

# EMERGENCY RESPONSE ACTION PLAN

## Pasadena Refining System, Inc.

# Pasadena Refinery and Red Bluff Tank Farm

*Prepared for:*

**PASADENA REFINING SYSTEM, INC.  
PASADENA REFINERY  
111 Red Bluff Road  
Pasadena, TX 77506**

*Prepared by:*

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# EMERGENCY RESPONSE ACTION PLAN

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**FIGURE 1.3****FACILITY INFORMATION**

<b>GENERAL INFORMATION</b>	
<b>Facility Name:</b>	Pasadena Refining System, Inc. (PRSI) Pasadena Refinery and Red Bluff Tank Farm 111 Red Bluff Road Pasadena, Texas 77506 <b>(713) 472-2461 - 24 HR NUMBER</b> (713) 534-0043 FAX
<b>EPA FRP ID#:</b>	FRP-06-TX-00348
<b>USCG FRP ID#:</b>	93002
<b>DOT FRP ID#:</b>	78
<b>Owner Name:</b>	PRSI 111 Red Bluff Road Pasadena, TX 77506
<b>*Qualified Individual and Person in Charge Facility Spill Coordinator:</b>	Don Davis – Emergency Response Supervisor (713) 920-3942 (Office) <b>(b) (6)</b> (Cellular)
<b>*Alternate Qual. Individ./ Other Emergency Coordinator:</b>	<b>(b) (6)</b> (Home) <b>(b) (6)</b> (Cellular)
<b>*Alternate Qual. Individ./ Other Emergency Coordinator:</b>	Tobey Taylor <b>(b) (6)</b> (Home) <b>(b) (6)</b> (Cellular)
* A Qualified Individual (QI) or Alternate Qualified Individual (AQI) is available at the Facility 24 hours per day.	

## FIGURE 1.3

## FACILITY INFORMATION (Cont'd)

GENERAL INFORMATION	
<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>Primary SIC Code:</b>	2911
<b>NAICS Code:</b>	32411
<b>Date of Initial Oil Storage:</b>	Approximately 1920
<b>Breakout Tank:</b>	(b) (3), (b) (7)(F)
<b>Pipeline Location:</b>	<p>A) Three (3) active pipelines run between the Pasadena Refinery and its Red Bluff Tank Farm. These lines are all less than one (1) mile in length outside of PRSI fence lines. The pipelines run parallel to Red Bluff Road, set back approximately ¼ mile in Harris County. There is one out-of-service 6" pipeline and one out-of-service 10" pipeline between the Pasadena Refinery and the Red Bluff Tank Farm.</p> <ul style="list-style-type: none"> <li>● 12" line is approx. 7250' with a max flow rate of 11,000 bph</li> <li>● 14" line is approx. 10,600' with a max flow rate of 11,000 bph</li> <li>● 16" line is approx. 7250' with a max flow rate of 14,000 bph</li> </ul> <p>B) Three (3) pipelines run between the Pasadena Refinery and Houston Refining. The 12" line is (inactive). There are no plans to return the 8" line to active service. The 4" line has been returned to active service. The 4", 8", and 12" lines are approximately 1.63 miles in length.</p> <ul style="list-style-type: none"> <li>● The max flow rate through the 4" line is 800 bph.</li> <li>● The max flow rate through the 12" line is estimated at 1,000 bph</li> </ul> <p>C) One (1) active pipeline, approximately 3.51 miles in length serves as an HVL line to transfer propane/propylene from the Pasadena Refinery to Exxon and/or Georgia Gulf. This line is primarily 4" in diameter, with segments of 6" and 8" diameter, and runs approximately parallel with Highway 225.</p> <ul style="list-style-type: none"> <li>● This line operates at approx. 900 psig at a max flow rate of 300 bph</li> </ul>

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

<b>GENERAL INFORMATION (Cont'd)</b>	
<b>Pipeline Location (Cont'd):</b>	<p>D) One (1) pipeline, approximately ½ mile in length and 24" diameter, runs between the 24" Magellan (formerly Rancho) pipeline and the PRSI Red Bluff Tank Farm. The pipeline crosses beneath Highway 225.</p> <ul style="list-style-type: none"> <li>● The max flow rate through this line is estimated at 15,000 bph</li> </ul> <p>E) The CPL 36" gasoline line is approximately 3,379 feet and 16" furnace oil line is approximately 3,393 feet. The CPL 40" furnace oil line is approximately 2,332 feet and the CPL 16" furnace oil is approximately 3,393 feet in length. The two 16" lines serve as gasoline blend and furnace oil transfer to Kinder Morgan/Colonial Pipeline. There is one (1) 6" pipeline that is out of service between Kinder Morgan and the PRSI Refinery.</p> <ul style="list-style-type: none"> <li>● The max flow rate through the 36" gasoline pipeline is 34,000 bph</li> <li>● The max flow rate through the 40" furnace oil pipeline is 54,000 bph</li> <li>● The two 16" flush back pipelines are max rated at 10,000 bph</li> </ul>
<b>Response Zone:</b>	Harris County (All maintenance/operational functions are conducted by Company personnel located at the Facility, a single Response Zone has been developed.)
<b>Pipeline Significant and Substantial Harm:</b>	Substantial Harm (Refer to "Operator's Statement - Significant and Substantial Harm" in Appendix M)
<b>FACILITY LOCATION</b>	
<b>County:</b>	Harris County
<b>Latitude:</b>	(b) (7)(F), (b) (3)
<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>	No Impact

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

<b>FACILITY LOCATION (Cont'd)</b>		
<b><i>Landside Directions:</i></b>		
●	From I-610, exit east SR 225 (Pasadena) and travel approximately 4.4 miles to Red Bluff Road.	
●	Turn northwest (left) and travel approximately 1.0 miles to PRSI's Pasadena Refinery.	
●	Turn north (right) into PRSI's – Pasadena Refinery Administration Building Parking Lot.	
●	The physical address is 111 Red Bluff Road, Pasadena, Texas.	
<b><i>Waterside Directions:</i></b>		
●	Travel Houston Ship Channel (west), facility is on the south bank, between buoys 161 and 163.	
<b>PHYSICAL DESCRIPTION - GENERAL</b>		
<b><i>Description of Operation:</i></b>		
●	The Facility receives approximately three crude ship deliveries per year at the oil dock. Crude is immediately transferred via facility pipeline to refinery or tank farm storage tanks.	
●	Products are shipped via tank barge, truck, and pipeline for custody transport.	
●	The Facility has a total storage capacity of approximately (b) (3), (b) (7)(F) with an average storage capacity of approximately (b) (3), (b) (7)(F). Daily throughput is approximately 102,598.05 Bbls across two docks, two bay truck racks, and seven oil pipelines.	
<b><i>Products Handled:</i></b>		
●	Crude Oil	● No. 2 Fuel Oil
●	Gasoline	● Petroleum Coke
●	Kerosene	● Propane
●	Furnace Oil	● Heavy Oil
●	Isobutane	● Naphtha
		● Propane/Propylene Mix
		● Normal Butane
		● Butane/Butylene Mix
<b>Note:</b> Safety Data Sheets (SDS) of all oil and hazardous materials handled, stored or transported from this facility are available on the private PRSI website.		

## FIGURE 1.3

### FACILITY INFORMATION (Cont'd)

PHYSICAL DESCRIPTION - TRUCK RACK
<p><b>Description of Operation:</b></p> <ul style="list-style-type: none"> <li>● The Facility is equipped with two (2) loading/unloading spots for LPG products.</li> <li>● A maximum of two (2) LPG trucks may load simultaneously with a maximum of one (1) truck load per month. (This area is currently out of service).</li> <li>● The Facility is equipped with two (2) loading/unloading spots for spent caustic.</li> <li>● A maximum of two (2) spent caustic trucks may load simultaneously with a maximum of one (1) truck load per week.</li> </ul> <p><b>Loading Rate:</b>           600 to 700 gpm (<i>typical</i>)</p> <p><b>Truck Capacity:</b>       9,000 gallons (<i>typical</i>)</p> <p><b>Discharge Prevention:</b></p> <ul style="list-style-type: none"> <li>● The truck rack has paved surfaces, concrete spill containment and center drains that holds the contents of a truck.</li> <li>● Spillage prevention is provided by procedure with a truck operator and a PRSI operator monitoring the loading/unloading process on a continuous basis. In addition, LPG trucks are vented to loading tanks and the Facility flare system to prevent over-pressure and spillage.</li> </ul>
PHYSICAL DESCRIPTION - MARINE OPERATIONS
<p><b>Description of Operation:</b></p> <ul style="list-style-type: none"> <li>● This Dock Facility is equipped with one (1) berth.</li> <li>● Maximum vessel length is eight hundred five feet (805').</li> <li>● Highest water level is forty four (44').</li> <li>● Lowest water level is thirty five feet (35').</li> <li>● Average mean water level is thirty five feet (35').</li> <li>● Dock draft is thirty nine feet (39').</li> </ul>
<p><b>Tow Quantity:</b></p> <ul style="list-style-type: none"> <li>● Approximately twenty (20) marine unloading operations per month.</li> <li>● One (1) barge with a typical length of 400 feet.</li> <li>● Capacity is 25,000 barrels for barges.</li> <li>● Typically two (2) barges in tow.</li> </ul>
<p><b>Loading/Unloading Rate:</b></p> <ul style="list-style-type: none"> <li>● 2,500 to 11,000 Bbls/hr and 1,500 Tons (coke)</li> <li>● 8" Hose</li> <li>● Marine loading/unloading operations are conducted at this Facility approximately five (5) times per week.</li> </ul>

## FIGURE 1.3

## FACILITY INFORMATION (Cont'd)

## PHYSICAL DESCRIPTION - MARINE OPERATIONS (Cont'd)

***Tanker Capacity:***

- 805 feet in length
- 300,000 Bbls maximum
- 225,000 Bbls typical
- One (1) tanker may load/unload at a time.
- All tankers are third party owned and operated.

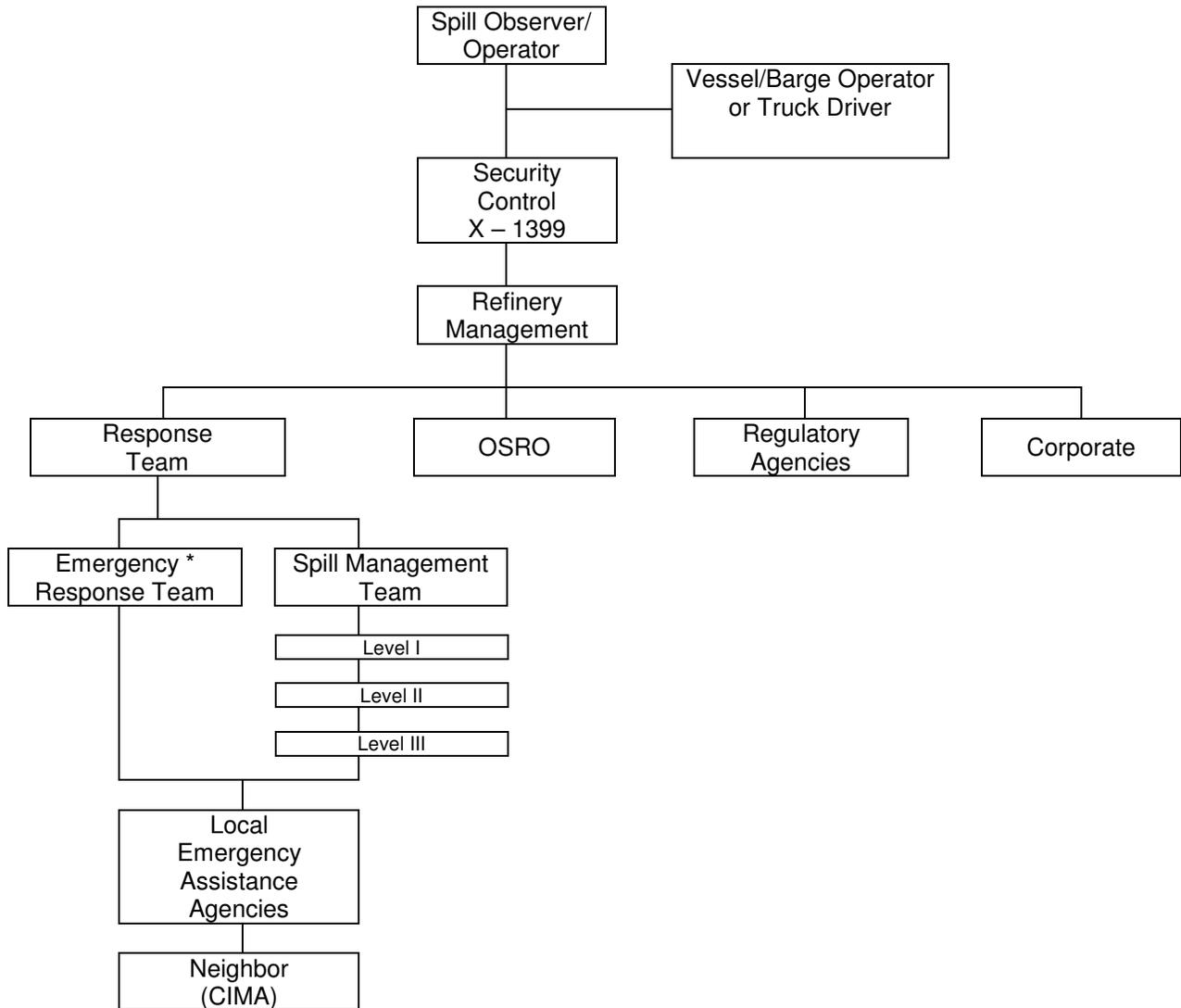
***Pipelines from Dock to Facility:***

(b) (3), (b) (7)(F)

*(Volume calculation details are provided in Appendix G -- Worst Case Discharge Analysis and Appendix H -- Hazard Evaluation)*

**FIGURE 2.1**

**INTERNAL NOTIFICATION SEQUENCE**



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

GENERAL FACILITY			
FACILITY	ADDRESS	OFFICE	FAX NUMBER
Pasadena Refinery	111 Red Bluff Road Pasadena, TX 77506	(713) 472-2461 <b>24 Hr. Number</b>	(713) 920-3933

QUALIFIED INDIVIDUALS						
POSITION/TITLE	NAME	RESPONSE TIME	TRAINING LEVEL	OFFICE	HOME	OTHER
<b>Qualified Individual and Person in Charge</b>	Don Davis	60 minutes ( <i>maximum</i> )	Training records are available at the Facility training department.	(713) 920-3942	(b) (6)	
	<b>Alternate Qualified Individual and Person in Charge</b>	Alisa White		60 minutes ( <i>maximum</i> )		
Tobey Taylor		60 minutes ( <i>maximum</i> )		(713) 920-4152		

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

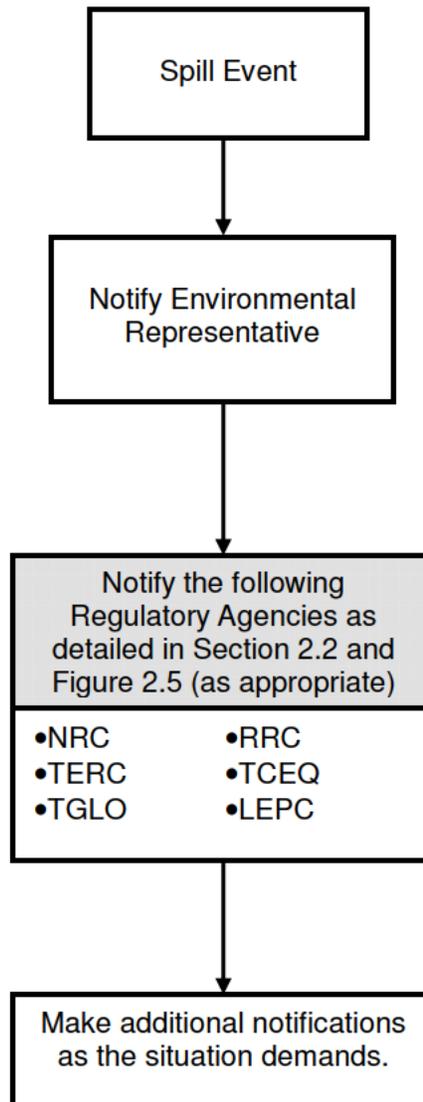
SPILL MANAGEMENT TEAM					
POSITION/TITLE	NAME	RESPONSE TIME	OFFICE	HOME	OTHER
<b><i>Volunteer Emergency Response Team</i></b>	Activated through Security Control at Extension 1399 via Global Pager System		(713) 476-2461	(b) (6)	
CEO	Fernando Oliveira	60 minutes (maximum)	(713) 920-4789		
Director Health, Safety, Environmental and Security	Mark Berlinger	60 minutes (maximum)	(713) 920-3924		
Director Operations	John Edmonds	60 minutes (maximum)	(713) 920-3913		
Human Resources Director	Denise Gaston	60 minutes (maximum)	(713) 920-3981		
Manager Environmental	Tobey Taylor	60 minutes (maximum)	(713) 920-4152		
Director Engineering Inspections	Mauro Pumar	60 minutes (maximum)	(713) 920- 4100		
Purchasing Supervisor	Adriana Uriarte	60 minutes (maximum)	(713) 660-4503		
Director Maintenance	Bill Domescik	60 minutes (maximum)	(713) 920-3961		

