ Facility Longitude: \_\_\_\_\_

Spill Location: \_\_\_\_\_

(if not at Facility) \_\_\_\_\_

Responsible Party's Name: \_\_\_\_\_ Phone Number: \_\_\_\_\_

Responsible Party's Address: \_\_\_\_\_

Source and/or cause of discharge: \_\_\_\_\_

Nearest City: \_\_\_\_\_

County: \_\_\_\_\_ State: \_\_\_\_\_ Zip code: \_\_\_\_\_

Section: \_\_\_\_\_ Township: \_\_\_\_\_ Range: \_\_\_\_\_ Borough: \_\_\_\_\_

Distance from City: \_\_\_\_\_ Direction from City: \_\_\_\_\_

Container Type: \_\_\_\_\_ Container Storage Capacity: \_\_\_\_\_

Facility Oil Storage Capacity: \_\_\_\_\_

Material: \_\_\_\_\_

Total Quantity Released	Water Impact (YES or NO)	Quantity into Water

**RESPONSE ACTION(S)**

Action(s) taken to Correct, Control, or Mitigate Incident: \_\_\_\_\_

Number of Injuries: \_\_\_\_\_ Number of Deaths: \_\_\_\_\_

Evacuation(s): \_\_\_\_\_ Number Evacuated: \_\_\_\_\_

Damage Estimate: \_\_\_\_\_

More information about impacted medium: \_\_\_\_\_

**CALLER NOTIFICATIONS**

National Response Center (NRC): 1-800-424-8802

Additional Notifications (Circle all applicable): USCG EPA State Other

**ADDITIONAL INFORMATION**

Any information about the incident not recorded elsewhere in this report: \_\_\_\_\_

**NOTE: DO NOT DELAY NOTIFICATION PENDING COLLECTION OF ALL INFORMATION.**

(b) (7)(F)



(b) (7)(F)



## SMT NOTIFICATION LOG

Person on the SMT staff to whom you relayed this emergency information:

Name: \_\_\_\_\_

Phone: (\_\_\_\_) \_\_\_\_\_

Time: \_\_\_\_:\_\_\_\_ AM or PM (circle one) Time Zone: EST or CST

**Document any calls or actions that you take in regard to this Emergency Call**  
(including calls where you leave a message):

Follow-up call:	Time Called:

Follow-up call:	Time Called:

Follow-up call:	Time Called:

Follow-up call:	Time Called:

## PERSONNEL RESPONSE TRAINING LOG

[illegible]

## DISCHARGE PREVENTION MEETING LOG

<b>Date:</b>		
<b>Attendees:</b>		
Subject/Issue	Required Action	Implementation



## RESPONSE EQUIPMENT INSPECTION LOG

[illegible]

**NOTES:**

- 1 Date of the inspection or when a problem is first observed or test date.
- 2 Condition should describe any problem detected during visual or other inspections.
- 3 Action Taken should describe how a problem was corrected, or write "none" if no problems were detected.

**PHMSA F 7000-1 Accident Report –  
Hazardous Liquid Pipeline Systems Form**

**NOTICE: This report is required by 49 CFR Part 195. Failure to report can result in a civil penalty not to exceed \$25,000 for each violation for each day that such violation persists except that the maximum civil penalty shall not exceed \$500,000 as provided in 49 USC 60122 OMB No. 2137-0047**



U.S. Department of Transportation  
Pipeline and Hazardous Materials  
Safety Administration

## ACCIDENT REPORT – HAZARDOUS LIQUID PIPELINE SYSTEMS

Report Date \_\_\_\_\_

No. \_\_\_\_\_  
(DOT Use Only)

### INSTRUCTIONS

**Important:** Please read the separate instructions for completing this form before you begin. They clarify the information requested and provide specific examples. If you do not have a copy of the instructions, you can obtain one from the Office Of Pipeline Safety Web Page at <http://ops.dot.gov>.

### PART A – GENERAL REPORT INFORMATION

Check: ☐ Original Report ☐ Supplemental Report ☐ Final Report

1. a. Operator's OPS 5-digit Identification Number (if known)      /      /      /      /      /
- b. If Operator does not own the pipeline, enter Owner's OPS 5-digit Identification Number (if known)      /      /      /      /      /
- c. Name of Operator \_\_\_\_\_
- d. Operator street address \_\_\_\_\_
- e. Operator address \_\_\_\_\_  
City, County, State and Zip Code

**IMPORTANT: IF THE SPILL IS SMALL, THAT IS, THE AMOUNT IS AT LEAST 5 GALLONS BUT IS LESS THAN 5 BARRELS, COMPLETE THIS PAGE ONLY, UNLESS THE SPILL IS TO WATER AS DESCRIBED IN 49 CFR §195.52(A)(4) OR IS OTHERWISE REPORTABLE UNDER §195.50 AS REVISED IN CY 2001.**

2. Time and date of the accident  
     /      /      /      /      /      /  
 hr. month day year
3. Location of accident  
*(If offshore, do not complete a through d. See Part C.1)*
  - a. Latitude: \_\_\_\_\_ Longitude: \_\_\_\_\_  
*(if not available, see instructions for how to provide specific location)*
  - b. \_\_\_\_\_  
 City, and County or Parish
  - c. \_\_\_\_\_  
 State and Zip Code
  - d. Mile post/valve station or survey station no. ☐  
*(whichever gives more accurate location)*  
 \_\_\_\_\_
4. Telephone report  
     /      /      /      /      /      /  
 NRC Report Number month day year

### 5. Losses (Estimated)

#### Public/Community Losses reimbursed by operator:

Public/private property damage \$ \_\_\_\_\_  
 Cost of emergency response phase \$ \_\_\_\_\_  
 Cost of environmental remediation \$ \_\_\_\_\_  
 Other Costs \$ \_\_\_\_\_  
 (describe) \_\_\_\_\_

#### Operator Losses:

Value of product lost \$ \_\_\_\_\_  
 Value of operator property damage \$ \_\_\_\_\_  
 Other Costs \$ \_\_\_\_\_  
 (describe) \_\_\_\_\_  
**Total Costs** \$ \_\_\_\_\_

6. Commodity Spilled ☐ Yes ☐ No  
*(If Yes, complete Parts a through c where applicable)*

- a. Name of commodity spilled \_\_\_\_\_
- b. Classification of commodity spilled:  
☐ HVLs /other flammable or toxic fluid which is a gas at ambient conditions  
☐ CO<sub>2</sub> or other non-flammable, non-toxic fluid which is a gas at ambient conditions  
☐ Gasoline, diesel, fuel oil or other petroleum product which is a liquid at ambient conditions  
☐ Crude oil

- a. Estimated amount of commodity involved :  
☐ Barrels  
☐ Gallons (check only if spill is less than one barrel)

**Amounts:**  
 Spilled : \_\_\_\_\_  
 Recovered : \_\_\_\_\_

### CAUSES FOR SMALL SPILLS ONLY (5 gallons to under 5 barrels) :

*(For large spills [5 barrels or greater] see Part H)*

- ☐ Corrosion ☐ Natural Forces ☐ Excavation Damage ☐ Other Outside Force Damage  
☐ Material and/or Weld Failures ☐ Equipment ☐ Incorrect Operation ☐ Other

### PART B – PREPARER AND AUTHORIZED SIGNATURE

(type or print) Preparer's Name and Title \_\_\_\_\_

Area Code and Telephone Number \_\_\_\_\_

Preparer's E-mail Address \_\_\_\_\_

Area Code and Facsimile Number \_\_\_\_\_

Authorized Signature \_\_\_\_\_

(type or print) Name and Title \_\_\_\_\_

Date \_\_\_\_\_

Area Code and Telephone Number \_\_\_\_\_

**PART C – ORIGIN OF THE ACCIDENT (Check all that apply)**

## 1. Additional location information

- a. Line segment name or ID \_\_\_\_\_  
 b. Accident on Federal land other than Outer Continental Shelf ☐ Yes ☐ No  
 c. Is pipeline interstate? ☐ Yes ☐ No