FIGURE 2.3

<b>NOTIFICATION DATA SHEET</b>					
<i>Date of Incident:</i> _____		<i>Time of Incident:</i> _____			
<b>INCIDENT DESCRIPTION</b>					
<i>Reporter's Full Name:</i> _____		<i>Position:</i> _____			
<i>Day Phone Number:</i> _____		<i>Evening Phone Number:</i> _____			
<i>Company:</i> <u>Pasadena Refining System, Inc.</u>		<i>Organization Type:</i> _____			
<i>Facility Address:</i> <u>Houston Refinery</u>		<i>Owner's Address:</i> <u>Pasadena Refining System, Inc.</u>			
<u>111 Red Bluff Road</u>		<u>111 Red Bluff Road</u>			
<u>Pasadena, TX 77506</u>		<u>Pasadena, TX 77506</u>			
<i>Facility Latitude:</i> <u>(b) (7)(F), (b)</u>		<i>Facility Longitude:</i> <u>(b) (7)(F), (b)</u>			
<i>Incident Address/Location:</i> _____					
<i>(if not at Facility):</i> _____					
<i>On-Scene Weather Conditions:</i> _____					
<i>Responsible Party's Name:</i> _____			<i>Phone Number:</i> _____		
<i>Responsible Party's Address:</i> _____					
<i>Source and/or cause of incident:</i> _____					
<i>Nearest City:</i> <u>Pasadena</u>					
<i>County:</i> <u>Harris</u>		<i>State:</i> <u>Texas</u>		<i>Zip code:</i> <u>77506</u>	
<i>Section:</i> _____		<i>Township:</i> _____		<i>Range:</i> _____	
<i>Distance from City:</i> _____		<i>Unit of Measure:</i> _____		<i>Direction from City:</i> _____	
<i>Container Type:</i> _____		<i>Container Storage Capacity:</i> _____		<i>Unit of Measure:</i> _____	
<i>Facility Oil Storage Capacity:</i> <u>(b) (3), (b) (7)(F)</u>		<i>Unit of Measure:</i> <u>Gallons</u>			
<i>Were Materials Discharged?</i> _____ <i>(Y/N)</i> <i>Confidential?</i> _____ <i>(Y/N)</i>					
CHRIS Code	Total Quantity Released	Unit of Measure	Water Impact (YES or NO)	Quantity into Water	Unit of Measure
<b>RESPONSE ACTION(S)</b>					
<i>Action(s) taken to Correct, Control, or Mitigate Incident:</i> _____					
<i>Number of Injuries:</i> _____		<i>Number of Deaths:</i> _____			
<i>Evacuation(s):</i> _____ <i>(Y/N)</i> <i>Number Evacuated:</i> _____					
<i>Was there any damage?</i> _____ <i>(Y/N)</i> <i>Medium Affected:</i> _____					
<i>Description:</i> _____					
<i>More Information about Medium:</i> _____					
<b>CALLER NOTIFICATIONS</b>					
<i>National Response Center (NRC):</i> <u>1-800-424-8802</u>					
<i>Additional Notifications (Circle all applicable):</i> <u>USCG</u> <u>EPA</u> <u>State</u> <u>Other</u>					
<i>Describe:</i> _____					
<i>NRC Incident Assigned No:</i> _____					
<b>ADDITIONAL INFORMATION</b>					
<i>Any information about the incident not recorded elsewhere in this report:</i> _____					
<i>Meeting Federal Obligations to Report?</i> _____ <i>(Y/N)</i> <i>Date Called:</i> _____					
<i>Calling for Responsible Party?</i> _____ <i>(Y/N)</i> <i>Time Called:</i> _____					
<b>NOTE: DO NOT DELAY NOTIFICATION PENDING COLLECTION OF ALL INFORMATION.</b>					

## FIGURE 2.4

### EXTERNAL NOTIFICATION FLOWCHART



Acronyms	
•	NRC = National Response Center
•	TERC = Texas Emergency Response Center
•	TGLO = Texas General Land Office
•	RRC = Railroad Commission
•	TCEQ = Texas Commission on Environmental Quality
•	LEPC = Local Emergency Planning Committee

FIGURE 2.5

## EXTERNAL NOTIFICATION REFERENCES

REQUIRED EXTERNAL NOTIFICATIONS			
AGENCY	LOCATION	OFFICE	ALTERNATE
National Response Center (NRC) USCG/EPA	Washington, DC	(800) 424-8802	(202) 267-2675
State Emergency Response Commission (SERC)* TCEQ/GLO/TRRC	Austin, TX	(800) 832-8224	
Sector Houston-Galveston	Galveston, TX	(281) 464-4855	
USCG Vessel Traffic	Houston, TX	(281) 464-4837	
US Environmental Protection Agency Region VI	Dallas, TX	(800) 887-6063/ (214) 665-2200	(866) 372-7745
DOT Department of Pipeline Safety – HAZ MAT 24 Hour Crisis Management Center	Houston, TX	(713) 272-2859 (202) 366-1863	EMERG. (800) 424-8802
Southeast Regional LEPC	Pasadena, TX	(713) 475-5599 (OEP) (713) 477-1511 (Dispatch for Duty Officer – 24 Hrs.)	(713) 475-5588
CAER Line		(281) 476-2237	

RECOMMENDED EXTERNAL NOTIFICATIONS			
AGENCY	LOCATION	OFFICE	ALTERNATE
OSHA (For Reportable Injury or Death)	Washington, DC	(800) 321-6742 (24 Hrs.)	(281) 591-2438
Texas General Land Office (TGLO)	Austin, TX	(800) 832-8224 (24 Hrs.)	(281) 470-6597 (La Porte, TX)
Texas Railroad Commission (Pipeline Safety Division)	Houston, TX	(713) 869-8425 (Day)	(512) 463-6788 (24 Hrs.)
Texas Commission on Environmental Quality (TCEQ)	Houston, TX	(800) 832-8224	(713) 767-3563
Texas Railroad Commission (Oil and Gas Division)	Houston, TX	(713) 869-5001 (24 Hrs.)	(512) 463-6788 (24 Hrs.)

\* Hotline answered by the Texas Department of Public Safety which will in turn notify GLO, TCEQ and TRRC as applicable. Follow-up calls to all appropriate agencies are always advisable.

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

<b>ASSISTANCE/ADVISORY NOTIFICATIONS (outside resources)</b>			
<b>AGENCY</b>	<b>LOCATION</b>	<b>OFFICE</b>	<b>ALTERNATE</b>
U.S. Fish and Wildlife Service (USFWS)	Clear Lake, TX	(281) 286-8282 (24 Hrs.)	
NOAA Weather Service	Corpus Christi, TX	(361) 289-0959	
USACOE (EOPS Chief Gus Marinas)	Galveston, TX	(409) 766-3045	Duty Office (409) 939-0235
Universal Weather	Houston, TX	(713) 944-1622	
National Weather Service (Recorded Forecast)	Dickinson, TX	(281) 337-5074	
Texas Parks and Wildlife Department	Austin, TX	(512) 389-4848	(281) 534-0130
Texas Department of Public Safety	Austin, TX	(512) 424-2008	
Port of Houston Authority Police Dept.	Houston, TX	(713) 670-3620	(713) 670-2892 (Fax)
City of Pasadena	Pasadena, TX	(713) 477-1511	(713) 475-5555 (Metro Action Line)
City of Pasadena Police Department	Pasadena, TX	911	(713) 477-1221 (24 Hrs.)
City of Pasadena Fire Department	Pasadena, TX	911	(713) 475-5554
Bay Star Ambulance	Baytown, TX	(877) 777-7400 (Dispatch)	(281) 427-1554
City of Pasadena Water Department	Pasadena, TX	(713) 475-5566	
City of Pasadena Fire Marshal's Office	Pasadena, TX	(713) 475-5556	
City of Pasadena City Marshal's Office	Pasadena, TX	(713) 475-7282	
CenterPoint	Houston, TX	(713) 207-2222 (Outage Reports)	(713) 207-1111 (281) 894-1625 (24 Hrs.)
AT&T	Houston, TX	(800) 286-8313	(713) 638-7300
Texas One Call System (Excavation)	Houston, TX 811	(800) 545-6005	
Lone Star Notification Center (Excavation)	Houston, TX	811	On Line E Ticket
Texas Excavation Safety System (Excavation)	Dallas, TX	(800) 669-8344	(713) 223-4567
KTRH (740 AM Radio)	Houston, TX	(713) 212-8000	(713) 212-8740 (News Room) (24 Hrs.)
Coastal Water Authority	Pasadena, TX	(713) 472-8225	
Harris County Public Health and Environmental Services	Pasadena, TX Houston, TX	(713) 274-6300 (24 Hrs.) (713) 920-2831	(713) 274-6475 Fax (Upset Conditions)

FIGURE 2.5 (Cont'd)

## EXTERNAL NOTIFICATION REFERENCES

NEIGHBORS			
AGENCY	LOCATION	OFFICE	ALTERNATE
Chevron/Texaco	Galena Park, TX	(713) 277-3800	
Harris County Washburn Tunnel	Galena Park, TX	(713) 455-0062	
Coastal Water Authority	Pasadena, TX	(713) 472-8225	
Kinder Morgan	Pasadena, TX	(713) 920-8450	
Kinder Morgan	Galena Park, TX	(713) 450-7422	
Gulf Coast Waste Disposal	Pasadena, TX	(713) 472-5507	
Steel and Pipe Supply	Pasadena, TX	(713) 472-5614	
Southwest Ship Yard	Pasadena, TX	(281) 860-3200	(281) 860-3215 (Fax)
Port Terminal Railway	Pasadena, TX	(713) 393-6500	(713) 393-6509 (24 Hrs.)
Wiggins Metals	Pasadena, TX	(713) 472-2057	

LOCAL EMERGENCY SERVICES			
<b><i>DIAL 911</i></b> for All Police, Fire, and Ambulance Emergencies			
SERVICE	LOCATION	OFFICE	ALTERNATE
Deer Park Fire Department	Deer Park, TX	(281) 478-7281	
Deer Park Police Department	Deer Park, TX	(281) 478-2000	(281) 479-4372 (Fax)
Office of Emergency Management	Deer Park, TX	(281) 478-7298	(281) 478-7289 (Fax)
Galena Park Fire Department	Galena Park, TX	(713) 674-5311	
Galena Park Police Department	Galena Park, TX	(713) 675-3471	(713) 675-3472
Pasadena Police Department	Pasadena, TX	(713) 477-1221 (24 Hrs.)	
Pasadena Fire Department	Pasadena, TX	(713) 475-5554	(713) 475-1221 (24 Hrs.)
Harris County Sheriff	Houston, TX	(713) 221-6000	
Department of Public Safety	Austin, TX	(512) 424-2000	
F.B.I. – Houston	Houston, TX	(713) 693-5000	(713) 936-8900 (Fax)

FIGURE 2.5 (Cont'd)

## EXTERNAL NOTIFICATION REFERENCES

LOCAL EMERGENCY SERVICES			
<b><i>DIAL 911</i></b> for All Police, Fire, and Ambulance Emergencies			
SERVICE	LOCATION	OFFICE	ALTERNATE
Life Flight (Herman Life Flight LD) Ambulance	Houston, TX	(713) 704-4357	(713) 704-3590 Non-emergency 911
Memorial Herman Southeast Hospital	Houston, TX	(281) 929-6100	
Columbia Bayshore Medical Center	Pasadena, TX	(713) 359-2000	
Memorial Hermann Hospital	Houston, TX	(713) 704-4000	
USCG CLASSIFIED OIL SPILL REMOVAL ORGANIZATIONS (OSRO)			
COMPANY	LOCATION	OFFICE	ALTERNATE
Garner Environmental Services, Inc.	Deer Park, TX	(800) 424-1716 (24 Hrs.)	(281) 930-1200
Oil Mop, LLC	Pasadena, TX	(800) 645-6671 (24 Hrs.)	
Anderson Pollution Control	LaPorte, TX	(281) 479-5300 (24 Hrs.)	(866) 609-6208 (24 Hrs.)
Clean Channel Association (CCA)	Pasadena, TX	(713) 534-6195 (24 Hrs.)	(713) 534-6197 (Fax)
ADDITIONAL RESPONSE RESOURCES			
COMPANY	LOCATION	OFFICE	ALTERNATE
CIMA	Deer Park, TX	(281) 476-5040	(281) 837-9191 (Dispatch)
Witt O'Brien's LLC	Houston, TX	(281) 320-9796	(985) 781-0804 (24 Hrs.)
Wildlife Center of TX	Houston, TX	(713) 861-9453 (8-5)	(713) 279-1417
Wildlife Response SVC LLC	Seabrook, TX	(713) 705-5897	(281) 266-0054 PGR
Consolidated Crane & Rigging (Cranes)	Houston, TX	(713) 641-3330 (24 Hrs.)	(888) 752-7263
Rapid Environmental Services (Waste)	La Porte, TX	(281) 479-4376	
Williams Fire & Hazard Control (FF)	Spring, TX	(281) 999-0276 (24 Hrs.)	(409) 727-2347 (Vidor, TX) (24 Hrs.)
Wild Well Control, Inc.	Houston, TX	(281) 784-4700	(281) 784-4750 (Fax)
American Commercial Barge Lines	Channelview, TX	(800) 457-6377	
Kirby Inland Marine (Barge)	Channelview, TX	(713) 435-1600	(713) 435-1079 (24 Hrs.)
T & T Marine Salvage Inc, (Salvage) (FF)	Galveston, TX	(281) 488-5757	(409) 744-1222 (24 Hrs.)
Thompson General Construction	Houston, TX	(281) 741-5261 (281) 741-5822 (Fax)	(713) 829-0896 (713) 724-7094

## 3.0 A      **RESPONSE ACTION RESOURCE LIST**

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### **SAFETY DATA SHEET (SDS)**

Safety Data Sheet's of all Oil and hazardous materials handled, stored or transported from this facility area available on a private PRSI website.

### **EMERGENCY ACTION PLAN (EAP)**

Emergency Action Plan is available on a private PRSI computer based program.

### **SITE SAFETY AND HEALTH PLAN (SSHP)**

Site Safety and Health Plan is available on a private PRSI computer based program.

### **FACILITY SECURITY PLAN (FSP)**

Facility Security Plan is available via the on-site Facility Security Officer.

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

#### FIRST PRSI PERSON NOTIFIED/ON SCENE

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

#### REFINERY 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 **Spill management Team, Volunteer Emergency Response Team, Channel Industries Mutual Aid, 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).
- \_\_\_\_ Notify the **Manager of Oil Movements** for all vessel and tank incidents.
- \_\_\_\_ Notify **Refinery Manager**. Provide incident briefing and coordinate activation of the Spill Management Team, as the situation demands.
- \_\_\_\_ 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 Figure 3.2.

#### SPILL MANAGEMENT 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 First Priority. Excessive Exposure To The Vapor And Liquid Stages Of The Spilled Product Should Be Avoided.**

**INITIAL RESPONSE**

- \_\_\_\_ Approach from upwind side and advise all personnel in the area.
- \_\_\_\_ Take appropriate personal protective measures.
- \_\_\_\_ Report incident by using emergency radio #1 or dial 1399 and report incident to the Security Control. Provide the following information:
  - Name
  - Location
  - Nature of incident
  - Injuries
  - Source or material
  - If known resources needed
- \_\_\_\_ If safe to do so, restrict access to the spill site and adjacent area as the situation demands. Be aware and eliminate any ignition sources in the area. Take any other steps necessary to minimize any threat to human health and environment.
- \_\_\_\_ Verify type of product and quantity released and request an SDS.
- \_\_\_\_ If safe to do so, identify/isolate the source to minimize spill/loss of product.
- \_\_\_\_ Use testing and sampling equipment to determine potential safety hazards.

**INITIAL RESPONSE**

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

- \_\_\_\_\_ Shut down pumping equipment.
- \_\_\_\_\_ Close upstream and downstream block valves. Use pumps on the line or vacuum trucks to remove product if applicable.
- \_\_\_\_\_ Utilize Combustible Gas Indicator, O<sub>2</sub> meter, proper colorimetric indicator and other air sampling measurements to assure that areas are safe to enter for continued response operations.
- \_\_\_\_\_ 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 areas such as waterways, sewers, 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, insure that drainage valve(s) is "closed".
- \_\_\_\_\_ Drain the line section, as the situation demands.
- \_\_\_\_\_ Request Internal Security or local authorities to establish traffic control in the area, 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 and dispose of all wastes according to Regulatory Requirements. 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, diversion, and recovery actions.
- \_\_\_\_\_ Inform local operators such as utilities, telephone company, railway as necessary.
- \_\_\_\_\_ Complete follow-up and written reporting, as the situation demands.

**LEAKS/SPILLS**

**FIGURE 3.1 (Cont'd)****SPECIFIC INCIDENT RESPONSE CHECKLIST****LINES UNDER PRESSURE**

- \_\_\_\_ Shut down pumping equipment.
- \_\_\_\_ Close upstream and downstream block valves. If applicable, use pumps on the line or vacuum trucks to remove product.
- \_\_\_\_ Pressured lines can be vented to the flares to avoid a spill's increase/impact.
- \_\_\_\_ Utilize Combustible Gas Indicator, O<sub>2</sub> meter, proper colorimetric indicator and other air sampling measurements to assure that areas are safe to enter for continued response operations.
- \_\_\_\_ 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 areas such as waterways, sewers, 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, insure that drainage valve(s) is "closed".
- \_\_\_\_ Drain the line section, as the situation demands.
- \_\_\_\_ Request Internal Security or local authorities to establish traffic control in the area, 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, diversion, and recovery actions.
- \_\_\_\_ Inform local operators such as utilities, telephone company, railway as necessary.
- \_\_\_\_ Complete follow-up and written reporting, as the situation demands.

**LEAKS/SPILLS**

**FIGURE 3.1 (Cont'd)****SPECIFIC INCIDENT RESPONSE CHECKLIST****STORAGE TANK LEAKS AND OVERFLOWS SPECIFIC RESPONSE**

- \_\_\_\_\_ Shut down all tank battery product movement operations and isolate the tank.
- \_\_\_\_\_ Ensure that the containment area drainage valve(s) is "closed".
- \_\_\_\_\_ If near tank bottom, fill tank with water and maintain water bottom to suspend the discharge.
- \_\_\_\_\_ Utilize Combustible Gas Indicator, O<sub>2</sub> meter, proper colorimetric indicator and other air sampling measurements to assure that areas are safe to enter for continued response operations.
- \_\_\_\_\_ Block drainage of spilled material from traveling offsite.
- \_\_\_\_\_ Stop all traffic in hazardous area (inside and outside of property boundaries), as the situation demands.
- \_\_\_\_\_ Remove product from containment (at a sump or in a low area) with an explosion proof pump, oil skimmer, and/or vacuum truck w/ skimmer attachments.
- \_\_\_\_\_ Process recovered product through the recovered oil system and the residual through the wastewater treatment system.
- \_\_\_\_\_ Determine the direction and expected duration of spill movement. Refer to the maps in Section 6.0.
- \_\_\_\_\_ Empty tank as soon as possible.
- \_\_\_\_\_ Transfer contents to alleviate overflow as applicable.
- \_\_\_\_\_ 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.
- \_\_\_\_\_ If necessary, call one (1) of the approved remediation companies to remove the remaining contaminated soils and residue from the containment area. Contact PRSI Environmental Department to assist in coordinating the waste removal methods and to remove waste from the Facility for 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 as necessary.
- \_\_\_\_\_ Complete follow-up and written reporting, as the situation demands.