Offshore: ☐ Yes ☐ No (completed if offshore)

d. Area \_\_\_\_\_ Block # \_\_\_\_\_  
 State / / / or Outer Continental Shelf ☐

## 2. Location of system involved (check all that apply)

- ☐ Operator's Property  
☐ Pipeline Right of Way  
☐ High Consequence Area (HCA)?  
 Describe HCA \_\_\_\_\_

## 3. Part of system involved in accident

- ☐ Above Ground Storage Tank  
☐ Cavern or other below ground storage facility  
☐ Pump/meter station; terminal/tank farm piping and equipment, including sumps  
☐ Other Specify: \_\_\_\_\_

- ☐ Onshore pipeline, including valve sites  
☐ Offshore pipeline, including platforms

If failure occurred on Pipeline, complete items a - g:

## 4. Failure occurred on

- ☐ Body of Pipe ☐ Pipe Seam ☐ Scraper Trap  
☐ Pump ☐ Sump ☐ Joint  
☐ Component ☐ Valve ☐ Metering Facility  
☐ Repair Sleeve ☐ Welded Fitting ☐ Bolted Fitting  
☐ Girth Weld  
 Other (specify) \_\_\_\_\_

Year the component that failed was installed: / / / / /

## 5. Maximum operating pressure (MOP)

- a. Estimated pressure at point and time of accident: \_\_\_\_\_ PSIG  
 b. MOP at time of accident: \_\_\_\_\_ PSIG  
 c. Did an over pressurization occur relating to the accident?  
☐ Yes ☐ No

## a. Type of leak or rupture

- ☐ Leak: ☐ Pinhole ☐ Connection Failure (complete sec. H5)  
☐ Puncture, diameter (inches) \_\_\_\_\_  
☐ Rupture: ☐ Circumferential – Separation  
☐ Longitudinal – Tear/Crack, length (inches) \_\_\_\_\_  
 Propagation Length, total, both sides (feet) \_\_\_\_\_  
 ON/A  
☐ Other \_\_\_\_\_

## b. Type of block valve used for isolation of immediate section:

- Upstream: ☐ Manual ☐ Automatic ☐ Remote Control  
☐ Check Valve  
 Downstream: ☐ Manual ☐ Automatic ☐ Remote Control  
☐ Check Valve

## c. Length of segment isolated \_\_\_\_\_ ft

## d. Distance between valves \_\_\_\_\_ ft

e. Is segment configured for internal inspection tools? ☐ Yes ☐ No

- f. Had there been an in-line inspection device run at the point of failure? ☐ Yes ☐ No ☐ Don't Know  
☐ Not Possible due to physical constraints in the system

## g. If Yes, type of device run (check all that apply)

- ☐ High Resolution Magnetic Flux tool Year run: \_\_\_\_\_  
☐ Low Resolution Magnetic Flux tool Year run: \_\_\_\_\_  
☐ UT tool Year run: \_\_\_\_\_  
☐ Geometry tool Year run: \_\_\_\_\_  
☐ Caliper tool Year run: \_\_\_\_\_  
☐ Crack tool Year run: \_\_\_\_\_  
☐ Hard Spot tool Year run: \_\_\_\_\_  
☐ Other tool Year run: \_\_\_\_\_

**PART D – MATERIAL SPECIFICATION**

1. Nominal pipe size (NPS) / / / / / in.  
 2. Wall thickness / / / / / in.  
 3. Specification \_\_\_\_\_ SMYS / / / / /  
 4. Seam type \_\_\_\_\_  
 5. Valve type \_\_\_\_\_  
 6. Manufactured by \_\_\_\_\_ in year / / / / /

**PART E – ENVIRONMENT**

1. Area of accident ☐ In open ditch  
☐ Under pavement ☐ Above ground  
☐ Underground ☐ Under water  
☐ Inside/under building ☐ Other \_\_\_\_\_  
 2. Depth of cover: \_\_\_\_\_ inches

**PART F – CONSEQUENCES**

## 1. Consequences (check and complete all that apply)

- a. 

	Fatalities	Injuries
Number of operator employees:		
Contractor employees working for operator:		
General public:		
<b>Totals:</b>		

- b. Was pipeline/segment shutdown due to leak? ☐ Yes ☐ No  
 If Yes, how long? \_\_\_\_\_ days \_\_\_\_\_ hours \_\_\_\_\_ minutes

## 2. Environmental Impact

- a. Wildlife Impact: 

	<input type="radio"/> Yes	<input type="radio"/> No
Fish/aquatic		
Birds		
Terrestrial		

  
 b. Soil Contamination ☐ Yes ☐ No  
 If Yes, estimated number of cubic yards: \_\_\_\_\_  
 c. Long term impact assessment performed: ☐ Yes ☐ No  
 d. Anticipated remediation ☐ Yes ☐ No  
 If Yes, check all that apply: ☐ Surface water ☐ Groundwater ☐ Soil ☐ Vegetation ☐ Wildlife

c. Product ignited ☐ Yes ☐ Nod. Explosion ☐ Yes ☐ Noe. ☐ Evacuation (general public only) / / / / / people

Reason for Evacuation:

- ☐ Precautionary by company  
☐ Evacuation required or initiated by public official

## f. Elapsed time until area was made safe:

/ / / hr. / / / min.

e. Water Contamination: ☐ Yes ☐ No (If Yes, provide the following)

- Amount in water \_\_\_\_\_ barrels  
 Ocean/Seawater ☐ No ☐ Yes  
 Surface ☐ No ☐ Yes  
 Groundwater ☐ No ☐ Yes  
 Drinking water ☐ No ☐ Yes (If Yes, check below.)  
☐ Private well ☐ Public water intake

**PART G – LEAK DETECTION INFORMATION**

1. Computer based leak detection capability in place? ☐ Yes ☐ No
2. Was the release initially detected by? (check one): ☐ CPM/SCADA-based system with leak detection  
☐ Static shut-in test or other pressure or leak test  
☐ Local operating personnel, procedures or equipment  
☐ Remote operating personnel, including controllers  
☐ Air patrol or ground surveillance  
☐ A third party ☐ Other (specify) \_\_\_\_\_
3. Estimated leak duration days \_\_\_\_\_ hours \_\_\_\_\_

**PART H – APPARENT CAUSE**

**Important:** There are 25 numbered causes in this Part H. Check the box corresponding to the primary cause of the accident. Check one circle in each of the supplemental categories corresponding to the cause you indicate. See the instructions for guidance.

- |   |  |   |  |
|---|--|---|--|
| <b>H1 – CORROSION</b><br>1. <input type="checkbox"/> External Corrosion<br><br>2. <input type="checkbox"/> Internal Corrosion<br><br>(Complete items a – e where applicable.) | <b>a. Pipe Coating</b><br><input type="radio"/> Bare<br><input type="radio"/> Coated | <b>b. Visual Examination</b><br><input type="radio"/> Localized Pitting<br><input type="radio"/> General Corrosion<br><input type="radio"/> Other _____ | <b>c. Cause of Corrosion</b><br><input type="radio"/> Galvanic <input type="radio"/> Atmospheric<br><input type="radio"/> Stray Current <input type="radio"/> Microbiological<br><input type="radio"/> Cathodic Protection Disrupted<br><input type="radio"/> Stress Corrosion Cracking<br><input type="radio"/> Selective Seam Corrosion<br><input type="radio"/> Other _____ |
|---|--|---|--|
- d. Was corroded part of pipeline considered to be under cathodic protection prior to discovering accident?  
☐ No ☐ Yes, Year Protection Started: \_\_\_\_/\_\_\_\_/\_\_\_\_/\_\_\_\_/\_\_\_\_/\_\_\_\_
- e. Was pipe previously damaged in the area of corrosion?  
☐ No ☐ Yes ⇒ Estimated time prior to accident: \_\_\_\_/\_\_\_\_/\_\_\_\_ years \_\_\_\_/\_\_\_\_/\_\_\_\_ months Unknown ☐

**H2 – NATURAL FORCES**

- |  |  |  |  |  |
|--|--|--|--|--|
| 3. <input type="checkbox"/> Earth Movement<br>4. <input type="checkbox"/> Lightning<br>5. <input type="checkbox"/> Heavy Rains/Floods<br>6. <input type="checkbox"/> Temperature<br>7. <input type="checkbox"/> High Winds | ⇒ <input type="radio"/> Earthquake<br>⇒ <input type="radio"/> Washouts<br>⇒ <input type="radio"/> Thermal stress | <input type="radio"/> Subsidence<br><input type="radio"/> Flotation<br><input type="radio"/> Frost heave | <input type="radio"/> Landslide<br><input type="radio"/> Mudslide<br><input type="radio"/> Frozen components | <input type="radio"/> Other _____<br><input type="radio"/> Scouring<br><input type="radio"/> Other _____ |
|--|--|--|--|--|

**H3 – EXCAVATION DAMAGE**

8. ☐ Operator Excavation Damage (including their contractors/Not Third Party)
9. ☐ Third Party (complete a-f)
- a. Excavator group  
☐ General Public ☐ Government ☐ Excavator other than Operator/subcontractor
- b. Type: ☐ Road Work ☐ Pipeline ☐ Water ☐ Electric ☐ Sewer ☐ Phone/Cable  
☐ Landowner-not farming related ☐ Farming ☐ Railroad  
☐ Other liquid or gas transmission pipeline operator or their contractor  
☐ Nautical Operations ☐ Other \_\_\_\_\_
- c. Excavation was: ☐ Open Trench ☐ Sub-strata (boring, directional drilling, etc...)
- d. Excavation was an ongoing activity (Month or longer) ☐ Yes ☐ No If Yes, Date of last contact \_\_\_\_/\_\_\_\_/\_\_\_\_
- e. Did operator get prior notification of excavation activity?  
☐ Yes; Date received: \_\_\_\_/\_\_\_\_/\_\_\_\_ mo. \_\_\_\_/\_\_\_\_/\_\_\_\_ day \_\_\_\_/\_\_\_\_/\_\_\_\_ yr. ☐ No  
 Notification received from: ☐ One Call System ☐ Excavator ☐ Contractor ☐ Landowner
- f. Was pipeline marked as result of location request for excavation? ☐ No ☐ Yes (If Yes, check applicable items i - iv)
- i. Temporary markings: ☐ Flags ☐ Stakes ☐ Paint
- ii. Permanent markings: ☐
- iii. Marks were (check one): ☐ Accurate ☐ Not Accurate
- iv. Were marks made within required time? ☐ Yes ☐ No

**H4 – OTHER OUTSIDE FORCE DAMAGE**

10. ☐ Fire/Explosion as primary cause of failure ⇒ Fire/Explosion cause: ☐ Man made ☐ Natural
11. ☐ Car, truck or other vehicle not relating to excavation activity damaging pipe
12. ☐ Rupture of Previously Damaged Pipe
13. ☐ Vandalism



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## APPENDIX L

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### GLOSSARY OF TERMS/ACRONYMS

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# GLOSSARY OF TERMS & ACRONYMS

## GLOSSARY OF TERMS

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This glossary contains definitions of terms that will be used frequently during the course of response operations.

**Activate:** The process of mobilizing personnel and/or equipment within the response organization to engage in response operations.

**Activator:** An individual in the response organization whose responsibilities include notifying other individuals or groups within the organization to mobilize personnel and/or equipment.

**Adverse Weather:** The weather conditions that will be considered when identifying response systems and equipment in a response plan for the applicable operating environment. Factors to consider include significant wave height, ice, temperature, weather-related visibility, and currents within the Captain of the Port (COTP) zone in which the systems or equipment are intended to function.

**Agency Representative:** Individual assigned to an incident from an agency who has been delegated full authority to make decisions on all matters affecting that agency's participation in response operations.

**Area Committee:** As defined by Sections 311(a)(18) and (j)(4) of CWA, as amended by OPA, means the entity appointed by the President consisting of members from Federal, State, and local agencies with responsibilities that include preparing an Area Contingency Plan for the area designated by the President. The Area Committee may include ex-officio (i.e., non-voting) members (e.g., industry and local interest groups).

**Area Contingency Plan:** As defined by Sections 311(a)(19) and (j)(4) of CWA, as amended by OPA, means the plan prepared by an Area Committee, that in conjunction with the NCP, shall address the removal of a discharge including a worst-case discharge and the mitigation or prevention of a substantial threat of such a discharge from a vessel, offshore facility, or onshore facility operating in or near an area designated by the President.

**Average Most Probable Discharge:** A discharge of the lesser of 50 barrels or 1% of the volume of the worst case discharge.

**Barrel (bbl):** Measure of space occupied by 42 U.S. gallons at 60 degrees Fahrenheit.

**Bioremediation Agents:** Means microbiological cultures, enzyme additives, or nutrient additives that are deliberately introduced into an oil discharge and

that will significantly increase the rate of biodegradation to mitigate the effects of the discharge.

**Boom:** A piece of equipment or a strategy used to either contain free floating oil to a confined area or protect an uncontaminated area from intrusion by oil.

**Booming Strategies:** Strategic techniques which identify the location and quantity of boom required to protect certain areas. These techniques are generated by identifying a potential spill source and assuming certain conditions which would affect spill movement on water.

**Bulk:** Material that is stored or transported in a loose, unpackaged liquid, powder, or granular form capable of being conveyed by a pipe, bucket, chute, or belt system.

**Chemical Agents:** Means those elements, compounds, or mixtures that coagulate, disperse, dissolve, emulsify, foam, neutralize, precipitate, reduce, solubilize, oxidize, concentrate, congeal, entrap, fix, make the pollutant mass more rigid or viscous, or otherwise facilitate the mitigation of deleterious effects or the removal of the oil pollutant from the water. Chemical agents include biological additives, dispersants, sinking agents, miscellaneous oil spill control agents, and burning agents, but do not include solvents.

**Clean-up Contractor:** Persons contracted to undertake a response action to clean up a spill.

**Cleanup:** For the purposes of this document, cleanup refers to the removal and/or treatment of oil, hazardous substances, and/or the waste or contaminated materials generated by the incident. Cleanup includes restoration of the site and its natural resources.

**Coastal Waters:** For the purpose of classifying the size of discharges, means the waters of the coastal zone except for the Great Lakes and specified ports and harbors on inland rivers.

**Coastal Zone:** As defined for the purpose of the NCP, means all United States waters subject to the tide, United States waters of the Great Lakes, specified ports and harbors on inland rivers, waters of the contiguous zone, other waters of the high seas subject to the NCP, and the land surface or land



## GLOSSARY OF TERMS & ACRONYMS

### GLOSSARY OF TERMS (Cont'd)

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substrata, ground waters, and ambient air proximal to those waters. The term coastal zone delineates an area of federal responsibility for response action. Precise boundaries are determined by EPA/USCG agreements and identified in federal regional contingency plans.