**LEAKS/SPILLS**

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

- \_\_\_\_\_ Take no risks with personal safety.
- \_\_\_\_\_ Try to stop flow of product but only if it can be done safely.
- \_\_\_\_\_ Evacuate personnel from the truck rack area, as the situation demands.
- \_\_\_\_\_ Minor spill (less than fifty (50) gallons):
  - Discontinue all loading operations.
  - Stop all traffic from entering rack.
  - Do not move any truck from area until area is flushed down with water and leak has been stopped.
  - Pump all product into facility wastewater treatment system
- \_\_\_\_\_ If level of vapors are high, do not attempt to enter area until Volunteer Emergency Response Team is on site and applies foam blanket.
- \_\_\_\_\_ Utilize Combustible Gas Indicator, O<sub>2</sub> meter, proper colormetric indicator and other air sampling measurements to assure that areas are safe to enter for continued response operations.
  - Shut down any valves that are causing a continued product flow to separator.
  - Flush Area (ON LOADING PAD). If product has spread, make efforts to contain on pad. Absorb spill with absorbent pads. If necessary dam area with absorbent booms. Place spill stoppers over any catch basins to keep product from entering waterway.
  - Absorb spill with absorbent pads. If necessary dam area with absorbent booms. Place spill stoppers over any catch basins to keep product from entering any waterway or storm sewers.
  - Collect residual product with explosion proof pump or vacuum truck.
  - Fire Danger. Care should be taken in working with a spill that a serious fire hazard is not created by recovery attempts. In many cases, small amounts of gasoline might best be treated by containment and evaporation to minimize the risk of fire. It is of utmost importance that unauthorized persons and equipment be kept out of the area when a spill has occurred involving a flammable liquid.
  - Area Declared Safe. Do not start any trucks until all product is flushed and vapors or fumes have cleared the loading rack area and the Terminal Superintendent declares the emergency over and safe to resume operations.

**LEAKS/SPILLS**

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

- \_\_\_\_\_ Use all appropriate emergency shutdown systems.
- \_\_\_\_\_ Shut down all engines/motors.
- \_\_\_\_\_ Block all line and ship manifold discharge valves.
- \_\_\_\_\_ If hose rupture, drain line into barge, drums, buckets, and block line to stop spill into water.
- \_\_\_\_\_ Notify Security Control at extension 1399.
- \_\_\_\_\_ Notify Oil Movements Supervisor.
- \_\_\_\_\_ Utilize Combustible Gas Indicator, O<sub>2</sub> meter, proper colormetric indicator and other air sampling measurements to assure that areas are safe to enter for continued response operations.
- \_\_\_\_\_ If other than hose rupture, determine source of leak and stop if safe to do so.
- \_\_\_\_\_ 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.
- \_\_\_\_\_ In the event of a gasoline spill, prevent any personnel or boats from entering area. Do not attempt to collect or contain product that has entered waterway.

**LEAKS/SPILLS**

## FIGURE 3.1 (Cont'd)

### SPECIFIC INCIDENT RESPONSE CHECKLIST

#### MARINE OPERATION SPILLS/LEAKS, (Cont'd)

- \_\_\_\_\_ Make all necessary repairs.
- \_\_\_\_\_ Return the line/vessel 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 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 as necessary.
- \_\_\_\_\_ Complete follow-up and written reporting, as the situation demands.

#### 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 continue safely? If yes, begin MOC Process, when complete 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 as necessary.
- \_\_\_\_\_ Complete follow-up and written reporting, as the situation demands

LEAKS/SPILLS

**FIGURE 3.1 (Cont'd)****SPECIFIC INCIDENT RESPONSE CHECKLIST****EQUIPMENT FAILURE**

- \_\_\_\_\_ Shut down all engines/motors.
- \_\_\_\_\_ Close upstream and downstream block valves. If applicable, use pumps on the line or vacuum trucks to remove product.
- \_\_\_\_\_ Utilize Combustible Gas Indicator, O<sub>2</sub> meter, proper colormetric indicator and other air sampling measurements to assure that areas are safe to enter for continued response operations.
- \_\_\_\_\_ If safe to do so, 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 areas such as waterways, storm and process sewers, etc. to the greatest extent possible.
- \_\_\_\_\_ If located within containment area, insure that drainage valve(s) is "closed".
- \_\_\_\_\_ Drain the line section, as the situation demands.
- \_\_\_\_\_ Request Internal Security or local authorities to establish traffic control in the area, 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, diversion, and recovery actions.
- \_\_\_\_\_ Inform local operators such as utilities, telephone company, railway as necessary.
- \_\_\_\_\_ Complete follow-up and written reporting, as the situation demands.

**EQUIPMENT FAILURE**

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

**EXPLOSIONS AND/OR FIRE, SPECIFIC RESPONSE**

**INDIVIDUAL DISCOVERING THE FIRE - (All Employees)**

- \_\_\_\_ Call security control at extension 1399.
- \_\_\_\_ Security control initiates the refinery alarm system.
- \_\_\_\_ Security control initiates activation by request of Shift Safety Personnel, the Spill Management Team and/or Volunteer Emergency Response Team, internal and external notifications.
- \_\_\_\_ Secure the operation by activating emergency shutdown procedures, close valves, etc., if safe to do so.
- \_\_\_\_ Notify Refinery Management or the supervisor on duty.
- \_\_\_\_ Return to the scene of the fire and, if 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 Volunteer Emergency Response Team to the scene of the fire and keep personnel and vehicles from entering the danger area.
- \_\_\_\_ Drivers with trucks at or near the incident should turn off truck and report to assigned check point(s) and await further instructions.
- \_\_\_\_ For dock fires, cease all marine and transfer operations. Close all manifold valves and secondary valves pertaining to the dock. Prepare foam system while awaiting arrival of the Fire Department and ensure that gates are open for emergency vehicles.
- \_\_\_\_ For ground fires, apply cooling water to all flame exposed metal. Stop the flow of product feeding the fire.
- \_\_\_\_ Evacuate area, as the situation demands.

**FIGURE 3.1 (Cont'd)****SPECIFIC INCIDENT RESPONSE CHECKLIST****EXPLOSIONS AND/OR FIRE, (Cont'd)****INDIVIDUAL DISCOVERING THE FIRE (in the absence of Supervision)**

- \_\_\_\_\_ In the event of fire in the absence of a member of supervision or the Refinery Operator, any PRSI employee on duty is designated as the individual in charge until relieved of duty.
- \_\_\_\_\_ The individual discovering the fire will adhere to the instructions issued in the PRSI EAP.
- \_\_\_\_\_ Ensure security control (1399) and immediate supervision is notified by telephone or radio.
- \_\_\_\_\_ Prior to the arrival of a member of supervision, the individual will remain in charge and will direct the fire department/Volunteer Emergency Response Team to the scene of the fire.

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

## FIGURE 3.1 (Cont'd)

### SPECIFIC INCIDENT RESPONSE CHECKLIST

#### VAPOR CLOUD (from a massive spill, line rupture, etc.), SPECIFIC RESPONSE

- \_\_\_\_\_ The person who discovers the vapor cloud will notify the security control at extension 1399 or ER, Radio Channel #1 or 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 rally point (north, south, east or west) for roll call and further instructions.
- \_\_\_\_\_ After all personnel have been accounted for Security Control, Refinery Management, Supervisor, or Gauger/Operator will initiate the following actions as deemed necessary:
  1. Notify the Security Control at extension 1399.
  2. Shut down transfer operations.
  3. Evacuation of adjacent property.
  4. Only the fire department will be permitted to enter the affected area.
- \_\_\_\_\_ Contact the appropriate agencies and potentially affected neighbors (refer to Figure 2.5).

VAPOR CLOUD

**FIGURE 3.2**  
**PRODUCT SPECIFIC RESPONSE CONSIDERATIONS**  
**for**  
**GASOLINE SPILLS**

***Flash Point Range:***

***Below 100°F***

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

*Suggested physical response actions for these products are detailed below. It is important to note however, that each situation is unique and must be individually responded to. These procedures are considerations only. Actual circumstances may dictate that procedures followed may differ somewhat from those listed below. **The following are intended for guideline purposes only.***

These materials float on water and are extremely flammable. Containment of these materials may allow explosive concentrations to accumulate. The preferred response is to minimize impact to water and protect shorelines (storm sewers, creeks, rivers, etc.) from contamination, allow evaporation to occur, and contain/clean-up remaining product.

- \_\_\_ Identify source and stop discharge if possible.
- \_\_\_ Make appropriate notifications to regulatory agencies and internal PRSI Management/Environmental Support. (Refer to Figure 2.5 for notifications.)
- \_\_\_ Obtain explosimeter and other air sampling measurements to assure that areas are safe to enter for continued response operations.
- \_\_\_ Eliminate sources of vapor ignition.
- \_\_\_ Stay upwind and evacuate nonessential personnel.
- \_\_\_ Advise people in the area of any potential threat and/or initiate evacuation. Inform local operators such as utilities, telephone company, railway, and tunnels as the situation demands.
- \_\_\_ Minimize area of surface soil impacted by free product (e.g. damming). Contact with surface runoff or standing water should be prevented whenever possible.
- \_\_\_ Recover pooled hydrocarbon as soon as possible.
- \_\_\_ Free hydrocarbons may be floated with water to aid recovery if increased vapors and agitation can be avoided. The water will act as a barrier to reduce further infiltration of pure hydrocarbon into the soil. (NOTE: This water will later have to be removed and probably treated.)
- \_\_\_ If free hydrocarbon **IS NOT** present, do not add water to the impacted area.

**FIGURE 3.2 (Cont'd)****PRODUCT SPECIFIC RESPONSE CONSIDERATIONS  
for  
GASOLINE SPILLS**

- Remove heavily impacted soil (saturated with hydrocarbons, or very strong hydrocarbon smell) as soon as possible after product/water removal.
- Place in a bin/rolloff or a waste pile lined on the bottom and covered on the top with plastic sheeting to prevent contact with rainwater and contamination of other areas.
- Drums may be used for very small spill cleanups.
- If removal of heavily-impacted soil is delayed or contaminated soil is left in place pending final disposition, the following action should be taken if the possibility of rain exists to minimize contact with rainfall:
  - Cover area with plastic sheeting, overlap seams, weigh down with sandbags;
  - Use shallow ditches to divert rainwater around contaminated site; and
  - Promptly remove any rainwater that does accumulate on the site.
- The following steps should be taken together with Environmental Support to minimize long term risk from the site:
  - Sample contaminated soil still in place;
  - Characterize and dispose of removed soil;
  - Estimate proper cleanup target;
  - Remove and dispose of more soil, if necessary;
  - Install groundwater monitoring wells or monitor existing wells, if necessary; and
  - Provide follow-up communication with regulatory agencies, if necessary.
- Recover the product and affected soil. Be alert for underground cables and water bearing formations. Remember that product may penetrate deeper if impermeable natural layers are disturbed.
- Due to the low flash point of these products: (1) Use non-sparking systems, (2) Have fire trucks or firefighting equipment nearby, (3) Warn all involved of the product's flammability, and (4) Allow product to evaporate to the greatest extent possible.
- Determine the direction and expected duration of spill movement. Refer to the maps provided in Figure 6.1 for an overview of the area.
- Request local authorities to establish traffic control in the area and to post a - "High Flammability" advisory, as the situation demands.
- 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.

# EVACUATION PLAN

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## Evacuation Procedures

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:

- Give verbal alarm (via radio or whatever means necessary).
- Call Security Control for internal/external notifications.
- Shut down loading, unloading, pipeline, and marine operations.
- Turn off all vehicles and evacuate upwind to nearest rally point.
- Evacuate trucks from facility (provided that a safe operating environment exists).
- Divert incoming trucks/vessels to a safe distance away from the Facility.
- Evacuate all personnel to the Rally Point (see diagram).
- Consider prevailing wind directions and speed, as well as water current and tidal conditions because certain conditions may eliminate the use of specific evacuation routes and/or muster points.

All internal systems/signals are clearly understood by all personnel, checked and practiced frequently, and the communications equipment is maintained in "intrinsically safe" condition.

Security Control operates the refinery Emergency Notification System (ENS). When an emergency is called in to Security Control the ENS is activated and detailed alert information will broadcast to the facility. If the ENS is inoperable, the nitrogen evacuation alarm is the emergency backup.

Evacuation diagrams are posted throughout the refinery, tank farm, and at the dock, showing evacuation routes from different areas of the Facility. These routes are as follows:

### Refinery Area

Primary Route – safest route to the nearest rally point (North, South, East or West)

### Dock Area

Primary Route – safest route to the nearest rally point

Evacuation points have also been established for each area. These points are as follows:

North – Old Fab Yard – west of Tank 353

South – Administration Building Parking Lot – Gate #7

East – Gate #13

West – Warehouse Yard at Gate #2

A roll call would be taken to account for all personnel.

### RBTF

Main Access Gate

### Operations

All Non Emergency Response Team Operating Personnel will remain in assigned areas and safely operate critical equipment unless instructed otherwise by IC or Operations Supervision.

Arrival routes of emergency response personnel and response equipment and transportation routes of injured personnel would be via Washburn Tunnel Service Road, Old Crown Road, North Witter Road and Red Bluff Road.

Shelter locations at the Facility consist within the following structures:

- Reformer #3 Alkylation Control Room
- Planning Building
- Administration Building
- Lab
- Maintenance Building Offices
- Operations Building
- Refinery Control Center

The primary Emergency Operation Center (EOC) is located in the Pasadena Refining Administration Building on the second floor.

Area wide alarms do not exist at this Facility. Evacuation of the surrounding community would be the responsibility of the City of Pasadena/Local Emergency Planning Committee (LEPC).

### **Wind and Tidal Conditions**

The Houston Ship Channel area typically experiences two (2) high tides and two (2) low tides on a daily (24 hour) cycle. The mean tidal range during the fall/winter is approximately 0.5 feet; whereas, the mean tidal range during the spring/summer is approximately 3.0 feet. Water currents range from approximately 0.5 knots during ebb conditions to approximately 2.1 knots during flood conditions. The water conditions in the Houston Ship Channel area represent a sheltered environment.

Prevailing winds in Houston are typically out of the southeast throughout the year. Cold fronts will change the prevailing wind to the northwest. Depending on the cold front strength and speed, strong winds can occur 2 to 3 days in advance and last 1 to 2 days after.

# **EVACUATION DIAGRAM REFINERY**

Evacuation Diagram

Pasadena Refining System, Inc  
Pasadena, TX

DATE:	JOB No:	SCALE:	EDITED BY:
4/17/14	-	AS NOTED	MJDS

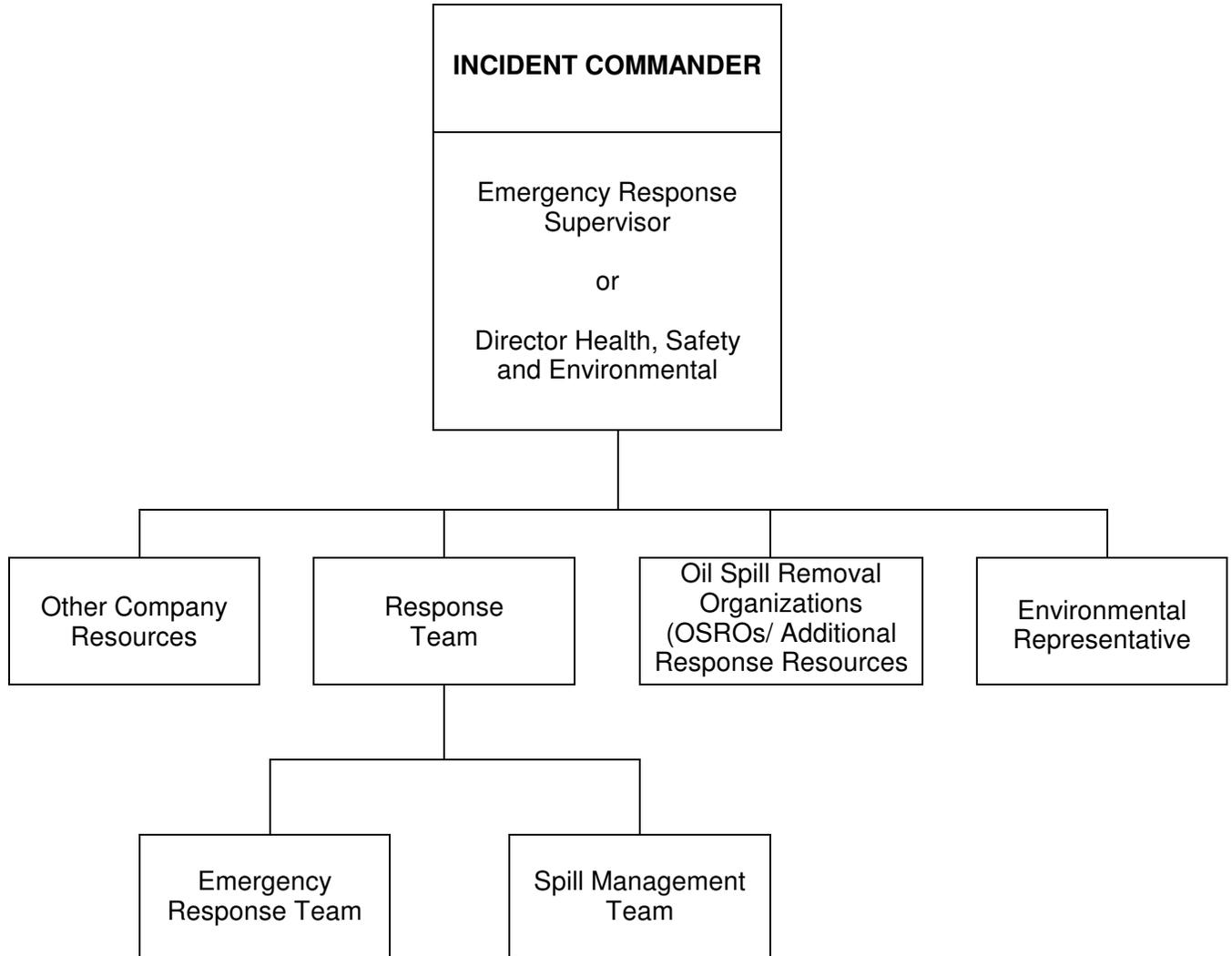
**WIT|O'BRIEN'S** 818 TOWN & COUNTRY, STE 200  
HOUSTON, TEXAS 77024  
PHONE (281) 320-9796  
FAX (281) 320-9700

# **EVACUATION DIAGRAM RED BLUFF TANK FARM**

	PASADENA REFINING SYSTEM, INC. RED BLUFF TANK FARM PASADENA, TEXAS	JOB NO: 59083	DATE: 04-08-14	EVACUATION DIAGRAM	WITT O'BRIEN'S	818 Town & Country Blvd., Suite 200 Houston, Texas 77024 Phone: (281) 320-9796
		DRAWN: EDH	SCALE: N/S			

**FIGURE 4.1**

**SPILL MANAGEMENT TEAM**  
 (Level 1 or Level 2 Incidents)



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

Houston Captain of the Port (COTP) Zone

USCG Classified Oil Spill Removal Organization (OSRO)								
OSRO Name	Contract Number	Actual Response Time	Environment Type	Facility Classification Level				High Volume Port
				MM	W <sup>1</sup>	W <sup>2</sup>	W <sup>3</sup>	
Garner Environmental Services, Inc.	B-92-13336	2 hours	River/Canal	X	X	X	X	Yes
			Inland	X	X	X	X	
Oil Mop, LLC	B-07-10062	2 hours	River/Canal	X	X	X	X	Yes
			Inland	X	X	X	X	
Anderson Pollution Control	LOI	2 hours	River/Canal	X	X	X	X	Yes
			Inland	X	X	X	X	
Clean Channel Association	Member	5 hours	River/Canal	X	X	X	X	Yes
			Inland	X	X	X	X	

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

**The AMPD coverage is provided by Facility owned spill response equipment.**

## **RESPONSE RESOURCES**

Responders for all emergency / upset events will be notified via Pasadena Refining System, Inc. (PRSI) emergency notification system in relation to the event.