**Coast Guard District Response Ground (DRG):**

As provided for by CWA sections 311(a)(20) and (j)(3), means the entity established by the Secretary of the department in which the USCG is operating within each USCG district and shall consist of: the combined USCG personnel and equipment, including firefighting equipment, of each port within the district; additional prepositioned response equipment; and a district response advisory team.

**Command:** The act of controlling manpower and equipment resources by virtue of explicit or delegated authority.

**Command Post:** A site located at a safe distance from the spill site where response decisions are made, equipment and manpower deployed, and communications handled. The Incident Commander and the On-Scene Coordinators may direct the on-scene response from this location.

**Communications Equipment:** Equipment that will be utilized during response operations to maintain communication between the Company employees, contractors, Federal/State/Local agencies. (Radio/telephone equipment and links)

**Containment Boom:** A flotation/freeboard device, made with a skirt/curtain, longitudinal strength member, and ballast unit/weight designed to entrap and contain the product for recovery.

**Contingency Plan:** A document used by (1) federal, state, and local agencies to guide their planning and response procedures regarding spills of oil, hazardous substances, or other emergencies; (2) a document used by industry as a response plan to spills of oil, hazardous substances, or other emergencies occurring upon their vessels or at their facilities.

**Contract or Other Approved Means:** For OPA 90, a written contract with a response contractor; certification by the facility owner or operator that personnel and equipment are owned, operated, or under the direct control of the facility, and available within the stipulated times; active membership in a local or regional oil spill removal organization; and/or the facility's own equipment.

**Critical Areas to Monitor:** Areas which if impacted by spilled oil may result in threats to public safety or health.

**Cultural Resources:** Current, historic, prehistoric and archaeological resources which include deposits, structures, ruins, sites, buildings, graves, artifacts, fossils, or other objects of antiquity which provide information pertaining to the historical or prehistorical culture of people in the state as well as to the natural history of the state.

**Damage Assessment:** The process of determining and measuring damages and injury to the human environment and natural resources, including cultural resources. Damages include differences between the conditions and use of natural resources and the human environment that would have occurred without the incident, and the conditions and use that ensued following the incident. Damage assessment includes planning for restoration and determining the costs of restoration.

**Decontamination:** The removal of hazardous substances from personnel and their equipment necessary to prevent adverse health effects.

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

**Dispersants:** Means those chemical agents that emulsify, disperse, or solubilize oil into the water column or promote the surface spreading of oil slicks to facilitate dispersal of the oil into the water column.

**Diversions Boom:** A floatation/freeboard device, made with a skirt/curtain, longitudinal strength member, and ballast unit/weight designed to deflect or divert the product towards a pick up point, or away from certain areas.

**Drinking Water Supply:** As defined by Section 101(7) of CERCLA, means any raw or finished water source that is or may be used by a public water system (as defined in the Safe Drinking Water Act) or as drinking water by one or more individuals.

**Economically Sensitive Areas:** Those areas of explicit economic importance to the public that due to their proximity to potential spill sources may require special protection and include, but are not limited to: potable and industrial water intakes; locks and dams; and public and private marinas.

**Emergency Service:** Those activities provided by state and local government to prepare for and carry out any activity to prevent, minimize, respond to, or recover from an emergency.

**Environmentally Sensitive Areas:** Streams and water bodies, aquifer recharge zones, springs, wetlands, agricultural areas, bird rookeries, endangered or threatened species (flora and fauna)

## GLOSSARY OF TERMS & ACRONYMS

### GLOSSARY OF TERMS (Cont'd)

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habitat, wildlife preserves or conservation areas, parks, beaches, dunes, or any other area protected or managed for its natural resource value.

**Facility:** Either an onshore facility or an offshore facility and includes, but is not limited to structures, equipment, and appurtenances thereto, used or capable of being used to transfer oil to or from a vessel or a public vessel. A facility includes federal, state, municipal, and private facilities.

**Facility Operator:** The person who owns, operates, or is responsible for the operation of the facility.

**Federal Fund:** The spill liability trust fund established under OPA.

**Federal Regional Response Team:** The federal response organization (consisting of representatives from selected federal and state agencies) which acts as a regional body responsible for planning and preparedness before an oil spill occurs and providing advice to the FOSC in the event of a major or substantial spill.

**Federal Response Plan (FRP):** Means the agreement signed by 25 federal departments and agencies in April 1987 and developed under the authorities of the Earthquake Hazards Reduction Act of 1977 and the Disaster Relief Act of 1974, as amended by the Stafford Disaster Relief Act of 1988.

**First Responders, First Response Agency:** A public health or safety agency (e.g., fire service or police department) charged with responding to a spill during the emergency phase and alleviating immediate danger to human life, health, safety, or property.

**Handle:** To transfer, transport, pump, treat, process, store, dispose of, drill for, or produce.

**Harmful Quantity Of Oil:** The presence of oil from an unauthorized discharge in a quantity sufficient either to create a visible film or sheen upon or discoloration of the surface of the water or a shoreline, tidal flat, beach, or marsh, or to cause a sludge or emulsion to be deposited beneath the surface of the water or on a shoreline, tidal flat, beach, or marsh.

**Hazardous Material:** Any nonradioactive solid, liquid, or gaseous substance which, when uncontrolled, may be harmful to humans, animals, or the environment. Including but not limited to substances otherwise defined as hazardous wastes, dangerous wastes, extremely hazardous wastes, oil, or pollutants.

**Hazardous Substance:** Any substance designed as such by the Administrator of the EPA pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act; regulated pursuant to Section 311 of the Federal Water Pollution Control Act, or discharged by the SERC.

**Hazardous Waste:** Any solid waste identified or listed as a hazardous waste by the Administrator of the EPA pursuant to the federal Solid Waste Disposal Act, as amended by the Resource Conservation and Recovery Act (RCRA), 42 U.S.C., Section 6901, et seq as amended. The EPA Administrator has identified the characteristics of hazardous wastes and listed certain wastes as hazardous in Title 40 of the Code of Federal Regulations, Part 261, Subparts C and D respectively.

**HAZMAT:** Hazardous materials or hazardous substances, exposure to which may result in adverse effects on health or safety of employees.

**HAZWOPER:** Hazardous Waste Operations and Emergency Response Regulations published by OSHA to cover worker safety and health aspects of

**Heat Stress:** Dangerous physical condition caused by over exposure to extremely high temperatures.

**Hypothermia:** Dangerous physical condition caused by over exposure to freezing temperatures.

**Incident:** Any event that results in a spill or release of oil or hazardous materials. Action by emergency service personnel may be required to prevent or minimize loss of life or damage to property and/or natural resources.

**Incident Briefing Meeting:** Held to develop a comprehensive, accurate, and up-to-date understanding of the incident, nature of status of control operations, and nature and status of response operations; ensure the adequacy of control and response operations; begin to organize control and response operations; and prepare for interactions with outside world.

**Incident Command Post (ICP):** That location at which all primary command functions are executed.

**Incident Command System (ICS):** The combination of facilities, equipment, personnel, procedures, and communications operating within a common organizational structure, with responsibility for the management of assigned resources at an incident.

## GLOSSARY OF TERMS & ACRONYMS

### GLOSSARY OF TERMS (Cont'd)

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**Incident Commander (IC):** The one individual in charge at any given time of an incident. The Incident Commander will be responsible for establishing a unified command with all on-scene coordinators.

**Indian Tribe:** As defined in OPA section 1001, means any Indian tribe, band, nation, or other organized group or community, but not including any Alaska Native regional or village corporation, which is recognized as eligible for the special programs and services provided by the United States to Indians because of their status as Indians and has governmental authority over lands belonging to or controlled by the Tribe.

**Initial Cleanup:** Remedial action at a site to eliminate acute hazards associated with a spill. An initial clean-up action is implemented at a site when a spill of material is an actual or potentially imminent threat to public health or the environment, or difficulty of cleanup increases significantly without timely remedial action. All sites must be evaluated to determine whether initial cleanup is total cleanup, however, this will not be possible in all cases due to site conditions (i.e., a site where overland transport or flooding may occur).

**Initial Notification:** The process of notifying necessary the Company personnel and Federal/State/Local agencies that a spill has occurred, including all pertinent available information surrounding the incident.

**Initial Response Actions:** The immediate actions that are to be taken by the spill observer after detection of a spill.

**Inland Area** means the area shoreward of the boundary lines defined in 46 CFR part 7, except that in the Gulf of Mexico, it means the area shoreward of the lines of demarcation (COLREG lines) as defined in §80.740 through 80.850 of this chapter. The inland area does not include the Great Lakes.

**Inland Waters:** State waters not considered coastal waters; lakes, rivers, ponds, streams, underground water, et. al.

**Inland Zone:** Means the environment inland of the coastal zone excluding the Great Lakes, and specified ports and harbors on inland rivers. The term inland zone delineates an area of federal responsibility for response action. Precise boundaries are determined by EPA/USCG agreements and identified in federal regional contingency plans.

**Interim Storage Site:** A site used to temporarily store recovered oil or oily waste until the recovered oil or oily waste is disposed of at a permanent disposal site. Interim storage sites include trucks, barges, and other vehicles, used to store waste until the transport begins.

**Lead Agency:** The government agency that assumes the lead for directing response activities.

**Lead Federal Agency:** The agency which coordinates the federal response to incident on navigable waters. The lead federal agencies are:

- **U.S. Coast Guard:** Oil and chemically hazardous materials incidents on navigable waters.
- **Environmental Protection Agency:** Oil and chemically hazardous materials incidents on inland waters.

**Lead State Agency:** The agency which coordinates state support to federal and/or local governments or assumes the lead in the absence of federal response.

**Loading:** Transfer from Facility to vehicle.

**Local Emergency Planning Committee (LEPC):** A group of local representatives appointed by the State Emergency Response Commission (SERC) to prepare a comprehensive emergency plan for the local emergency planning district, as required by the Emergency Planning and Community Right-to-know Act (EPCRA).

**Local Response Team:** Designated Facility individuals who will fulfill the roles determined in the oil spill response plan in the event of an oil or hazardous substance spill. They will supervise and control all response and clean-up operations.

**Lower Explosive Limit:** Air measurement utilized to determine the lowest concentration of vapors that support combustion. This measurement must be made prior to entry into a spill area.

**Marinas:** Small harbors with docks, services, etc. for pleasure craft.

**Medium Discharge:** Means a discharge greater than 2,100 gallons (50 Bbls) and less than or equal to 36,000 gallons (85+ Bbls) or 10% of the capacity of the largest tank, whichever is less and not to exceed the WCD.

## GLOSSARY OF TERMS & ACRONYMS

### GLOSSARY OF TERMS (Cont'd)

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**National Contingency Plan:** The plan prepared under the Federal Water Pollution Control Act (33 United State Code §1321 et seq) and the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (42 United State Code § 9601 et seq), as revised from time to time.

**National Pollution Funds Center (NPFC):** Means the entity established by the Secretary of Transportation whose function is the administration of the Oil Spill Liability Trust Fund (OSLTF). Among the NPFC's duties are: providing appropriate access to the OSLTF for federal agencies and states for removal actions and for federal trustees to initiate the assessment of natural resource damages; providing appropriate access to the OSLTF for claims; and coordinating cost recovery efforts.

**National Response System (NRS):** Is the mechanism for coordinating response actions by all levels of government in support of the OSC. The NRS is composed of the NRT, RRTs, OSC, Area Committees, and Special Teams and related support entities.

**National Strike Force (NSF):** Is a special team established by the USCG, including the three USCG Strike Teams, the Public Information Assist Team (PIAT), and the National Strike Force Coordination Center. The NSF is available to assist OSCs in their preparedness and response duties.

**National Strike Force Coordination Center (NSFCC):** Authorized as the National Response Unit by CWA section 311(a)(23) and (j)(2), means the entity established by the Secretary of the department in which the USCG is operating at Elizabeth City, North Carolina, with responsibilities that include administration of the USCG Strike Teams, maintenance of response equipment inventories and logistic networks, and conducting a national exercise program.

**Natural Resource:** Land, fish, wildlife, biota, air, water, ground water, drinking water supplies, and other such resources belonging to, managed by, held in trust by, appertaining to or otherwise controlled by the state, federal government, private parties, or a municipality.

**Navigable Waters:** As defined by 40 CFR 110.1 means the waters of the United States, including the territorial seas. The term includes:

All waters that are currently used, were used in the past, or may be susceptible to use in

interstate or foreign commerce, including all waters that are subject to the ebb and flow of the tide;

Interstate waters, including interstate wetlands;

All other waters such as interstate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, and wetlands, the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters;

That are or could be used by interstate or foreign travelers for recreational or other purposes;

From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; and

That are used or could be used for industrial purposes by industries in interstate commerce.

All impoundments of waters otherwise defined as navigable waters under this section;

Tributaries of waters identified in paragraphs (a) through (d) of this definition, including adjacent wetlands; and

Wetlands adjacent to waters identified in paragraphs (a) through (e) of this definition: Provided, that waste treatment systems (other than cooling ponds meeting the criteria of this paragraph) are not waters of the United States.

Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency,

for the purposes of the Clean Water Act jurisdiction remains with EPA.

**Nearshore Area:** For OPA 90, the area extending seaward 12 miles from the boundary lines defined in 46 CFR Part 7, except in the Gulf of Mexico. In the Gulf of Mexico, it means the area extending seaward 12 miles from the line of demarcation defined in §80.740 - 80.850 of title 33 of the CFR.

**Non-persistent or Group I Oil:** A petroleum-based oil that, at the time of shipment, consists of hydrocarbon fractions:

1. At least 50% of which by volume, distill at a temperature of 340 degrees C (645 degrees F);
2. At least 95% of which volume, distill at a temperature of 370 degrees C (700 degrees F).

## GLOSSARY OF TERMS & ACRONYMS

### GLOSSARY OF TERMS (Cont'd)

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**Ocean:** The open ocean, offshore area, and nearshore area as defined in this subpart.

**Offshore area:** The area up to 38 nautical miles seaward of the outer boundary of the nearshore area.

**Oil or Oils:** Naturally occurring liquid hydrocarbons at atmospheric temperature and pressure coming from the earth, including condensate and natural gasoline, and any fractionation thereof, including, but not limited to, crude oil, petroleum gasoline, fuel oil, diesel oil, oil sludge, oil refuse, and oil mixed with wastes other than dredged spoil. Oil does not include any substance listed in Table 302.4 of 40 CFR Part 302 adopted August 14, 1989, under Section 101(14) of the federal comprehensive environmental response, compensation, and liability act of 1980, as amended by P. L. 99-499.

**Oil Spill Liability Trust Fund:** Means the fund established under section 9509 of the Internal Revenue Code of 1986 (26 U.S.C. 9509).

**Oily Waste:** Product contaminated waste resulting from a spill or spill response operations.

**On-Scene Coordinator (OSC):** Means the federal official predesignated by the EPA or the USCG to coordinate and direct response under subpart D.

**On-site:** Means the areal extent of contamination and all suitable areas in very close proximity to the contamination necessary for implementation of a response action.