Responders reporting to the emergency / upset conditions are active members of Volunteer Emergency Response Team (VERT).

**FACILITY FIRE EXTINGUISHING EQUIPMENT<sup>1</sup>**

Quantity	Type	Location	Inspection / Testing
1	1500 GPM Foam Pumper w/1000 Gal Foam	Fire Station	Annual 3 <sup>rd</sup> party NFPA inspection.
4,000'	5" Fire Hose	Engines 1 & 2, Fire Station	Annual 3 <sup>rd</sup> party pressure tested.
1,000'	6" Fire Hose	Engine 3	
3,000'	3" Fire Hose	Fire Station	
1,000'	1.75" Fire Hose	Fire Station	
1	3500 Watt Generator	Engine 2	Operate quarterly repair as needed.
1	500 Watt Extend-A-Lite	Engines 1 & 2	
10	270 Gal. Foam Totes with Foam Nozzles	Located throughout refinery	Samples pulled every 3 years.
40	SCBA	Located throughout refinery	Monthly/annually and hydro every 5 years.
40	SCBA	Supplied Light and Air Truck	Monthly/annually and hydro every 5 years.
1	Helicopter Flares for Landing	Engines 1 & 2	Annual
6	750 GPM Portable Wheeled Monitors	Located throughout the refinery	Monthly/annual after use.
1	Command Vehicle	Safety Dept.	Used daily and repaired, inspected as needed.
2	Quick Attack Trucks with 100 Gal. of Foam	In Plant	
30	Level "A" Encapsulated Suits	Fire House	Inspect prior to use per manufacture recommendations.
>450	Portable Fire Extinguishers	Located throughout refinery	Monthly/annual and hydro each 5 years.
3	Response Pick-Ups	Various Dept.	Used daily and repaired, inspect as needed.
3	Basic Life Support First Aid Kits	(1) Medical Department, (1) Safety Vehicle, (1) Security Vehicle	Monthly inspection or immediate replacement after use.
3	Automatic Defibrillators	(1) Medical Department, (1) Safety Vehicle, (1) Security Vehicle	Monthly inspection or immediate replacement after use.
1	3000 GPM Fire Truck with 1000 Gal. Foam	Fire Station	Annual 3 <sup>rd</sup> party NFPA
1	1000 GPM Fire Truck with 750 Gal Foam	Fire Station	Annual 3 <sup>rd</sup> party NFPA
1	4000 GPM Portable Fire Pump	Dock	Monthly or after each use

<sup>1</sup> All facility equipment is tested/inspected on a routine basis and maintained in good operational status.

**FACILITY FIRE EXTINGUISHING EQUIPMENT<sup>2</sup> (Cont'd)**

<b>Quantity</b>	<b>Type</b>	<b>Location</b>	<b>Inspection / Testing</b>
3	Kolda Pump Modules 1500 GPM	Storage	Not Yet in Service
3	Kolda Mobile Hose Reel Trailers 3000' – 6" Fire Hose Ea.	Storage	Annually after EA Use

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<sup>2</sup> All facility equipment is tested/inspected on a routine basis and maintained in good operational status.

**FACILITY SPILL RESPONSE EQUIPMENT<sup>1</sup>**

Quantity	Type	Size	Model / Year	Location	Inspection/Testing
1,500 ft.	Boom <sup>1</sup>	18" skirt	Jaton 2010	Dock	Floatation boom (1,500 ft.) is inspected and if needed repaired on an annual basis. Repairs will be made immediately if damage occurs during use.
1,000 ft.	Boom <sup>1</sup>	18" skirt	ACME 2012	Storage New	
1	Open Top Trailer		Top-Hat 2007	Dock	Boom Trailer is inspected and repaired on an annual basis. Repairs are made immediately if damage occurs prior to annual inspection.
20 Bales	Absorbent Pads	18" x 18"	Various	Trailer	Sorbent equipment is used daily and is replaced on an as needed basis to maintain sufficient stock.
20 Bales	Absorbent Boom	8'	Various	Trailer	
1/each	Aluminum flat bottom boat/trailer	18'	2012	PRSI Storage	Visual after use
1	Boat Motor	40 HP	Evinrude	PRSI Storage	PM per instructions
1	Custom Response Trailer	28'	Super Coach 2012	PRSI Storage	PM per instructions
1000'	Containment Boom/Trailer	18" skirt 16'	Acme Top Hat	PRSI Storage	PM per instructions
4	Radios		XPR6550	Response Trailer	PM per instructions
2	Marine Radios		VHF	Response Trailer	PM per instructions
2	Pneumatic Drum Skimmers / and Compressors	18" 35 gpm	Crucial	PRSI Storage	PM per instructions
1	Diesel Disc Skimmer	48" 90 gpm	Crucial ORD	PRSI Storage	PM per instructions
15	Life Jackets		MD3087 Auto inflate	PRSI Storage	PM per instructions
2	Diaphragm Pumps	3" 80 gpm	Yanmar L48V	PRSI Storage	PM per instructions

<sup>1</sup> All facility equipment is tested/inspected on a routine basis and maintained in good operational status.

**FACILITY COMMUNICATION EQUIPMENT<sup>1</sup>**

<b>Quantity</b>	<b>Type</b>	<b>Operating Frequency (mhz)</b>	<b>Location</b>	<b>Inspection/Testing</b>
150	XPR 6550	Mototubo Digital Radio System	Facility Wide	Used daily and repaired as needed.
120	Verizon Cell Phone	Cellular	Facility Personnel	
3	Cell Phone	Cellular	Security	
10	Various Beepers	N/A	Response Personnel	

**FACILITY DIAGRAM  
RED BLUFF TANK FARM**

	PASADENA REFINING SYSTEM, INC. RED BLUFF TANK FARM PASADENA, TEXAS	JOB NO: 59083	DATE: 04-08-14	FACILITY DIAGRAM	WITT O'BRIEN'S	818 Town & Country Blvd., Suite 200 Houston, Texas 77024 Phone: (281) 320-9796
		DRAWN: EDH	SCALE: N/S			

## FACILITY DIAGRAM

Facility Diagram

Pasadena Refining System, Inc  
Pasadena, TX

DATE:	JOB No:	SCALE:	EDITED BY:
4/17/14	-	AS NOTED	MJDS

WITT O'BRIEN'S

818 TOWN & COUNTRY, STE 200  
HOUSTON, TEXAS 77024  
PHONE (281) 320-9796  
FAX (281) 320-9700

**DRAINAGE DIAGRAM  
RED BLUFF TANK FARM**

	PASADENA REFINING SYSTEM, INC. RED BLUFF TANK FARM PASADENA, TEXAS	JOB NO: 59083	DATE: 04-08-14	DRAINAGE DIAGRAM	WITT O'BRIEN'S	818 Town & Country Blvd., Suite 200 Houston, Texas 77024 Phone: (281) 320-9796
		DRAWN: EDH	SCALE: N/S			

# **DRAINAGE DIAGRAM REFINERY**



Drainage Diagram			
Pasadena Refining System, Inc Pasadena, TX			
DATE: 4/17/14	JOB No: -	SCALE: AS NOTED	EDITED BY: MJDS
<b>WITT O'BRIEN'S</b>		<small>818 TOWN &amp; COUNTRY, STE 200 HOUSTON, TEXAS 77024 PHONE (281) 320-9796 FAX (281) 320-9700</small>	

# INTEGRATED CONTINGENCY PLAN

## Pasadena Refining System, Inc.

# Pasadena Refinery and Red Bluff Tank Farm

*Prepared for:*

**PASADENA REFINING SYSTEM, INC.  
PASADENA REFINERY  
111 Red Bluff Road  
Pasadena, TX 77506**

*Prepared by:*

**Witt O'Brien's  
818 Town & Country Blvd., Suite 200  
Houston, TX 77024  
(281) 320-9796 ● (281) 320-9700 FAX**

## INTEGRATED CONTINGENCY PLAN

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.

### CERTIFICATION OF QUALIFIED INDIVIDUAL AND ALTERNATE QUALIFIED INDIVIDUAL

Pasadena Refining System, Inc. hereby certifies to the Coast Guard, Environmental Protection Agency, Department of Transportation, and The Texas General Land Office that the individuals identified as Qualified Individual and Alternate Qualified in this plan have the full authority in accordance with the applicable state regulations and this plan to:

- Activate and engage in contacting with oil spill removal organizations,
- Act as a liaison with the predesignated Federal On-Scene Coordinator (OSC), and
- Obligate funds required to carry out response activities.

### PLAN APPROVAL

**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:

Signature: 

Name: Steve Wilson

Title: Chief Operating Officer

Date: 3-19-2010

NOTE: O'Brien's Response Management Inc. (O'Brien'sRM) provided consulting and plan development services in the preparation of this plan utilizing data provided by Pasadena Refining System, Inc. and/or the Facility. O'Brien'sRM 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

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## SPCC Tab SPILL PREVENTION, CONTROL, AND COUNTERMEASURE (SPCC) PLAN

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## INTEGRATED CONTINGENCY PLAN

### REVISION RECORD (From Crown Petroleum Corp.)

**Note:** It is the responsibility of the holder of this plan to insure that all changes and updates are made. The holder shall:

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Change Date	Affected Page Number(s)	Description of Change(s)	Name
March 1999	Entire plan	Conversion to Integrated Contingency Plan	
April 2000	Misc. page changes throughout plan	Annual Update	
April 2001	ERAP Section; Foreword Cover, iv, vi, vii, viii; Pgs. 1-9 thru 1-13, 1-15 thru 1-24, 2-4, 2-5, 2-8 thru 2-10, 4-2, 4-3, 4-6, 4-9, 4-10; SPCC Cover, SPCC 8-2 thru SPCC 8-8; Appendices B-10 thru B-12, B-25, C-3, D-4, D-5, F-3, F-7, F-10, F-11, H-6, K-9, K-10, M-2	Annual Update	
October 2001	ERAP-11 thru ERAP-38, iii, vi, 2-8 thru 2-15	Phone number update	
May 2002	ERAP-2, ERAP-3, ERAP-7, ERAP-8, ERAP-14, vi, 1-15, 1-16, 2-4, 2-5, 2-11, SPCC 8-2, K-14	Annual Update	
March 2003	ERAP-32, iii, iv, vi, viii, 1-5, 1-15 thru 1-24, 2-4, 2-5, 3-4, 4-3, 4-9, Section 5.0, 6-1, 6-5 thru 6-12, Entire SPCC, A-1, A-22, A-23, C-2, C-3, C-4, C-5, G-1, G-4 thru G-16, H-1, H-6 thru H-35, K-16, M-4	Miscellaneous Revisions	
March 2004	ERAP-2 thru ERAP-5, ERAP-7, ERAP-8, ERAP-10, ERAP-11, ERAP-14, ERAP-17, ERAP-31, ERAP-33, ERAP-34, ERAP-37, ERAP-38, vi, 1-2, 1-15, 2-4, 2-5, 2-7, 2-8, 2-11 thru 2-14, 4-9, SPCC 8-2, SPCC 8-4, C-3, F-11, G-14, G-15	Annual Update	

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February 2005	Entire plan	New plan – Change of Ownership (previous revisions on page vi (a))	
March 2005	ERAP-2, ERAP-3, ERAP-10, ERAP-11, ERAP-14, ERAP-34, iv, vi, 1-15, 1-16, 2-4, 2-5, 2-8, 4-9, Appendix J, Appendix L	Personnel revisions	
July 2005	ERAP, Foreword, 1-15,1-16,1-17, Figure 2.2 page 2-4, Section 3.0, Appendix C-0 and C-1, Appendix K HASP	Discrepancies noted by USCG	AW
March 2006	ERAP-2, ERAP-4, ERAP-6, ERAP-7, ERAP-10, ERAP-11, ERAP-13 thru ERAP-18, ERAP-28 thru ERAP-30, ERAP-33, ERAP-35 thru ERAP-38, ERAP-40 thru ERAP-45, vi, vii, 1-15, 1-17, 1-19, 1-20, 2-2, 2-4, 2-5, 2-7 thru 2-11, 2-15, 3-1, 3-12 thru 3-14, 4-2 thru 4-4, 4-9, 4-10, 5-1, 5-5, SPCC 7-1, SPCC 8-2, Appendix A-19 thru A-21, Appendix C, Appendix D-1, D-2, Appendix H-2 thru H-6, H-68 (insert), Appendix K	Updates	
April 2006	ERAP-2, ERAP-4, ERAP-6, ERAP-7, ERAP-10, ERAP-11, ERAP-13 thru ERAP-18, ERAP-28 thru ERAP-30, ERAP-33, ERAP-35 thru ERAP-38, ERAP-40 thru ERAP-45, vi, vii, 1-15, 1-17, 1-19, 1-20, 2-2, 2-4, 2-5, 2-7 thru 2-11, 2-15, 3-1, 3-12 thru 3-14, 4-2 thru 4-4, 4-9, 4-10, 5-1, 5-5, SPCC 7-1, SPCC 8-2, Appendix A-19 thru A-21, Appendix C, Appendix D-1, D-2, Appendix H-2 thru H-6, H-68 (insert), Appendix K	Updates	
March 2007	ERAP-2 thru ERAP-4, ERAP-6, ERAP-7, ERAP-10, ERAP-11, ERAP-14 thru ERAP-17, ERAP-35, ERAP-36, ERAP-38, ERAP-40 thru ERAP-45, iii, v, vi, vii, 1-9, 1-10, 1-12, 1-15 thru 1-17, 1-19 thru 1-25, 2-4, 2-5, 2-8 thru 2-11, 5-5, SPCC ii(b) (insert), SPCC-v, SPCC 8-2 thru SPCC 8-19, A-1, A-24, A-25, C-1, C-3, C-4, C-30 and inserts, D-4, D-5, H-68 thru H-76	Annual Review and Update	
March 2008	ERAP-2 thru ERAP-4, ERAP-6 thru ERAP-8, ERAP-10, ERAP-11, ERAP-14 thru ERAP-17, ERAP-40, ERAP-41, iv, vi thru viii, 1-15 thru 1-17, 1-19 thru 1-21, 1-24, 1-25, 2-4, 2-5, 2-8 thru 2-12, 2-14, 4-2, 4-3, 6-4, 6-10, SPCC 8-6 thru SPCC 8-23, C-3, C-4	Annual Review and Update	
April 2009	ERAP-2 thru ERAP-7, ERAP-9 thru ERAP-11, ERAP-15 thru ERAP-19, ERAP-21 thru ERAP-23, ERAP-25, ERAP-28, ERAP-33 thru ERAP-35, ERAP-39 thru ERAP-41, ERAP-43, ERAP-45, vi, vii, 1-5, 1-9, 1-15 thru 1-20, 1-25, 2-1 thru 2-5, 2-9 thru 2-15, 3-1, 3-3, 3-5 thru 3-7, 3-9, 3-12, 3-18 thru 3-22, 4-1, 4-2, 4-4 thru 4-6, 4-10, 5-3, 6-3, SPCC-ii(c), SPCC-v, SPCC 1-1, SPCC 2-2, SPCC 3-1, SPCC 4-3, SPCC 6-1, SPCC 7-1, SPCC 8-2 thru SPCC 8-4, SPCC 8-6 thru SPCC 8-25, A-22, B-2, B-3, B-5, C-2 thru C-4, C-11, D-2 thru D-4, F-11, H-4 thru H-7, H-77 thru H-85, M-2	Annual Review and Update	AW