**Open Ocean:** means the area from 38 nautical miles seaward of the outer boundary of the nearshore area, to the seaward boundary of the exclusive economic zone.

**Owner or Operator:** Any person, individual, partnership, corporation, association, governmental unit, or public or private organization of any character.

**Persistent Oil:** A petroleum-based oil that does not meet the distillation criteria for a non-persistent oil. For the purposes of this Appendix, persistent oils are further classified based on specific gravity as follows:

1. Group II specific gravity less than .85
2. Group III specific gravity between .85 and less than .95
3. Group IV specific gravity .95 and including 1.0
4. Group V specific gravity greater than 1.0

**Plan Holder:** The plan holder is the industry transportation related facility for which a response plan is required by federal regulation to be submitted by a vessel or facility's owner or operator.

**Post Emergency Response:** The portion of a response performed after the immediate threat of a release has been stabilized or eliminated and cleanup of the sites has begun.

**Post Emergency:** The phase of response operations conducted after the immediate threat of the release has been stabilized, and cleanup operations have begun.

**Primary Response Contractors or Contractors:** An individual, company, or cooperative that has contracted directly with the plan holder to provide equipment and/or personnel for the containment or cleanup of spilled oil.

**Qualified Individual (QI):** That person or entity who has authority to activate a spill cleanup contractors, act as liaison with the "On-Scene Coordinator" and obligate funds required to effectuate response activities.

**Recreation Areas:** Publicly accessible locations where social/sporting events take place.

**Regional Response Team (RRT):** The Federal response organization (consisting of representatives from selected Federal and State agencies) which acts as a regional body responsible for overall planning and preparedness for oil and hazardous materials releases and for providing advice to the OSC in the event of a major or substantial spill.

**Remove or Removal:** As defined by section 311(a)(8) of the CWA, refers to containment and removal of oil or hazardous substances from the water and shorelines or the taking of such other actions as may be necessary to minimize or mitigate damage to the public health or welfare (including, but not limited to, fish, shellfish, wildlife, public and private property, and shorelines and beaches) or to the environment. For the purpose of the NCP, the term also includes monitoring of action to remove discharge.

**Response Activities:** The containment and removal of oil from the water and shorelines, the temporary storage and disposal of recovered oil, or the taking of other actions as necessary to minimize or mitigate damage to public health or welfare, or the environment.

**Response Contractors:** Persons/companies contracted to undertake a response action to contain and/or clean up a spill.

## GLOSSARY OF TERMS & ACRONYMS

### GLOSSARY OF TERMS (Cont'd)

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**Response Guidelines:** Guidelines for initial response that are based on the type of product involved in the spill, these guidelines are utilized to determine clean-up methods and equipment.

**Response Plan:** A practical manual used by industry for responding to a spill. Its features include: (1) identifying the notifications sequence, responsibilities, response techniques, etc. in a easy to use format; (2) using decision trees, flowcharts, and checklists to ensure the proper response for spills with varying characteristics; and (3) segregating information needed during the response from data required by regulatory agencies to prevent confusion during a spill incident.

**Response Resources:** All personnel and major items of equipment available, or potentially available, for assignment to incident tasks on which status is maintained.

**Responsible Party:** Any person, owner/operator, or facility that has control over an oil or hazardous substance immediately before entry of the oil or hazardous substance into the atmosphere or in or upon the water, surface, or subsurface land of the state.

**Response Priorities:** Mechanism used to maximize the effective use of manpower and equipment resources based upon their availability during an operational period.

**Response Resources:** All personnel and major items of equipment available, or potentially available, for assignment to incident tasks on which status is maintained.

**Restoration:** The actions involved in returning a site to its former condition.

**Rivers and Canals:** A body of water confined within the inland area that has a project depth of 12 feet or less, including the Intracoastal Waterway and other waterways artificially created for navigation.

**Securing the Source:** Steps that must be taken to stop discharge of oil at the source of the spill.

**Sinking Agents:** Means those additives applied to oil discharges to sink floating pollutants below the water surface.

**Site Characterization:** An evaluation of a cleanup site to determine the appropriate safety and health procedures needed to protect employees from identified hazards.

**Site Conditions:** Details of the area surrounding the facility, including shoreline descriptions, typical weather conditions, socioeconomic breakdowns, etc.

**Site Safety and Health Plan:** A site specific plan developed at the time of an incident that addresses:

- Safety and health hazard analysis for each operation.
- Personal protective equipment to be used.
- Training requirements for site workers.
- Medical surveillance requirements.
- Air monitoring requirements.
- Site control measures.
- Decontamination procedures.
- Emergency response procedures.
- Confined space entry procedures.

**Site Security and Control:** Steps that must be taken to provide safeguards needed to protect personnel and property, as well as the general public, to ensure an efficient clean-up operation.

**Skimmers:** Mechanical devices used to skim the surface of the water and recover floating oil. Skimmers fall into four basic categories (suction heads, floating weirs, oleophilic surface units, and hydrodynamic devices) which vary in efficiency depending on the type of oil and size of spill.

**Snare Boom:** Oil will adhere to the material of which this boom is made of and thus collect it.

**Sorbents:** Materials ranging from natural products to synthetic polymeric foams placed in confined areas to soak up small quantities of oil. Sorbents are very effective in protecting walkways, boat decks, working areas, and previously uncontaminated or cleaned areas.

**Spill:** An unauthorized discharge of oil or hazardous substance into the waters of the state.

**Spill Observer:** The first Facility individual who discovers a spill. This individual must function as the first responder and person-in-charge until relieved by an authorized supervisor.

**Spill of National Significance (SONS):** Means a spill which due to its severity, size, location, actual or potential impact on the public health and welfare or the environment, or the necessary response effort, is so complex that it requires extraordinary coordination of federal, state, local, and responsible party resources to contain and cleanup the discharge.

## GLOSSARY OF TERMS & ACRONYMS

### GLOSSARY OF TERMS (Cont'd)

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**Spill Management Team:** The personnel identified to staff the organizational structure identified in a response plan to manage response plan implementation.

**Spill Response:** All actions taken in responding to spills of oil and hazardous materials, e.g.: receiving and making notifications; information gathering and technical advisory phone calls; preparation for and travel to and from spill sites; direction of clean-up activities; damage assessments; report writing, enforcement investigations and actions; cost recovery; and program development.

**Spill Response Personnel:** Federal, state, local agency, and industry personnel responsible for participating in or otherwise involved in spill response. All spill response personnel will be pre-approved on a list maintained in each region.

**Staging Areas:** Designated areas near the spill site accessible for gathering and deploying equipment and/or personnel.

**State Emergency Response Commission (SERC):** A group of officials appointed by the Governor to implement the provisions of Title III of the Federal Superfund Amendments and Reauthorization Act of 1986 (SARA). The SERC approves the State Oil and Hazardous Substance Discharge Prevention and Contingency Plan and Local Emergency Response Plans.

**Surface Collecting Agents:** Means those chemical agents that form a surface film to control the layer thickness of oil.

**Surface Washing Agent:** Is any product that removes oil from solid surfaces, such as beaches and rocks, through a detergency mechanism and does not involve dispersing or solubilizing the oil into the water column.

**Tanker:** A self-propelled tank vessel constructed or adapted primarily to carry or hazardous material in bulk in the cargo spaces.

**Tidal Current Tables:** Tables which contain the predicted times and heights of the high and low waters for each day of the year for designated areas.

**Trajectory Analysis:** Estimates made concerning spill size, location, and movement through aerial surveillance or computer models.

**Transfer:** Any movement of oil to, from, or within a vessel by means of pumping, gravitation, or displacement.

**Trustee:** Means an official of a federal natural resources management agency designated in subpart G of the NCP or a designated state official or Indian tribe or, in the case of discharges covered by the OPA, a foreign government official, who may pursue claims for damages under section 1006 of the OPA.

**Underwriter:** An insurer, a surety company, a guarantor, or any other person, other than an owner or operator of a vessel or facility, that undertakes to pay all or part of the liability of an owner or operator.

**Unified Command:** The method by which local, state, and federal agencies and the responsible party will work with the Incident Commander to:

- Determine their roles and responsibilities for a given incident.
- Determine their overall objectives for management of an incident.
- Select a strategy to achieve agreed-upon objectives.
- Deploy resources to achieve agreed-upon objectives.

**Unified or Coordinated Command Meeting:** Held to obtain agreement on strategic objectives and response priorities; review tactical strategies; engage in joint planning, integrate response operations; maximize use of resources; and minimize resolve conflicts.

**Volunteers:** An individual who donates their services or time without receiving monetary compensation.

**Waste:** Oil or contaminated soil, debris, and other substances removed from coastal waters and adjacent waters, shorelines, estuaries, tidal flats, beaches, or marshes in response to an unauthorized discharge. Waste means any solid, liquid, or other material intended to be disposed of or discarded and generated as a result of an unauthorized discharge of oil. Waste does not include substances intended to be recycled if they are in fact recycled within 90 days of their generation or if they are brought to a recycling facility within that time.

**Waters of the U.S. -** See Navigable Waters, page G-11.

**Wetlands:** Those areas that are inundated or saturated by surface or groundwater at a frequency or duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil

## GLOSSARY OF TERMS & ACRONYMS

### GLOSSARY OF TERMS (Cont'd)

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conditions. Wetlands generally include playa lakes, swamps, marshes, bogs, and similar areas such as sloughs, prairie potholes, wet meadows, prairie river overflows, mudflats, and natural ponds (40 CFR 112.2(y)).

**Wildlife Rescue:** Efforts made in conjunction with Federal and State agencies to retrieve, clean, and rehabilitate birds and wildlife affected by an oil spill.

**Worst Case Discharge:** The largest foreseeable discharge under adverse weather conditions. For facilities located above the high water line of coastal waters, a worst case discharge includes those weather conditions most likely to cause oil discharged from the facility to enter coastal waters.



## GLOSSARY OF TERMS & ACRONYMS

### ACRONYMS

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<b>AC</b>	- Area Committee	<b>EQ</b>	- Environmental Quality
<b>AOR</b>	- Area of Review	<b>ERT</b>	- Environmental Response Team
<b>AQI</b>	- Alternate Qualified Individual	<b>ESA</b>	- Endangered Species Act
<b>BIA</b>	- Bureau of Indian Affairs	<b>ETA</b>	- Estimated Time of Arrival
<b>BLM</b>	- Bureau of Land Management	<b>FAA</b>	- Federal Aviation Administration
<b>BPD</b>	- Barrels Per Day	<b>FACT</b>	- First Assessment Crisis Team
<b>BOD</b>	- Biological Oxygen Demand	<b>FAX</b>	- Facsimile Machine
<b>BOM</b>	- Bureau of Mines	<b>FCC</b>	- Federal Communications Commission
<b>CAER</b>	- Community Awareness and Emergency Response	<b>FEMA</b>	- Federal Emergency Management Agency
<b>CERCLA</b>	- Comprehensive Environmental Response, Compensation and Liability Act	<b>FOSC</b>	- Federal On-Scene Coordinator
<b>CFR</b>	- Code of Federal Regulations	<b>FR</b>	- Federal Register
<b>CHEMTREC</b>	- Chemical Transportation Emergency Center	<b>FRDA</b>	- Freshwater Resource Damage Assessment
<b>COE</b>	- U. S. Army Corps of Engineers	<b>FRF</b>	- Federal Revolving Fund
<b>CPI</b>	- Corrugated Plate Interceptor	<b>GIS</b>	- Geographic Information System
<b>CRZ</b>	- Contamination Reduction Zone	<b>GSA</b>	- General Services Administration
<b>CWA</b>	- Clean Water Act (Federal - Public Law 100-4)	<b>HAZWOPER</b>	- Hazardous Waste Operations and Emergency Response
<b>CWS</b>	- Community Water System	<b>HHS</b>	- Department of Health and Human Services
<b>CZM</b>	- Coastal Zone Management	<b>HOPD</b>	- Head Office Products Distribution
<b>DECON</b>	- Decontamination	<b>IBRRC</b>	- International Bird Rescue Research Center
<b>DOC</b>	- Department of Commerce	<b>IOCC</b>	- Interstate Oil Compact Commission
<b>DOD</b>	- Department of Defense	<b>LEPC</b>	- Local Emergency Planning Committee
<b>DOE</b>	- Department of Energy	<b>LFL</b>	- Lower Flammable Limit
<b>DOI</b>	- Department of Interior	<b>LOSC</b>	- Local On-Scene Coordinator
<b>DOJ</b>	- Department of Justice	<b>LRT</b>	- Local Response Team
<b>DOL</b>	- Department of Labor	<b>MBL</b>	- Mobile
<b>DOS</b>	- Department of State	<b>MER</b>	- Marine Emergency Response
<b>DOT</b>	- Department of Transportation	<b>MMS</b>	- Minerals Management Service
<b>DRAT</b>	- District Response Advisory Team	<b>MMT</b>	- Marine Management Team
<b>DRG</b>	- District Response Group	<b>MOU</b>	- Memorandum of Understanding
<b>EBS</b>	- Emergency Broadcast System	<b>MSDS</b>	- Material Safety Data Sheet
<b>EHS</b>	- Extremely Hazardous Substance	<b>MSO</b>	- Marine Safety Office
<b>EMA</b>	- Emergency Management Agency	<b>MSRC</b>	- Marine Spill Response Corporation
<b>EMS</b>	- Emergency Medical Service	<b>NCP</b>	- National Contingency Plan
<b>EOC</b>	- Emergency Operations Center	<b>NCWS</b>	- Non-Community Water System
<b>EPA</b>	- U. S. Environmental Protection Agency		
<b>EPCRA</b>	- The Emergency Planning and Community Right-to-Know Act of 1986 (Title III of SARA)		