## INTEGRATED CONTINGENCY PLAN

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March 2010	Entire ERAP; ii thru iv, vi thru ix; 1-4, 1-5, 1-15 thru 1-24; 2-3 thru 2-5, 2-8 thru 2-12; 3-1, 3-10, 3-11; 4-1, 4-2, 4-9, 4-10; 5-1, 5-3 thru 5-5; 6-4, 6-8, 6-9 & inserts, 6-13 thru 6-15; SPCC cover page, SPCC-ii(c), SPCC-iii, SPCC-iv, SPCC 1-1, SPCC 1-4, SPCC 2-2, SPCC 2-3, SPCC 6-1, SPCC 6-2, SPCC 8-2, SPCC 8-3, SPCC 8-5, SPCC 8-8, SPCC 8-10 thru SPCC 8-13, SPCC 8-15, SPCC 8-17, SPCC 8-19, SPCC 8-20, SPCC-22 thru SPCC-27 & inserts; A-1, A-13 thru A-24; B-2; App. C (all pages & inserts); H-2, H-3, H-6, H-37 thru H-55; K-1. K-44 thru K-50 & attachments; M-2	Annual Review and Update	AW
May 2011	ERAP-2, ERAP-3, ERAP-5, ERAP-6, ERAP-9, ERAP-10, ERAP-13 thru ERAP-16, ERAP-19 thru ERAP-29, ERAP-32, ERAP-33, ERAP-34 & insert, ERAP-35 & insert, ERAP-36, ERAP-39 ERAP-40, ERAP-41 & insert, ERAP-42 & insert, ERAP-43 & insert, ERAP-44 & insert, Foreword cover, viii, 1-9 thru 1-14 & inserts, 1-15, 1-16, 1-18, 1-19, 1-24, 2-1, 2-2, 2-4, 2-5, 2-8 thru 2-11, 3-4 thru 3-14, 4-1, 4-9, 4-10, 5-1, 5-3, SPCC-ii(d), SPCC 3-2, SPCC 4-3, SPCC 8-2, SPCC 8-5, SPCC 8-8, SPCC 8-15, SPCC-8-23 thru SPCC 8-26 & inserts, C-3, C-4, D-2, D-3, D-4 & insert, D-5 & insert, H-6, H-56 thru H-62, M-2	Annual Review and Update	
April 2012	ERAP-2, ERAP-9, ERAP-10, ERAP-13 thru ERAP-16, ERAP-40 thru ERAP-45, viii, ix, 1-15, 1-24, 2-4, 2-5, 2-8 thru 2-11, SPCC 8-8, SPCC 8-9, SPCC 8-11, SPCC 8-12, SPCC 8-15, C-4 thru C-7, C-8 and insert, C-9 and insert, C-10 and insert, C-11 and insert	Annual Review and Update	
April 2013	ERAP-2, ERAP-3, ERAP-5, ERAP-6, ERAP-9, ERAP-10, ERAP-13 thru ERAP-16, ERAP-34 and diagram, ERAP-36, ERAP-39 thru ERAP-42, ERAP-43 and diagram, ERAP-44 and diagram, ERAP-45 and diagram, ERAP-46 and diagram, viii, 1-3, 1-9 and diagram, 1-12 and diagram, 1-13 and insert, 1-14 and insert, 1-15, 1-16, 1-18, 1-19, 1-24, 2-4, 2-5, 2-8, 2-9, 2-10, 2-11, 3-18, 4-2, 4-3, 4-9, 4-10, 4-11 and inserts, 4-12, 4-13, 4-14, 5-2, SPCC-iii, SPCC 1-2, SPCC 2-1, SPCC 2-2, SPCC 4-3, SPCC 8-2, SPCC 8-7 thru SPCC 8-9, SPCC 8-11 thru SPCC 8-15, SPCC 8-18, SPCC 8-25 and diagram, SPCC 8-27 and diagram, A-24, C-1, C-3 thru C-12, D-4 and diagram, F-2, H-2, H-4 thru H-6, H-63 thru H-65, K-1, K-44 thru K-62, K-63 and inserts, M-2	Annual Review and Update	
July 2013	iii thru v, viii, 3-17 thru 3-23, A-1, A-8 thru A-10, A-12 thru A-25, G-1, G-16	Miscellaneous revisions	

## INTEGRATED CONTINGENCY PLAN

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- Record each revision on this form.

Change Date	Affected Page Number(s)	Description of Change(s)	Name
February 2014	ERAP-3 thru ERAP-7, ix, x, 1-2, 1-5, 1-16 thru 1-25, 4-5, G-16, H-5	DOT Response	
April 2014	ERAP Cover, ERAP-2, ERAP-4, ERAP-5, ERAP-7, ERAP-9 thru ERAP-11, ERAP-13 thru ERAP-19, ERAP-23, ERAP-27, ERAP-28, ERAP-30, ERAP-31, ERAP-34 and diagram, ERAP-35 and diagram, ERAP-38, ERAP-39, ERAP-43 and diagram, ERAP-44 and diagram, ERAP-45 and diagram, ERAP-46 and diagram, FWD Cover Page, iii, iv, ix, x, 1-3, 1-9 and diagram, 1-10 and diagram, 1-11 and diagram, 1-12 and diagram, 1-13 and diagram, 1-14, 1-15, 1-17, 1-18, 1-20, 1-24, 1-25, 2-1, 2-4 thru 2-6, 2-8 thru 2-11, 2-15, 3-1 thru 3-4, 3-8, 3-12, 3-13, 3-15, 3-16, 3-18, 3-21, 3-23, 4-2, 4-3, 4-5, 4-9, 5-1 thru 5-4, SPCC Cover Page, SPCC 1-1, SPCC 1-2, SPCC 2-2, SPCC 4-4, SPCC 5-2, SPCC 8-2, SPCC 8-3, SPCC 8-6 thru SPCC 8-20, SPCC 8-23 and diagram, SPCC 8-24 and diagram, SPCC 8-25 and diagram, SPCC 8-26 and diagram, SPCC 8-27 and diagram, A-10, C-2, C-3, D-4 and diagram, D-5 and diagram, F-2, G-6, G-8, H-6, H-7, H-10, H-66 thru H-68, K-8, M-2	Annual Updates	

# INTEGRATED CONTINGENCY PLAN

## DISTRIBUTION LIST

**NOTE:** 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	LOCATION
1 (+ Electronic copies)	Environment Specialist Pasadena Refining System, Inc. - Pasadena Refinery 111 Red Bluff Road Pasadena, TX 77506	Pasadena, TX
2	Emergency Response Supervisor Pasadena Refining System, Inc. - Pasadena Refinery 111 Red Bluff Road Pasadena, TX 77506	Pasadena, TX
3	Superintendent of Oil Movements Pasadena Refining System, Inc. - Pasadena Refinery 111 Red Bluff Road Pasadena, TX 77506	Pasadena, TX
4	Emergency Operations Center Pasadena Refining System, Inc. - Pasadena Refinery 111 Red Bluff Road Pasadena, TX 77506	Pasadena, TX
5	Dock Pasadena Refining System, Inc. - Pasadena Refinery 111 Red Bluff Road Pasadena, TX 77506	Pasadena, TX
6	Chief Executive Officer Pasadena Refining System, Inc. 111 Red Bluff Road Pasadena, TX 77506	Pasadena, TX
7 (CD only)	U.S. Environmental Protection Agency - Region VI 1445 Ross Avenue, Suite 1200 Dallas, TX 75202	Dallas, TX
8	Commanding Officer U.S. Coast Guard - Sector Houston-Galveston 13411 Hillard St. Houston, TX 77034	Houston, TX
9	Manager of Environmental Pasadena Refining System, Inc. - Pasadena Refinery 111 Red Bluff Road Pasadena, TX 77506	Pasadena, TX
10 (Electronic)	Witt O'Brien's 818 Town & Country Blvd., Suite 200 Houston, TX 77024	Houston, TX
(2 Electronic copies)	Response Plans Officer Pipeline and Hazardous Materials Safety Administration U.S. DOT Office of Pipeline Safety 1200 New Jersey Avenue SE – E – 22 – 321 Washington, DC 20590	Washington, DC
NOTE <sup>1</sup>	Texas General Land Office Region 2 11811 North D Street LaPorte, TX 77571	LaPorte, TX

NOTE<sup>1</sup> Letter notification of changes only; no Plan copy retained by the Agency.

## 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 Pasadena Refining System, Inc. Pasadena Refinery or Red Bluff Tank Farm (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 which may occur at the Facility.

The specific objectives of the Plan are to:

- Establish a Spill Management 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 PRSI's Corporate Environmental Policy (Appendix A).
- Ensure compliance with the federal, state, and local oil pollution 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, Pipeline and Hazardous Materials Safety Administration), Department of the Interior (Minerals Management Service), and the Department of Labor (Occupational Safety and Health Administration). The plan is organized into Contingency Planning Sections, Facility Specific Information, and Appendices.

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 affected by each regulation is provided in Section 1.5.

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

### *Plan Integration*

- The SPCC Plan is integrated into the Facility's Integrated Contingency Plan (ICP) as a stand-alone section tabbed "SPCC Plan". The integrated documents have been streamlined to maximize their usefulness in the event of an emergency response, as well as for training and regulatory compliance.
- Specific references are made in the SPCC Plan to certain sections, figures, and appendices of the ICP for data that provides a primarily response oriented function (Facility diagrams, summary Facility information, notification data, etc.) or to consolidate certain supporting appendices (regulatory cross-references, documentation forms, glossary/acronyms, etc.). Specific references are made out of the ICP into certain sections and figures of the SPCC Plan for data that provides primarily spill prevention, control and countermeasures information (discharge detection methods, containment and drainage detail, hazard identification tank tables, security, etc.).

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

- Failure of manifold and mechanical loading arm, other transfer equipment or losses, as appropriate.
- 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 (as defined in EPA Final Rule 40 CFR Part 112):

Discharge Scenario	Worst Case Potential Oil Group	Planning Volumes			
		EPA (Bbls)	USCG (Bbls)	DOT (Bbls)	Facility Maximum (Bbls)
Small/Average Most Probable	Group 3	50	50	N/A	50
Medium/Maximum Most Probable	Group 3	857	720	N/A	1,200
Worst Case	Group 3	(b) (7)(F), (b) (3)			

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

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. The tier requirements for this high volume area are for response in 6 hours (Tier 1), 30 hours (Tier 2), and 54 hours (Tier 3). 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 *Final Rule*, (The EPA's method for calculating discharge amounts is acceptable for TGLO standards), U.S. Coast Guard (USCG) in 33 CFR Part 154 and the DOT PHMSA regulations in 49 CFR 194.105. 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

The Manager of Environmental 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 cover page. 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***

The Manager of Environmental will coordinate the following plan review and update procedures with Refinery/Tank Farm 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.
- The Manager of Environmental will coordinate the word processing, publication, and distribution efforts of completing the revisions and maintaining the Plan.

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

- 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 shall revise and resubmit revised portions of the Plan for each Facility change that may materially affect the response to a Worst Case Discharge, including:

CONDITIONS REQUIRING CHANGES	EPA	USCG	DOT	TGLO
Relocation or replacement of portions of the Facility 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.

### *Submission of Revisions*

When submitting revisions to the applicable agencies always include the Facility identification number (see Figure 1.3) with the revisions. The 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.

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

- **USCG** requires changes to be submitted in a timely manner to the MSU (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 must submit a letter to the USCG stating "NO CHANGES REQUIRED."
- **DOT/PHMSA** - the Facility shall revise and resubmit changes (i.e. revised plan) to the Pipeline Response Plans Officer within 30 days. In addition, the entire plan shall be reviewed and resubmitted to PHMSA every five (5) years from the date of the last plan submission date.

## 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 compliance is delineated in Appendix A:

- Federal Oil Pollution Act of 1990: U.S. EPA Final Rule for Non-Transportation Related On-shore Facilities (40 CFR Part 112).
- Federal Oil Pollution Act of 1990: U.S. Coast Guard Final Rule for Transportation Related On-Shore Facilities (33 CFR Part 154)
- Federal Oil Pollution Act of 1990: U.S. Department of Transportation Final Rule for Transportation Related On-Shore Facilities (49 CFR Part 194).
- Texas Oil Spill Prevention and Response Act of 1991: Texas General Land Office (31 TAC 19).

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.

This Plan is consistent with the applicable Area Contingency Plan (ACP). The applicable ACP for the Facility is:

- U.S. Coast Guard, One Gulf Plan and Sector Houston-Galveston Geographic Response Plan.
- U.S. Environmental Protection Agency – Region VI, Dallas, TX.

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

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

## 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.

## 1.6 DISCHARGE CLASSIFICATION (Cont'd)

<b>CLASS I EVENT</b>
Incident Command will normally be assumed by Oil Movements Supervisor. Facility 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.

<b>CLASS II EVENT</b>
Local PRSI resources may have to be supplemented with Spill Management Team, 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.

## 1.6 DISCHARGE CLASSIFICATION (Cont'd)

<b>CLASS III EVENT</b>
Maximum PRSI and external resources must be implemented to respond to the spill incident. Activation of the Spill Management Team would be anticipated during a Class III 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 PRSI 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 1.2**  
**FACILITY DIAGRAM**

Facility Diagram

Pasadena Refining System, Inc  
Pasadena, TX

DATE:	JOB No:	SCALE:	EDITED BY:
4/17/14	-	AS NOTED	MJDS

WITTO'BRIEN'S

818 TOWN & COUNTRY, STE 200  
HOUSTON, TEXAS 77024  
PHONE (281) 320-9796  
FAX (281) 320-9700

**FIGURE 1.2(a)**  
**FACILITY DIAGRAM**

	PASADENA REFINING SYSTEM, INC. RED BLUFF TANK FARM PASADENA, TEXAS	JOB NO: 59083	DATE: 04-08-14	FACILITY DIAGRAM	WITT O'BRIEN'S	818 Town & Country Blvd., Suite 200 Houston, Texas 77024 Phone: (281) 320-9796
		DRAWN: EDH	SCALE: N/S			

**FIGURE 1.2(b)**  
**FACILITY DIAGRAM**

	PASADENA REFINING SYSTEM, INC. RED BLUFF TANK FARM PASADENA, TEXAS	JOB NO: 59083	DATE: 04-08-14	DRAINAGE DIAGRAM	WITT O'BRIEN'S	818 Town & Country Blvd., Suite 200 Houston, Texas 77024 Phone: (281) 320-9796
		DRAWN: EDH	SCALE: N/S			

**FIGURE 1.2(c)**  
**FACILITY DIAGRAM**

USCG Diagram

Pasadena Refining System, Inc  
Pasadena, TX

DATE:	JOB No:	SCALE:	EDITED BY:
4/17/14	--	AS NOTED	MJDS

WIT/O'BRIEN'S

818 TOWN & COUNTRY, STE 200  
HOUSTON, TEXAS 77024  
PHONE (281) 320-9796  
FAX (281) 320-9700

**FIGURE 1.2(d)**  
**PASADENA REFINERY**  
**AERIAL PHOTO**

**WITT O'BRIEN'S**

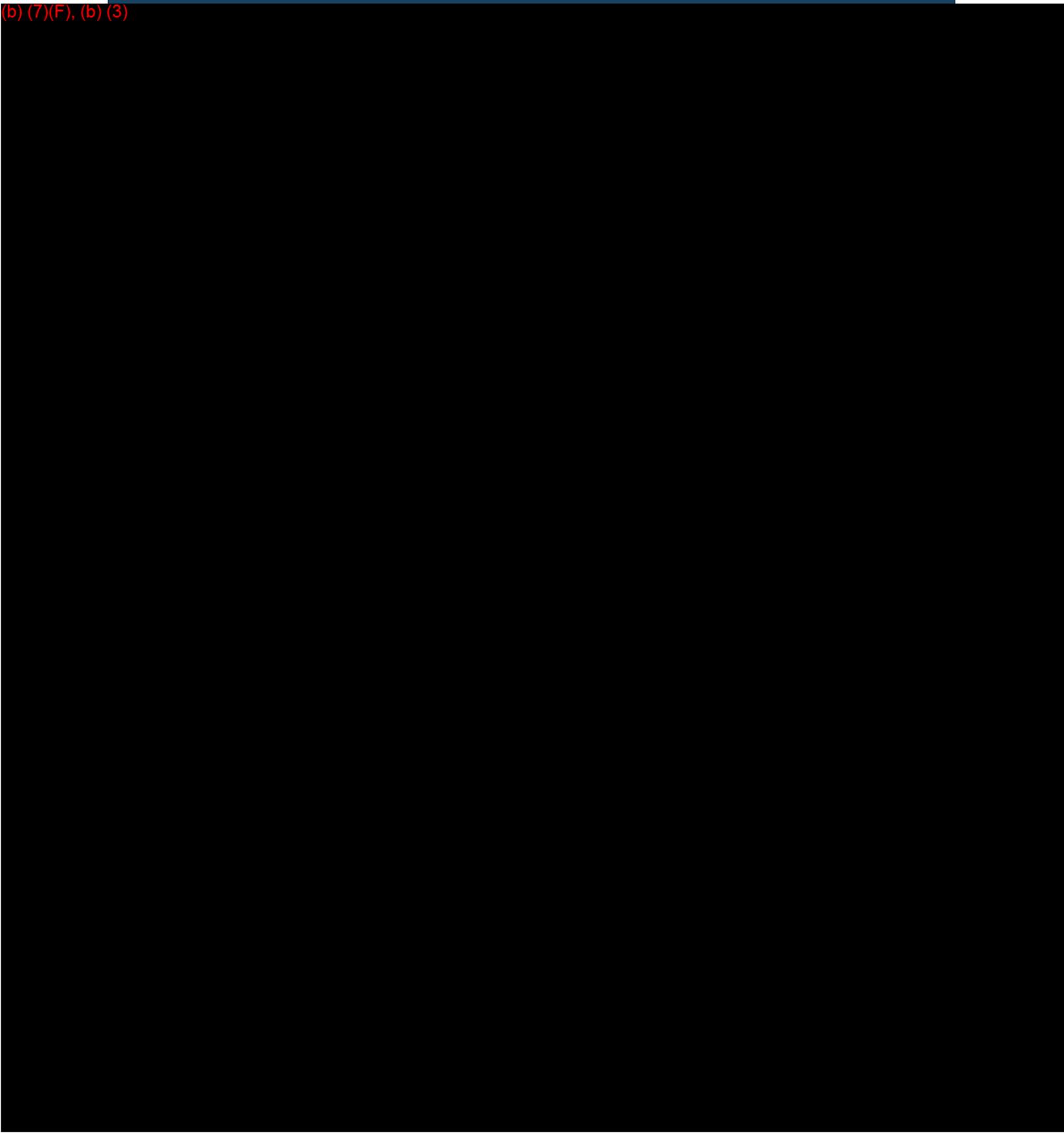


Map Prepared by: Witt O'Brien's  
818 Town & Country Blvd., Houston, Texas 77024  
281-320-9796



*Pasadena Refining - Aerial Photo*  
111 Red Bluff Road  
Pasadena, Texas 77506

(b) (7)(F), (b) (3)



**FIGURE 1.2(e)**  
**RED BLUFF TANK FARM**  
**AERIAL PHOTO**

WITT O'BRIEN'S

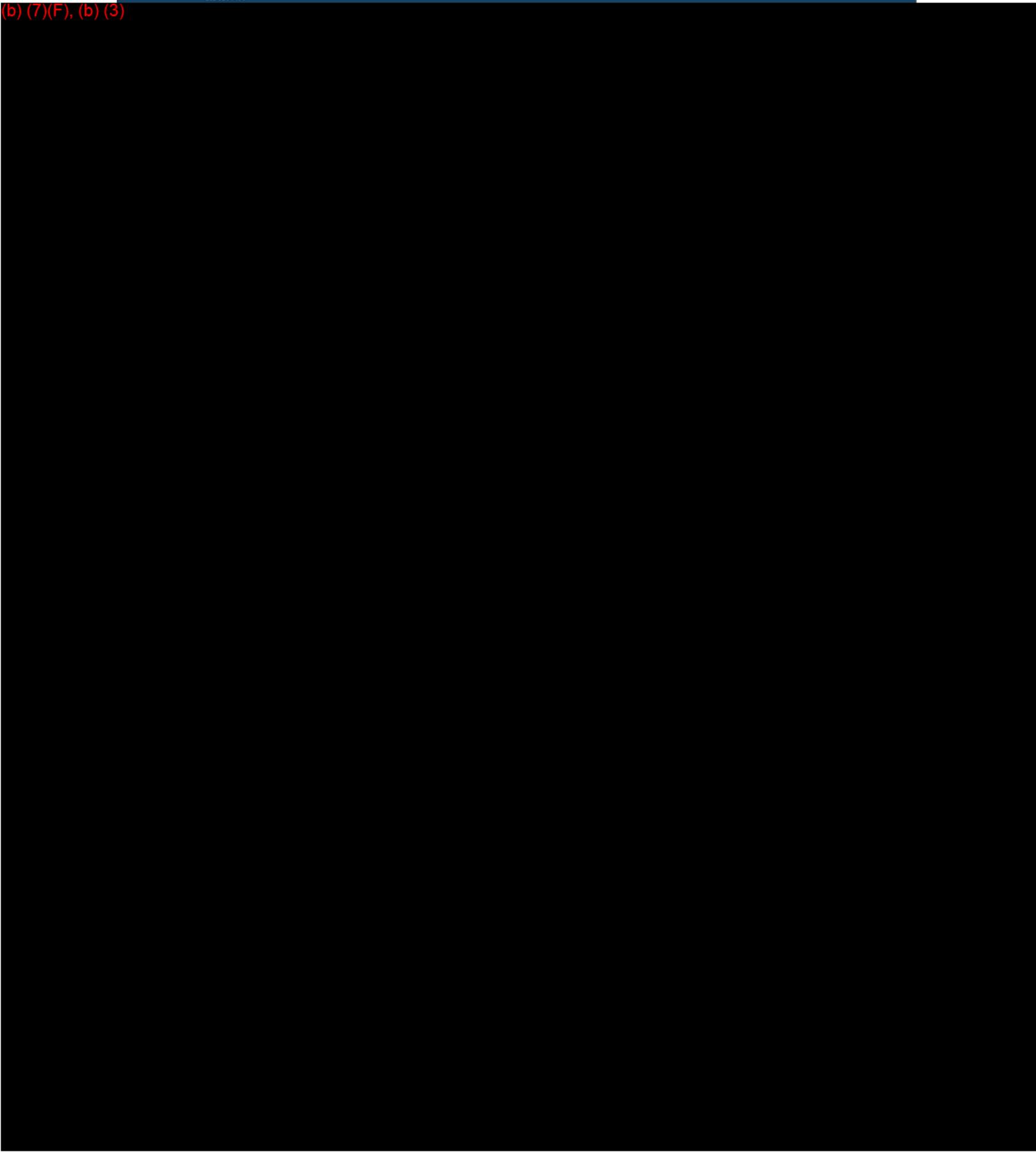
Map Prepared by: Witt O'Brien's  
818 Town & Country Blvd., Houston, Tx. 77024  
281-320-9796

0 100 200 300 400 500  
Feet



Fig. 1.2 (e) Red Bluff Tank Farm - Aerial Photo  
111 Red Bluff Road  
Pasadena, Texas 77506

(b) (7)(F), (b) (3)



**FIGURE 1.3**  
**FACILITY INFORMATION**

<b>GENERAL INFORMATION</b>	
<b>Facility Name:</b>	Pasadena Refining System, Inc. (PRSI) Pasadena Refinery and Red Bluff Tank Farm 111 Red Bluff Road Pasadena, Texas 77506 <b>(713) 472-2461 - 24 HR NUMBER</b> (713) 534-0043 FAX
<b>EPA FRP ID#:</b>	FRP-06-TX-00348
<b>USCG FRP ID#:</b>	93002
<b>DOT FRP ID#:</b>	78
<b>Owner Name:</b>	PRSI 111 Red Bluff Road Pasadena, TX 77506
<b>*Qualified Individual and Person in Charge Facility Spill Coordinator:</b>	Don Davis – Emergency Response Supervisor (713) 920-3942 (Office) <b>(b) (6)</b> (Cellular)
<b>*Alternate Qual. Individ./ Other Emergency Coordinator:</b>	<b>(b) (6)</b> (Home) <b>(b) (6)</b> (Cellular)
<b>*Alternate Qual. Individ./ Other Emergency Coordinator:</b>	<b>(b) (6)</b> (Home) <b>(b) (6)</b> (Cellular)
* A Qualified Individual (QI) or Alternate Qualified Individual (AQI) is available at the Facility 24 hours per day.	

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

<b>GENERAL INFORMATION</b>	
<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>Primary SIC Code:</b>	2911
<b>NAICS Code:</b>	32411
<b>Date of Initial Oil Storage:</b>	Approximately 1920
<b>Breakout Tank:</b>	(b) (3), (b) (7)(F)
<b>Pipeline Location:</b>	<p>A) Three (3) active pipelines run between the Pasadena Refinery and its Red Bluff Tank Farm. These lines are all less than one (1) mile in length outside of PRSI fence lines. The pipelines run parallel to Red Bluff Road, set back approximately ¼ mile in Harris County. There is one out-of-service 6" pipeline and one out-of-service 10" pipeline between the Pasadena Refinery and the Red Bluff Tank Farm.</p> <ul style="list-style-type: none"> <li>● 12" line is approx. 7250' with a max flow rate of 11,000 bph</li> <li>● 14" line is approx. 10,600' with a max flow rate of 11,000 bph</li> <li>● 16" line is approx. 7250' with a max flow rate of 14,000 bph</li> </ul> <p>B) Three (3) pipelines run between the Pasadena Refinery and Houston Refining. The 12" line is (inactive). There are no plans to return the 8" line to active service. The 4" line has been returned to active service. The 4", 8", and 12" lines are approximately 1.63 miles in length.</p> <ul style="list-style-type: none"> <li>● The max flow rate through the 4" line is 800 bph.</li> <li>● The max flow rate through the 12" line is estimated at 1,000 bph</li> </ul> <p>C) One (1) active pipeline, approximately 3.51 miles in length serves as an HVL line to transfer propane/propylene from the Pasadena Refinery to Exxon and/or Georgia Gulf. This line is primarily 4" in diameter, with segments of 6" and 8" diameter, and runs approximately parallel with Highway 225.</p> <ul style="list-style-type: none"> <li>● This line operates at approx. 900 psig at a max flow rate of 300 bph</li> </ul>

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

<b>GENERAL INFORMATION (Cont'd)</b>	
<b>Pipeline Location (Cont'd):</b>	<p>D) One (1) pipeline, approximately ½ mile in length and 24" diameter, runs between the 24" Magellan (formerly Rancho) pipeline and the PRSI Red Bluff Tank Farm. The pipeline crosses beneath Highway 225.</p> <ul style="list-style-type: none"> <li>• The max flow rate through this line is estimated at 15,000 bph</li> </ul> <p>E) The CPL 36" gasoline line is approximately 3,379 feet and 16" furnace oil line is approximately 3,393 feet. The CPL 40" furnace oil line is approximately 2,332 feet and the CPL 16" furnace oil is approximately 3,393 feet in length. The two 16" lines serve as gasoline blend and furnace oil transfer to Kinder Morgan/Colonial Pipeline. There is one (1) 6" pipeline that is out of service between Kinder Morgan and the PRSI Refinery.</p> <ul style="list-style-type: none"> <li>• The max flow rate through the 36" gasoline pipeline is 34,000 bph</li> <li>• The max flow rate through the 40" furnace oil pipeline is 54,000 bph</li> <li>• The two 16" flush back pipelines are max rated at 10,000 bph</li> </ul>
<b>Response Zone:</b>	Harris County (All maintenance/operational functions are conducted by Company personnel located at the Facility, a single Response Zone has been developed.)
<b>Pipeline Significant and Substantial Harm:</b>	Substantial Harm (Refer to "Operator's Statement - Significant and Substantial Harm" in Appendix M)
<b>FACILITY LOCATION</b>	
<b>County:</b>	Harris County
<b>Latitude:</b>	(b) (7)(F), (b) (3)
<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>	No Impact

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

<b>FACILITY LOCATION (Cont'd)</b>		
<b><i>Landside Directions:</i></b>		
●	From I-610, exit east SR 225 (Pasadena) and travel approximately 4.4 miles to Red Bluff Road.	
●	Turn northwest (left) and travel approximately 1.0 miles to PRSI's Pasadena Refinery.	
●	Turn north (right) into PRSI's – Pasadena Refinery Administration Building Parking Lot.	
●	The physical address is 111 Red Bluff Road, Pasadena, Texas.	
<b><i>Waterside Directions:</i></b>		
●	Travel Houston Ship Channel (west), facility is on the south bank, between buoys 161 and 163.	
<b>PHYSICAL DESCRIPTION - GENERAL</b>		
<b><i>Description of Operation:</i></b>		
●	The Facility receives approximately three crude ship deliveries per year at the oil dock. Crude is immediately transferred via facility pipeline to refinery or tank farm storage tanks.	
●	Products are shipped via tank barge, truck, and pipeline for custody transport.	
●	The Facility has a total storage capacity of approximately (b) (3), (b) (7)(F) with an average storage capacity of approximately (b) (3), (b) (7)(F). Daily throughput is approximately 102,598.05 Bbls across two docks, two bay truck racks, and seven oil pipelines.	
<b><i>Products Handled:</i></b>		
●	Crude Oil	● No. 2 Fuel Oil
●	Gasoline	● Petroleum Coke
●	Kerosene	● Propane
●	Furnace Oil	● Heavy Oil
●	Isobutane	● Naphtha
		● Propane/Propylene Mix
		● Normal Butane
		● Butane/Butylene Mix
<b>Note:</b> Safety Data Sheets (SDS) of all oil and hazardous materials handled, stored or transported from this facility are available on the private PRSI website.		

## FIGURE 1.3

### FACILITY INFORMATION (Cont'd)

PHYSICAL DESCRIPTION - TRUCK RACK
<p><b>Description of Operation:</b></p> <ul style="list-style-type: none"> <li>● The Facility is equipped with two (2) loading/unloading spots for LPG products.</li> <li>● A maximum of two (2) LPG trucks may load simultaneously with a maximum of one (1) truck load per month. (This area is currently out of service).</li> <li>● The Facility is equipped with two (2) loading/unloading spots for spent caustic.</li> <li>● A maximum of two (2) spent caustic trucks may load simultaneously with a maximum of one (1) truck load per week.</li> </ul> <p><b>Loading Rate:</b>           600 to 700 gpm (<i>typical</i>)</p> <p><b>Truck Capacity:</b>       9,000 gallons (<i>typical</i>)</p> <p><b>Discharge Prevention:</b></p> <ul style="list-style-type: none"> <li>● The truck rack has paved surfaces, concrete spill containment and center drains that holds the contents of a truck.</li> <li>● Spillage prevention is provided by procedure with a truck operator and a PRSI operator monitoring the loading/unloading process on a continuous basis. In addition, LPG trucks are vented to loading tanks and the Facility flare system to prevent over-pressure and spillage.</li> </ul>
PHYSICAL DESCRIPTION - MARINE OPERATIONS
<p><b>Description of Operation:</b></p> <ul style="list-style-type: none"> <li>● This Dock Facility is equipped with one (1) berth.</li> <li>● Maximum vessel length is eight hundred five feet (805').</li> <li>● Highest water level is forty four (44').</li> <li>● Lowest water level is thirty five feet (35').</li> <li>● Average mean water level is thirty five feet (35').</li> <li>● Dock draft is thirty nine feet (39').</li> </ul>
<p><b>Tow Quantity:</b></p> <ul style="list-style-type: none"> <li>● Approximately twenty (20) marine unloading operations per month.</li> <li>● One (1) barge with a typical length of 400 feet.</li> <li>● Capacity is 25,000 barrels for barges.</li> <li>● Typically two (2) barges in tow.</li> </ul>
<p><b>Loading/Unloading Rate:</b></p> <ul style="list-style-type: none"> <li>● 2,500 to 11,000 Bbls/hr and 1,500 Tons (coke)</li> <li>● 8" Hose</li> <li>● Marine loading/unloading operations are conducted at this Facility approximately five (5) times per week.</li> </ul>



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

<b>DATES AND TYPES OF SUBSTANTIAL EXPANSIONS</b>	
<b>1919</b>	(b) (3), (b) (7)(F) gas oil/crude tank #101. gas oil/crude tank #102. gas oil/crude tank #103. gas oil/crude tank #109. gas oil/crude tank #111. gas oil/crude tank #112. gas oil/crude tank #113. gas oil tank #118.
<b>1920</b>	gas oil tank #1. gas oil tank #2.
<b>1926</b>	coker feed tank #51. coker feed tank #66
<b>1940</b>	sour water tank #202. slurry tank #203. slurry oil tank #204. recovered oil tank #205.
<b>1942</b>	l coker gas oil tank #206.
<b>1943</b>	l No. 2 fuel oil tank #307. l No. 2 fuel oil tank #308. sour water tank #309. sour water tank #310. oil tank #311. caustic tank #312. austic tank #313.

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

<b>DATES AND TYPES OF SUBSTANTIAL EXPANSIONS (Cont'd)</b>	
<b>1943</b> <b>(Ct'd)</b>	(b) (3), (b) (7)(F) covered oil tank #315. recovered oil tank #316. recovered oil tank #317. caustic tank #318. out of service tank #319 TBE tank #320. spent caustic tank #321. oil tank #324. oil tank #325. covered oil tank #326. covered oil tank #327.
<b>1953</b>	oil crude tank #807.
<b>1955</b>	oil kerosene tank #331.
<b>1961</b>	NaSH spent caustic tank #335. methanol tank #336. methanol tank #337. MTBE tank #339. medium reformat tank #340. medium reformat tank #341. reformat tank #342. Naphtha tank #343.

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

<b>DATES AND TYPES OF SUBSTANTIAL EXPANSIONS (Cont'd)</b>	
<b>1965</b>	(b) (3), (b) (7)(F) remium gas tank #344. on-lead gas tank #345. osene tank #346. sel tank #347. asoline tank #808. gular gasoline tank #809. gasoline tank #810.
<b>1967</b>	covered oil tank #348. aptha tank #349. aptha tank #350.
<b>1968</b>	covered oil tank #351. edium reformat tank #353.
<b>1969</b>	gasoline tank #811. gasoline tank #812. crude tank #813. sene/No. 2 fuel oil tank #130.
<b>1976</b>	naphtha/gasoline tank #814. crude tank #815. crude tank #816.
<b>1977</b>	crude/condensate tank #817. gasoline tank #818. No. 2 fuel oil tank #820. crude tank #822.
<b>1978</b>	reformat tank #824. LSR tank #825.
<b>1981</b>	FCC gasoline tank #826. crude tank #830. crude tank #831.

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

<b>DATES AND TYPES OF SUBSTANTIAL EXPANSIONS (Cont'd)</b>	
<b>1989</b>	80,000 barrel 1 & 2 fuel oil tank removed.
<b>1990</b>	89,600 barrel storm water tank #400.
<b>1992</b>	Demolished 5,000 barrel oil tank #324. Demolished 5,000 barrel oil tank #325.
<b>1998</b>	Demolished 70,000 barrel gas oil tank #2.
<b>1999</b>	(b) (3), (b) (7)(F) No. 2 fuel oil tank #330.
<b>2000</b>	(b) (3), (b) (7)(F) recovered oil tank #328.
<b>2006</b>	(b) (3), (b) (7)(F) coker feed tank #51. Demolished 55,000 barrel gas oil/crude tank #103. Demolished 55,000 barrel gas oil/crude tank#109. Demolished 55,000 barrel gas oil/crude tank #111. Demolished 80,000 barrel coker feed tank #51 but rebuilt. Demolished 80,000 barrel coker gas oil tank #206. Demolished 1,108 barrel out of service tank #319. Demolished 5,000 barrel MTBE tank #320. Demolished 5,000 barrel recovered oil tank #348.
<b>2007</b>	(b) (3), (b) (7)(F) FCC gasoline tank #827 Demolished 5,000 barrel recovered oil tank #315. Permanently Closed 10,000 barrel tank #336. Permanently Closed 10,000 barrel tank #337. Permanently Closed 15,000 barrel tank #339. Permanently Closed 10,000 barrel tank #344. Permanently Closed 10,000 barrel tank #345. Permanently Closed 5,000 barrel tank #346. Permanently Closed 5,000 barrel tank #347. Permanently Closed 20,000 barrel tank #809. Permanently Closed 10,000 barrel tank #351. Permanently Closed 726 barrel tank #130. Demolished 55,000 barrel tank #205. Demolished 10,000 barrel tank #319. Built (b) (3), (b) (7)(F) .
<b>2008</b>	Demolished 5,000 barrel recovered oil tank #315. Demolished 10,000 barrel recovered oil tank #316. Demolished 5,000 barrel recovered oil tank #348.