# GLOSSARY OF TERMS & ACRONYMS

## ACRONYMS (Cont'd)

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<b>NEPA</b>	- National Environmental Policy Act	<b>RCRA</b>	- Resource Conservation and Recovery Act
<b>NIOSH</b>	- National Institute for Occupational Safety and Health	<b>RECON</b>	- Reconnaissance
<b>NMFS</b>	- National Marine Fisheries Service	<b>REP</b>	- Radiological Emergency Preparedness
<b>NOAA</b>	- National Oceanic and Atmospheric Administration (Department of Commerce)	<b>RERT</b>	- Radiological Emergency Response Team
<b>NPDES</b>	- National Pollution Discharge Elimination System	<b>RQ</b>	- Reportable Quantity
<b>NPFC</b>	- National Pollution Funds Center	<b>RRT</b>	- Regional Response Team
<b>NPS</b>	- National Park Service	<b>RSPA</b>	- Research and Special Programs Administration (replaced by PHMSA)
<b>NRC</b>	- National Response Center	<b>SARA</b>	- Superfund Amendments and Reauthorization Act
<b>NRDA</b>	- Natural Resource Damage Assessment	<b>SCBA</b>	- Self Contained Breathing Apparatus
<b>NRS</b>	- National Response System	<b>SDWA</b>	- Safe Drinking Water Act
<b>NRT</b>	- National Response Team	<b>SERC</b>	- State Emergency Response Commission
<b>NSF</b>	- National Strike Force	<b>SIC</b>	- State Implementation Plan
<b>NSFCC</b>	- National Strike Force Coordination Center	<b>SMT</b>	- Spill Management Team
<b>NTNCWS</b>	- Non -Transient Non-Community Water System	<b>SONS</b>	- Spill of National Significance
<b>OPA</b>	- Oil Pollution Act	<b>SOP</b>	- Standard Operating Procedure
<b>OPS</b>	- Office of Pipeline Safety (DOT)	<b>SPCC</b>	- Spill Prevention Control and Countermeasures
<b>OSC</b>	- On-Scene Coordinator	<b>SSC</b>	- Scientific Support Coordinator (NOAA)
<b>OSHA</b>	- Occupational Safety and Health Administration (USDH)	<b>STEL</b>	- Short Term Exposure Limits
<b>OSLTF</b>	- Oil Spill Liability Trust Fund	<b>SUPSALV</b>	- United States Navy Supervisor of Salvage
<b>OSPRA</b>	- Oil Spill Prevention and Response Act	<b>SWD</b>	- Salt Water Disposal
<b>OSRO</b>	- Oil Spill Response Organization	<b>TSCA</b>	- Toxic Substances Control Act
<b>PCB</b>	- Polychlorinated Biphenyls	<b>TSDF</b>	- Treatment, Storage or Disposal Facility
<b>PFD</b>	- Personal Flotation Device	<b>UCS</b>	- Unified Command System
<b>PGR</b>	- Pager	<b>USACOE</b>	- U.S. Army Corps of Engineers
<b>PHMSA</b>	- Pipeline and Hazardous Materials Safety Administration (replaces RSPA)	<b>USCG</b>	- U.S. Coast Guard
<b>PIAT</b>	- Public Information Assist Team	<b>USDA</b>	- U.S. Department of Agriculture
<b>POLREP</b>	- Pollution Report	<b>USDH</b>	- U.S. Department of Labor
<b>PPE</b>	- Personal Protective Equipment	<b>USDOD</b>	- U.S. Department of Defense
<b>PPM</b>	- Parts Per Million	<b>USDOE</b>	- U.S. Department of Energy
<b>PSD</b>	- Prevention of Significant Deterioration	<b>USDW</b>	- Underground Source of Drinking Water
<b>QI</b>	- Qualified Individual	<b>USFWS</b>	- U. S. Fish and Wildlife Services
<b>RACT</b>	- Reasonably Achievable Control Technology	<b>USGS</b>	- U. S. Geological Survey
<b>RCP</b>	- Regional Contingency Plan	<b>WCD</b>	- Worst Case Discharge

## **APPENDIX M**

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### **RESPONSE PLAN COVER SHEET**

## Response Plan Cover Sheet

General Information	
<b>Owner/Operator of Facility</b>	Oiltanking, Texas City
<b>Facility Name:</b>	Texas City Terminal
<b>Facility's Physical Address:</b>	2800 Loop 197 South Texas City, TX 77590
<b>Facility Phone Number:</b>	(409) 797-1700
<b>Latitude:</b>	(b) (7)(F)
<b>Longitude:</b>	(b) (7)(F)
<b>Dun &amp; Bradstreet Number:</b>	
<b>North American Industrial Classification System (NAICS) Code:</b>	493190
<b>Number of Aboveground Oil Storage Tanks:</b>	(b) (7)(F)
<b>Capacity of Largest Aboveground Oil Storage Tank:</b>	(b) (7)(F) (Bbls)
<b>Maximum Oil Storage Capacity:</b>	(b) (7)(F)
<b>Worst Case Oil Discharge Amount:</b>	(b) (7)(F) (Bbls)
<b>Facility Distance to Navigable Water:</b>	<input checked="" type="checkbox"/> 0 – ¼ mile <input type="checkbox"/> ½ - 1 mile <input type="checkbox"/> ¼ - ½ mile <input type="checkbox"/> >1 mile

# **CERTIFICATION OF THE APPLICABILITY OF THE SUBSTANTIAL HARM CRITERIA**

FACILITY NAME: Oiltanking, Texas City – Texas City Terminal

FACILITY ADDRESS: 2800 Loop 197 South

Texas City, TX 77590

1. Does the facility transfer oil over water to or from vessels **and** does the facility have a total oil storage capacity greater than or equal to 42,000 gallons?  
 YES ✓ NO
2. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons **and** does the facility lack secondary containment that is sufficiently large to contain the capacity of the largest aboveground oil storage tank plus sufficient freeboard to allow for precipitation within any aboveground oil storage tank area?  
 YES ✓ NO
3. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons **and** is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula<sup>1</sup>) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments? For further description of fish and wildlife and sensitive environments, see Appendices I, II, and III to DOC/NOAA's "Guidance for Facility and Vessel Response Plans: Fish and Wildlife and Sensitive Environments" (59 FR 14713, March 29, 1994) and the applicable Area Contingency Plan.  
 YES ✓ NO
4. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons **and** is the facility located at a distance (as calculated using the appropriate formula in Attachment C-III to this appendix or a comparable formula<sup>1</sup>) such that a discharge from the facility would shut down a public drinking water intake<sup>2</sup>?  
 YES            NO ✓
5. Does the facility have a total oil storage capacity greater than or equal to 1 million gallons **and** has the facility experienced a reportable oil spill in an amount greater than or equal to 10,000 gallons within the last 5 years?  
 YES            NO ✓

## **CERTIFICATION**

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Kevin Campbell

Signature

Kevin Campbell

Name (please type or print)

Operations Manager

Title

12/7/2004

Date

<sup>1</sup> If a comparable formula is used, documentation of the reliability and analytical soundness of the comparable formula must be attached to this form.  
<sup>2</sup> For the purposes of 40 CFR part 112, public drinking water intakes are analogous to public water systems as described at 40 CFR 143.2(c).



**OPERATOR'S STATEMENT – SIGNIFICANT AND SUBSTANTIAL HARM**

FACILITY NAME: Oiltanking, Texas City - Texas City Terminal  
 FACILITY ADDRESS: 2800 Loop 197 South  
Texas City, TX 77590

Is the pipeline greater than 6 and 5/8 inches (168 mm) in outside nominal diameter, greater than 10 miles (16.1 km) in length? and

YES \_\_\_\_\_ NO ✓

1. Has any line section experienced a release greater than 1,000 barrels within the previous five years? or

YES \_\_\_\_\_ NO ✓

2. Has any line section experienced two or more reportable releases, as defined in Sec. 195.5, within the previous five years? or

YES \_\_\_\_\_ NO ✓

3. Does any line section contain any electric resistance welded pipe, manufactured prior to 1970 and operates at a maximum operating pressure established under Sec. 195.406 that corresponds to a stress level greater than 50 percent of the specified minimum yield strength of the pipe? or

YES \_\_\_\_\_ NO ✓

4. Is any line located within a 5-mile (8 km) radius of potentially affected public drinking water intakes and could reasonably be expected to reach public drinking water intakes? or

YES \_\_\_\_\_ NO ✓

5. Is any line located within a 1-mile (1.6 km) radius of potentially affected environmentally sensitive areas and could reasonably be expected to reach these areas?

YES ✓ \_\_\_\_\_ NO \_\_\_\_\_

Based on the pipeline is less than 10 miles in length, the Facility is identified as "Substantial Harm" only.

Kevin Campbell  
Signature

Operations Manager  
Title

Kevin Campbell  
Name (please type or print)

4/20/2006  
Date

## **APPENDIX N**

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### **REGULATORY AGENCY CORRESPONDENCE AND OTHER AGENCY REQUIREMENTS**