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

<b>DATES AND TYPES OF SUBSTANTIAL EXPANSIONS (Cont'd)</b>	
<b>2009</b>	Demolished 580 barrel tank #79 Demolished 580 barrel tank #80 Demolished 1,000 barrel tank #98 Demolished 10,000 barrel recovered oil tank #317. Demolished 5,000 barrel tank #326 Demolished 5,000 barrel tank #327 (b) (3), (b) (7)(F) Demolished 10,000 barrel tank #317.
<b>2010</b>	Demolished 112 Tank 55,000 BBL Tank
<b>2011</b>	Demolished 101 Tank 55,000 BBL Tank (b) (3), (b) (7)(F)
<b>2013</b>	Demolished 83,000 barrel Tank. Permanently closed 74,000 barrel Tank #1.
<b>2014</b>	Demolished 55,000 barrel Tank #102. Demolished 55,000 barrel Tank #113. Demolished 55,000 barrel Tank #118. Demolished Tank #50.
<b>OTHER FACILITY DATA</b>	
	<ul style="list-style-type: none"> <li>Additional facility data (including storage information) is provided in Appendix H and discharge detection and inspection information is provided in the SPCC Plan.</li> </ul>

## 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 (telephone reference is provided in Figure 2.2). In no event shall notification be delayed because the immediate supervisor is inaccessible. The Facility Spill Management Team will consist of members of the Volunteer Emergency Response Team, staff and corporate personnel, 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 PRSI Person Notified/On-Scene***

- Immediately notify the **Refinery Operator, Truck Rack Personnel or Vessel**, as the situation demands.
- Immediately notify Security Control at extension 1399 in addition to your immediate supervisor.
- Immediately notify **Refinery Management and the Environmental Representative on call**.

#### ***Refinery Management***

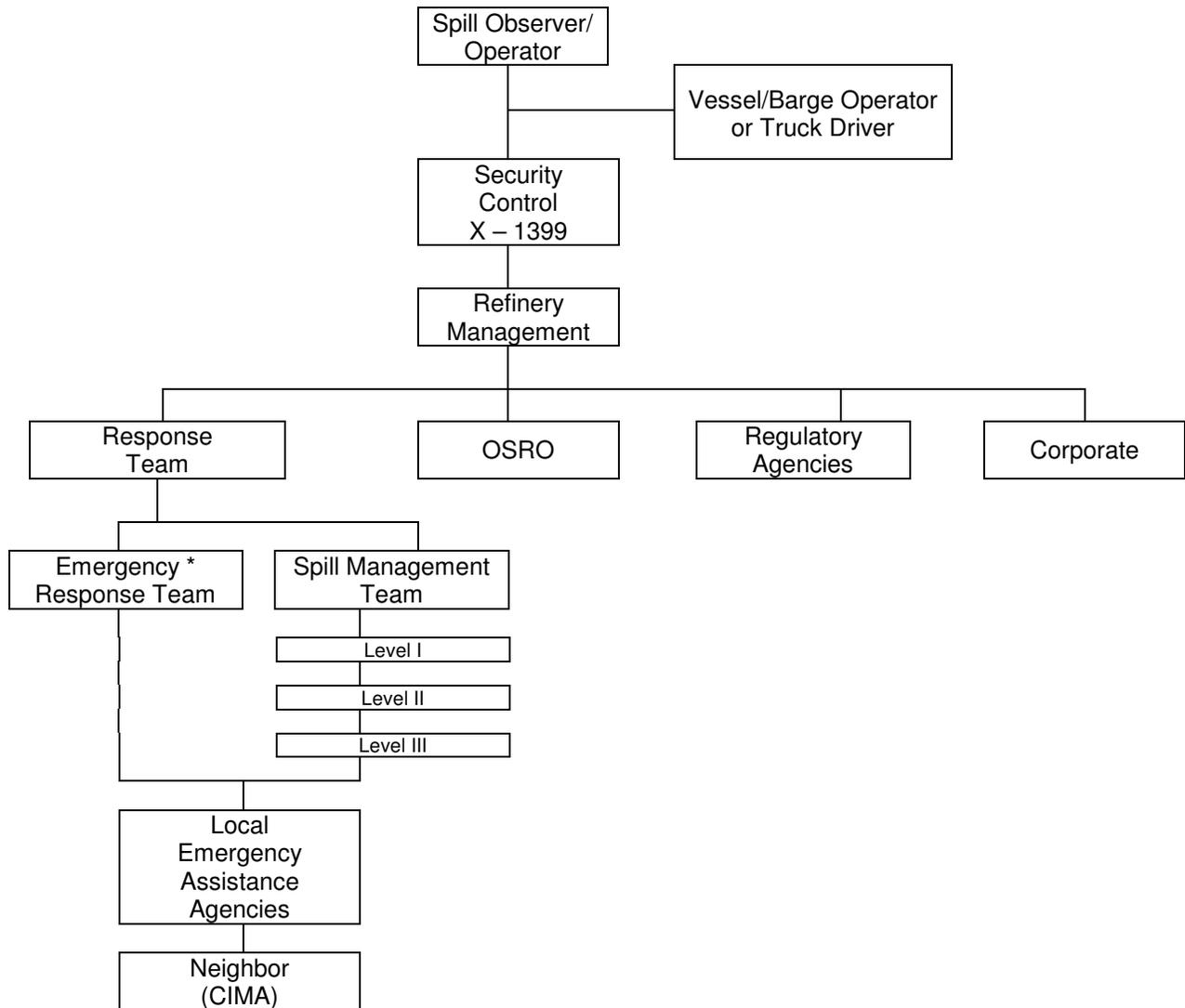
- Activate the **Volunteer Emergency Response Team or Spill Management Team**, as the situation demands.
- Notify **Corporate Personnel** as required by the Incident Management Standards.
- Activate **local emergency response resources (Oil Spill Removal Organizations (OSRO), fire, police, medical, etc.)**.
- To report incidents internally, take the following actions:
  1. If the situation warrants potential use of outside resources, i.e., CIMA, local services, etc. The Incident Commander or EOC Emergency Coordinator shall approve authorization of outside resources. When notification is made to or assistance is requested from the Spill Management Team (SMT), notification information should be documented in the Security Control Log.

## 2.1 INTERNAL NOTIFICATION (Cont'd)

2. If the reportable event involves a spill or an impact to the community, appropriate notifications should be made and a fact finding report (FFR) should be generated. Investigation will begin as part of the FFR process.

- The Environmental Group will notify all **regulatory/governmental agencies** and other external organizations as detailed in Section 2.2 and Figure 2.5. Coordinate with **Environmental Representative** as the situation demands.
- In the event of a **vessel incident**, coordinate notifications with **Oil Movements** and **Environmental**.
- Coordinate** activation of additional response (including activation/mobilization of the Spill Management Team) and clean-up resources with Safety and the **Environmental Representative**, as the situation demands.

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



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

GENERAL FACILITY			
FACILITY	ADDRESS	OFFICE	FAX NUMBER
Pasadena Refinery	111 Red Bluff Road Pasadena, TX 77506	(713) 472-2461 <b>24 Hr. Number</b>	(713) 920-3933

QUALIFIED INDIVIDUALS						
POSITION/TITLE	NAME	RESPONSE TIME	TRAINING LEVEL	OFFICE	HOME	OTHER
<b>Qualified Individual and Person in Charge</b>	Don Davis	60 minutes ( <i>maximum</i> )	Training records are available at the Facility training department.	(713) 920-3942	(b) (6)	
	<b>Alternate Qualified Individual and Person in Charge</b>	Alisa White		60 minutes ( <i>maximum</i> )		
Tobey Taylor		60 minutes ( <i>maximum</i> )		(713) 920-4152		

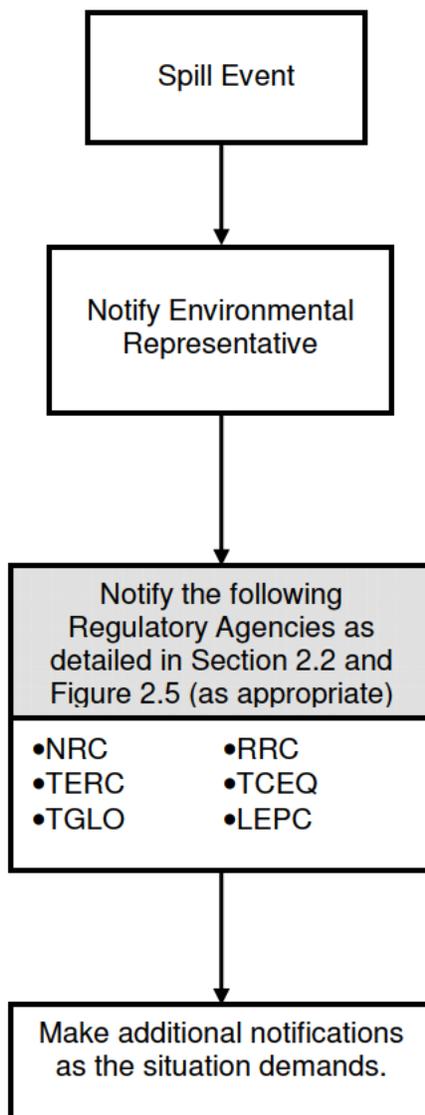
FIGURE 2.2 (Cont'd)

## INTERNAL NOTIFICATION REFERENCES

SPILL MANAGEMENT TEAM					
POSITION/TITLE	NAME	RESPONSE TIME	OFFICE	HOME	OTHER
<b><i>Volunteer Emergency Response Team</i></b>	Activated through Security Control at Extension 1399 via Global Pager System		(713) 476-2461	(b) (6)	
CEO	Fernando Oliveira	60 minutes (maximum)	(713) 920-4789		
Director Health, Safety, Environmental and Security	Mark Berlinger	60 minutes (maximum)	(713) 920-3924		
Director Operations	John Edmonds	60 minutes (maximum)	(713) 920-3913		
Human Resources Director	Denise Gaston	60 minutes (maximum)	(713) 920-3981		
Manager Environmental	Tobey Taylor	60 minutes (maximum)	(713) 920-4152		
Director Engineering Inspections	Mauro Pumar	60 minutes (maximum)	(713) 920- 4100		
Purchasing Supervisor	Adriana Uriarte	60 minutes (maximum)	(713) 660-4503		
Director Maintenance	Bill Domescik	60 minutes (maximum)	(713) 920-3961		

FIGURE 2.3

NOTIFICATION DATA SHEET					
Date of Incident: _____		Time of Incident: _____			
INCIDENT DESCRIPTION					
Reporter's Full Name: _____		Position: _____			
Day Phone Number: _____		Evening Phone Number: _____			
Company: <u>Pasadena Refining System, Inc.</u>		Organization Type: _____			
Facility Address: <u>Houston Refinery</u>		Owner's Address: <u>Pasadena Refining System, Inc.</u>			
<u>111 Red Bluff Road</u>		<u>111 Red Bluff Road</u>			
<u>Pasadena, TX 77506</u>		<u>Pasadena, TX 77506</u>			
Facility Latitude: <u>(b) (7)(F),</u>		Facility Longitude: <u>(b) (7)(F), (b)</u>			
Incident Address/Location: _____ (if not at Facility): _____					
On-Scene Weather Conditions: _____					
Responsible Party's Name: _____			Phone Number: _____		
Responsible Party's Address: _____					
Source and/or cause of incident: _____					
Nearest City: <u>Pasadena</u>					
County: <u>Harris</u>		State: <u>Texas</u>		Zip code: <u>77506</u>	
Section: _____		Township: _____		Range: _____	
Borough: _____		Distance from City: _____			
Unit of Measure: _____		Direction from City: _____			
Container Type: _____		Container Storage Capacity: _____		Unit of Measure: _____	
Facility Oil Storage: <u>(b) (3), (b) (7)(F)</u>		Unit of Measure: <u>Gallons</u>			
Were Materials Discharged? _____		(Y/N) Confidential? _____		(Y/N)	
CHRIS Code	Total Quantity Released	Unit of Measure	Water Impact (YES or NO)	Quantity into Water	Unit of Measure
RESPONSE ACTION(S)					
Action(s) taken to Correct, Control, or Mitigate Incident: _____					
Number of Injuries: _____			Number of Deaths: _____		
Evacuation(s): _____ (Y/N) Number Evacuated: _____					
Was there any damage? _____ (Y/N) Medium Affected: _____					
Description: _____					
More Information about Medium: _____					
CALLER NOTIFICATIONS					
National Response Center (NRC): <u>1-800-424-8802</u>					
Additional Notifications (Circle all applicable): <u>USCG</u> <u>EPA</u> <u>State</u> <u>Other</u>					
Describe: _____					
NRC Incident Assigned No: _____					
ADDITIONAL INFORMATION					
Any information about the incident not recorded elsewhere in this report: _____					
Meeting Federal Obligations to Report? _____ (Y/N) Date Called: _____					
Calling for Responsible Party? _____ (Y/N) Time Called: _____					
NOTE: DO NOT DELAY NOTIFICATION PENDING COLLECTION OF ALL INFORMATION.					

**FIGURE 2.4****EXTERNAL NOTIFICATION FLOWCHART**

Acronyms	
•	NRC = National Response Center
•	TERC = Texas Emergency Response Center
•	TGLO = Texas General Land Office
•	RRC = Railroad Commission
•	TCEQ = Texas Commission on Environmental Quality
•	LEPC = Local Emergency Planning Committee

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

<b>REQUIRED EXTERNAL NOTIFICATIONS</b>			
<b>AGENCY</b>	<b>LOCATION</b>	<b>OFFICE</b>	<b>ALTERNATE</b>
National Response Center (NRC) USCG/EPA	Washington, DC	(800) 424-8802	(202) 267-2675
State Emergency Response Commission (SERC)* TCEQ/GLO/TRRC	Austin, TX	(800) 832-8224	
Sector Houston-Galveston	Galveston, TX	(281) 464-4855	
USCG Vessel Traffic	Houston, TX	(281) 464-4837	
US Environmental Protection Agency Region VI	Dallas, TX	(800) 887-6063/ (214) 665-2200	(866) 372-7745
DOT Department of Pipeline Safety – HAZ MAT 24 Hour Crisis Management Center	Houston, TX	(713) 272-2859 (202) 366-1863	EMERG. (800) 424-8802
Southeast Regional LEPC	Pasadena, TX	(713) 475-5599 (OEP) (713) 477-1511 (Dispatch for Duty Officer – 24 Hrs.)	(713) 475-5588
CAER Line		(281) 476-2237	

<b>RECOMMENDED EXTERNAL NOTIFICATIONS</b>			
<b>AGENCY</b>	<b>LOCATION</b>	<b>OFFICE</b>	<b>ALTERNATE</b>
OSHA (For Reportable Injury or Death)	Washington, DC	(800) 321-6742 (24 Hrs.)	(281) 591-2438
Texas General Land Office (TGLO)	Austin, TX	(800) 832-8224 (24 Hrs.)	(281) 470-6597 (La Porte, TX)
Texas Railroad Commission (Pipeline Safety Division)	Houston, TX	(713) 869-8425 (Day)	(512) 463-6788 (24 Hrs.)
Texas Commission on Environmental Quality (TCEQ)	Houston, TX	(800) 832-8224	(713) 767-3563
Texas Railroad Commission (Oil and Gas Division)	Houston, TX	(713) 869-5001 (24 Hrs.)	(512) 463-6788 (24 Hrs.)

\* Hotline answered by the Texas Department of Public Safety which will in turn notify GLO, TCEQ and TRRC as applicable. Follow-up calls to all appropriate agencies are always advisable.

FIGURE 2.5 (Cont'd)

## EXTERNAL NOTIFICATION REFERENCES

ASSISTANCE/ADVISORY NOTIFICATIONS (outside resources)			
AGENCY	LOCATION	OFFICE	ALTERNATE
U.S. Fish and Wildlife Service (USFWS)	Clear Lake, TX	(281) 286-8282 (24 Hrs.)	
NOAA Weather Service	Corpus Christi, TX	(361) 289-0959	
USACOE (EOPS Chief Gus Marinas)	Galveston, TX	(409) 766-3045	Duty Office (409) 939-0235
Universal Weather	Houston, TX	(713) 944-1622	
National Weather Service (Recorded Forecast)	Dickinson, TX	(281) 337-5074	
Texas Parks and Wildlife Department	Austin, TX	(512) 389-4848	(281) 534-0130
Texas Department of Public Safety	Austin, TX	(512) 424-2008	
Port of Houston Authority Police Dept.	Houston, TX	(713) 670-3620	(713) 670-2892 (Fax)
City of Pasadena	Pasadena, TX	(713) 477-1511	(713) 475-5555 (Metro Action Line)
City of Pasadena Police Department	Pasadena, TX	911	(713) 477-1221 (24 Hrs.)
City of Pasadena Fire Department	Pasadena, TX	911	(713) 475-5554
Bay Star Ambulance	Baytown, TX	(877) 777-7400 (Dispatch)	(281) 427-1554
City of Pasadena Water Department	Pasadena, TX	(713) 475-5566	
City of Pasadena Fire Marshal's Office	Pasadena, TX	(713) 475-5556	
City of Pasadena City Marshal's Office	Pasadena, TX	(713) 475-7282	
CenterPoint	Houston, TX	(713) 207-2222 (Outage Reports)	(713) 207-1111 (281) 894-1625 (24 Hrs.)
AT&T	Houston, TX	(800) 286-8313	(713) 638-7300
Texas One Call System (Excavation)	Houston, TX 811	(800) 545-6005	
Lone Star Notification Center (Excavation)	Houston, TX	811	On Line E Ticket
Texas Excavation Safety System (Excavation)	Dallas, TX	(800) 669-8344	(713) 223-4567
KTRH (740 AM Radio)	Houston, TX	(713) 212-8000	(713) 212-8740 (News Room) (24 Hrs.)
Coastal Water Authority	Pasadena, TX	(713) 472-8225	
Harris County Public Health and Environmental Services	Pasadena, TX Houston, TX	(713) 274-6300 (24 Hrs.) (713) 920-2831	(713) 274-6475 Fax (Upset Conditions)

FIGURE 2.5 (Cont'd)

## EXTERNAL NOTIFICATION REFERENCES

NEIGHBORS			
AGENCY	LOCATION	OFFICE	ALTERNATE
Chevron/Texaco	Galena Park, TX	(713) 277-3800	
Harris County Washburn Tunnel	Galena Park, TX	(713) 455-0062	
Coastal Water Authority	Pasadena, TX	(713) 472-8225	
Kinder Morgan	Pasadena, TX	(713) 920-8450	
Kinder Morgan	Galena Park, TX	(713) 450-7422	
Gulf Coast Waste Disposal	Pasadena, TX	(713) 472-5507	
Steel and Pipe Supply	Pasadena, TX	(713) 472-5614	
Southwest Ship Yard	Pasadena, TX	(281) 860-3200	(281) 860-3215 (Fax)
Port Terminal Railway	Pasadena, TX	(713) 393-6500	(713) 393-6509 (24 Hrs.)
Wiggins Metals	Pasadena, TX	(713) 472-2057	

LOCAL EMERGENCY SERVICES			
<b><i>DIAL 911</i></b> for All Police, Fire, and Ambulance Emergencies			
SERVICE	LOCATION	OFFICE	ALTERNATE
Deer Park Fire Department	Deer Park, TX	(281) 478-7281	
Deer Park Police Department	Deer Park, TX	(281) 478-2000	(281) 479-4372 (Fax)
Office of Emergency Management	Deer Park, TX	(281) 478-7298	(281) 478-7289 (Fax)
Galena Park Fire Department	Galena Park, TX	(713) 674-5311	
Galena Park Police Department	Galena Park, TX	(713) 675-3471	(713) 675-3472
Pasadena Police Department	Pasadena, TX	(713) 477-1221 (24 Hrs.)	
Pasadena Fire Department	Pasadena, TX	(713) 475-5554	(713) 475-1221 (24 Hrs.)
Harris County Sheriff	Houston, TX	(713) 221-6000	
Department of Public Safety	Austin, TX	(512) 424-2000	
F.B.I. – Houston	Houston, TX	(713) 693-5000	(713) 936-8900 (Fax)

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

<b>LOCAL EMERGENCY SERVICES</b>			
<b><i>DIAL 911 for All Police, Fire, and Ambulance Emergencies</i></b>			
<b>SERVICE</b>	<b>LOCATION</b>	<b>OFFICE</b>	<b>ALTERNATE</b>
Life Flight (Herman Life Flight LD) Ambulance	Houston, TX	(713) 704-4357	(713) 704-3590 Non-emergency 911
Memorial Herman Southeast Hospital	Houston, TX	(281) 929-6100	
Columbia Bayshore Medical Center	Pasadena, TX	(713) 359-2000	
Memorial Hermann Hospital	Houston, TX	(713) 704-4000	

<b>USCG CLASSIFIED OIL SPILL REMOVAL ORGANIZATIONS (OSRO)</b>			
<b>COMPANY</b>	<b>LOCATION</b>	<b>OFFICE</b>	<b>ALTERNATE</b>
Garner Environmental Services, Inc.	Deer Park, TX	(800) 424-1716 (24 Hrs.)	(281) 930-1200
Oil Mop, LLC	Pasadena, TX	(800) 645-6671 (24 Hrs.)	
Anderson Pollution Control	LaPorte, TX	(281) 479-5300 (24 Hrs.)	(866) 609-6208 (24 Hrs.)
Clean Channel Association (CCA)	Pasadena, TX	(713) 534-6195 (24 Hrs.)	(713) 534-6197 (Fax)

<b>ADDITIONAL RESPONSE RESOURCES</b>			
<b>COMPANY</b>	<b>LOCATION</b>	<b>OFFICE</b>	<b>ALTERNATE</b>
CIMA	Deer Park, TX	(281) 476-5040	(281) 837-9191 (Dispatch)
Witt O'Brien's LLC	Houston, TX	(281) 320-9796	(985) 781-0804 (24 Hrs.)
Wildlife Center of TX	Houston, TX	(713) 861-9453 (8-5)	(713) 279-1417
Wildlife Response SVC LLC	Seabrook, TX	(713) 705-5897	(281) 266-0054 PGR
Consolidated Crane & Rigging (Cranes)	Houston, TX	(713) 641-3330 (24 Hrs.)	(888) 752-7263
Rapid Environmental Services (Waste)	La Porte, TX	(281) 479-4376	
Williams Fire & Hazard Control (FF)	Spring, TX	(281) 999-0276 (24 Hrs.)	(409) 727-2347 (Vidor, TX) (24 Hrs.)
Wild Well Control, Inc.	Houston, TX	(281) 784-4700	(281) 784-4750 (Fax)
American Commercial Barge Lines	Channelview, TX	(800) 457-6377	
Kirby Inland Marine (Barge)	Channelview, TX	(713) 435-1600	(713) 435-1079 (24 Hrs.)
T & T Marine Salvage Inc, (Salvage) (FF)	Galveston, TX	(281) 488-5757	(409) 744-1222 (24 Hrs.)
Thompson General Construction	Houston, TX	(281) 741-5261 (281) 741-5822 (Fax)	(713) 829-0896 (713) 724-7094

## 2.2 EXTERNAL NOTIFICATION

The following 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 Environmental Representative shall ensure that the following "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.

### Required Notifications

**National Response Center (NRC)**

**Verbal**

*Immediately for all spills that impact or threaten navigable water.*

(800) 424-8802 (24 Hour)  
(202) 267-2675 (Alternate)

**Oil Spill Removal Organization (OSRO)**

*Immediately for all spills that exceed the Facility's response capabilities. Figure 5.1 details the OSRO response resources with their respective response times and Figure 2.5 details the OSRO phone references for 24 hour contact.*

**Written**

*In accordance with the applicable SPCCR regulations, within 60 days to the U.S. Environmental Protection Agency for a spill in excess of 1,000 gallons (24 Bbls.) in a single event or two spill events within a twelve month period into or upon navigable waters of the United States or adjoining shorelines.*

U.S. Environmental Protection Agency - Region VI  
Fountain Place 12th Floor, Suite 1200  
1445 Ross Avenue  
Dallas, TX 75202-2733

**Texas Emergency Response Center (TERC)**

**Verbal**

*Immediately for all spills into the environment of the state. Note: the TERC will in turn contact all applicable agencies including but not limited to the GLO, TCEQ, and RRC. Follow-up calls to all applicable agencies is always advisable.*

(800) 832-8224 (24 Hour)

**Written**

*As requested by the agency.*

## 2.2 EXTERNAL NOTIFICATION (Cont'd)

### Required Notifications (Cont'd)

**Texas General Land Office (TGLO)**

**Verbal**

*Immediately for all spills, including surface spills and tank overfills, of any amount into the **coastal environment** from a Terminal Facility (Terminal Facility is defined as any waterfront or offshore pipeline, structure, equipment, or device used for the purposes of drilling for, pumping, storing, handling, or transferring oil and operating where a discharge of oil from the Facility could threaten coastal waters).*

(281) 470-6597 (24 Hour)

**Written**

*As requested by the agency.*

**Texas Railroad Commission (TRRC)**

**Verbal**

*Immediately for any spill of crude oil from a storage facility or pipeline.*

(713) 869-5001 (Oil and Gas Division) (24 Hour)

(713) 869-8425 (Pipeline Safety) (Day)

(512) 463-6788 (Nights and Weekends)

**Written**

*Submit Form H-8 and Interim H-8 (located at the end of this section and in Appendix L) for any spill or discharge of five (5) barrels or more, within 30 days to the respective district office. Form H-8 is located in Appendix K of this plan.*

Texas Railroad Commission  
Pipeline Safety Division  
1706 Seamist Drive  
Suite 501  
Houston, TX 77008-3135

**Texas Commission on Environmental Quality (TCEQ)**

**Verbal**

*Immediately for all oil or hazardous substance spills into the non-coastal environment. The TCEQ should be called for all spills in the state as a courtesy call since jurisdictional boundaries between the various agencies are somewhat indefinite.*

(713) 767-3554 (24 Hour)

(800) 832-8224 (24 Hour)

(713) 767-3563 (Day)

## 2.2 EXTERNAL NOTIFICATION (Cont'd)

### Required Notifications (Cont'd)

**Written**

*Within 15 days of the spill or discharge.*

Pollution Cleanup Division  
Texas Commission on Environmental Quality  
Messenger Building D  
P.O. Box 13087  
Austin, TX 78711

**Pasadena Local Emergency Planning Committee (LEPC)**

**Verbal**

*For any spill which escapes the boundary of the Facility.*

(713) 475-5588 (OES)  
(713) 477-1221 (Fire/Police)

**Written**

*As requested by the agency.*

**Galena Park Local Emergency Planning Committee (LEPC)**

**Verbal**

*For any spill which escapes the boundary of the Facility.*

(713) 675-3471

**Written**

*As requested by the agency.*

### Other Notifications

**Occupational Safety and Health Administration (OSHA)**

*Immediately for incidents involving three (3) or more hospitalizations or one (1) or more deaths.*

(800) 321-6742

**U.S. Environmental Protection Agency (EPA)**

*Immediately for all spills that impact or threaten navigable water or adjoining shoreline. Notification to the EPA is typically accomplished by the call to the NRC.*

(866) 372-7745

## 2.2 EXTERNAL NOTIFICATION (Cont'd)

### Other Notifications (Cont'd)

- U.S. Coast Guard - Marine Safety Unit (USCG - MSU)**  
*Immediately for all oil spills into the waters of the coastal environment.  
Notification to the USCG is typically accomplished by the call to the NRC.*  
  
(281) 464-4855
- Texas Parks and Wildlife Department**  
*Immediately for all spills that impact or threaten state wildlife management areas  
or refuges.*  
  
(512) 389-4800
- Neighbors**  
*Directly or with assistance from local police and fire agencies, inform all adjacent  
businesses and private citizens that might be immediately impacted.*

<b>SPILL REPORTING GUIDELINES</b>	
<ul style="list-style-type: none"> <li>● Never include information which has <b><u>not been verified.</u></b></li> <li>● <b><u>Never speculate</u></b> as to the cause of an incident or make any acknowledgment of liability.</li> <li>● <b><u>DOCUMENT:</u></b> <ul style="list-style-type: none"> <li>v Agency notified</li> <li>v Time agency notified</li> <li>v Person notified</li> <li>v Content of message given</li> </ul> </li> <li>● <b><u>DO NOT DELAY</u></b> reporting due to incomplete information.</li> </ul>	

## 3.0 A      **RESPONSE ACTION RESOURCE LIST**

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### **SAFETY DATA SHEET (SDS)**

Safety Data Sheets of all Oil and hazardous materials handled, stored or transported from this facility area available on a private PRSI website.

Emergency Action Plan is available on a private PRSI computer based program.

### **SITE SAFETY AND HEALTH PLAN (SSHP)**

Site Safety and Health Plan is available on a private PRSI computer based program.

### **FACILITY SECURITY PLAN (FSP)**

Facility Security Plan is available via the on-site Facility Security Officer.

## 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 Spill management 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 PRSI 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 Spill management Team, the role of IC will typically be assumed and retained by Refinery 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

- Assume responsibility and control of the situation.
- Assess the incident - Personnel and Public Safety is first priority. Provide immediate aid to the injured.
- Eliminate any sources of ignition.
- Isolate the source of a discharge, eliminate, or minimize further flow and initiate containment.
- Conduct immediate notification to activate the alarm system and mobilize the Spill Management Team or Local Response Team, Fire Department, Oil Spill Response Team, or Hazmat Team as necessary.
- Notify federal/state/local agencies and other contacts per notification tables in Section 2 (NRC, OSC, etc.).
- Control the area - Evacuate as needed and prevent personnel from entering the area until trained responders have arrived.

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

#### FIRST PRSI PERSON NOTIFIED/ON SCENE

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

#### REFINERY 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 **Spill management Team, Volunteer Emergency Response Team, Channel Industries Mutual Aid, 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).
- \_\_\_\_ Notify the **Manager of Oil Movements** for all vessel and tank incidents.
- \_\_\_\_ Notify **Refinery Manager**. Provide incident briefing and coordinate activation of the Spill Management Team, as the situation demands.
- \_\_\_\_ 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 Figure 3.2.

#### SPILL MANAGEMENT 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 First Priority. Excessive Exposure To The Vapor And Liquid Stages Of The Spilled Product Should Be Avoided.**

**INITIAL RESPONSE**

- \_\_\_\_ Approach from upwind side and advise all personnel in the area.
- \_\_\_\_ Take appropriate personal protective measures.
- \_\_\_\_ Report incident by using emergency radio #1 or dial 1399 and report incident to the Security Control. Provide the following information:
  - Name
  - Location
  - Nature of incident
  - Injuries
  - Source or material
  - If known resources needed
- \_\_\_\_ If safe to do so, restrict access to the spill site and adjacent area as the situation demands. Be aware and eliminate any ignition sources in the area. Take any other steps necessary to minimize any threat to human health and environment.
- \_\_\_\_ Verify type of product and quantity released and request an SDS.
- \_\_\_\_ If safe to do so, identify/isolate the source to minimize spill/loss of product.
- \_\_\_\_ Use testing and sampling equipment to determine potential safety hazards.

**INITIAL RESPONSE**

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

- \_\_\_\_\_ Shut down pumping equipment.
- \_\_\_\_\_ Close upstream and downstream block valves. Use pumps on the line or vacuum trucks to remove product if applicable.
- \_\_\_\_\_ Utilize Combustible Gas Indicator, O<sub>2</sub> meter, proper colormetric indicator and other air sampling measurements to assure that areas are safe to enter for continued response operations.
- \_\_\_\_\_ 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 areas such as waterways, sewers, 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, insure that drainage valve(s) is "closed".
- \_\_\_\_\_ Drain the line section, as the situation demands.
- \_\_\_\_\_ Request Internal Security or local authorities to establish traffic control in the area, 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 and dispose of all wastes according to Regulatory Requirements. 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, diversion, and recovery actions.
- \_\_\_\_\_ Inform local operators such as utilities, telephone company, railway as necessary.
- \_\_\_\_\_ Complete follow-up and written reporting, as the situation demands.

**LEAKS/SPILLS**

**FIGURE 3.1 (Cont'd)****SPECIFIC INCIDENT RESPONSE CHECKLIST****LINES UNDER PRESSURE**

- \_\_\_\_ Shut down pumping equipment.
- \_\_\_\_ Close upstream and downstream block valves. If applicable, use pumps on the line or vacuum trucks to remove product.
- \_\_\_\_ Pressured lines can be vented to the flares to avoid a spill's increase/impact.
- \_\_\_\_ Utilize Combustible Gas Indicator, O<sub>2</sub> meter, proper colorimetric indicator and other air sampling measurements to assure that areas are safe to enter for continued response operations.
- \_\_\_\_ 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 areas such as waterways, sewers, 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, insure that drainage valve(s) is "closed".
- \_\_\_\_ Drain the line section, as the situation demands.
- \_\_\_\_ Request Internal Security or local authorities to establish traffic control in the area, 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, diversion, and recovery actions.
- \_\_\_\_ Inform local operators such as utilities, telephone company, railway as necessary.
- \_\_\_\_ Complete follow-up and written reporting, as the situation demands.

**FIGURE 3.1 (Cont'd)****SPECIFIC INCIDENT RESPONSE CHECKLIST****STORAGE TANK LEAKS AND OVERFLOWS SPECIFIC RESPONSE**

- \_\_\_\_\_ Shut down all tank battery product movement operations and isolate the tank.
- \_\_\_\_\_ Ensure that the containment area drainage valve(s) is "closed".
- \_\_\_\_\_ If near tank bottom, fill tank with water and maintain water bottom to suspend the discharge.
- \_\_\_\_\_ Utilize Combustible Gas Indicator, O<sub>2</sub> meter, proper colorimetric indicator and other air sampling measurements to assure that areas are safe to enter for continued response operations.
- \_\_\_\_\_ Block drainage of spilled material from traveling offsite.
- \_\_\_\_\_ Stop all traffic in hazardous area (inside and outside of property boundaries), as the situation demands.
- \_\_\_\_\_ Remove product from containment (at a sump or in a low area) with an explosion proof pump, oil skimmer, and/or vacuum truck w/ skimmer attachments.
- \_\_\_\_\_ Process recovered product through the recovered oil system and the residual through the wastewater treatment system.
- \_\_\_\_\_ Determine the direction and expected duration of spill movement. Refer to the maps in Section 6.0.
- \_\_\_\_\_ Empty tank as soon as possible.
- \_\_\_\_\_ Transfer contents to alleviate overflow as applicable.
- \_\_\_\_\_ 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.
- \_\_\_\_\_ If necessary, call one (1) of the approved remediation companies to remove the remaining contaminated soils and residue from the containment area. Contact PRSI Environmental Department to assist in coordinating the waste removal methods and to remove waste from the Facility for 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 as necessary.
- \_\_\_\_\_ Complete follow-up and written reporting, as the situation demands.

**LEAKS/SPILLS**

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

- \_\_\_\_\_ Take no risks with personal safety.
- \_\_\_\_\_ Try to stop flow of product but only if it can be done safely.
- \_\_\_\_\_ Evacuate personnel from the truck rack area, as the situation demands.
- \_\_\_\_\_ Minor spill (less than fifty (50) gallons):
  - Discontinue all loading operations.
  - Stop all traffic from entering rack.
  - Do not move any truck from area until area is flushed down with water and leak has been stopped.
  - Pump all product into facility wastewater treatment system
- \_\_\_\_\_ If level of vapors are high, do not attempt to enter area until Volunteer Emergency Response Team is on site and applies foam blanket.
- \_\_\_\_\_ Utilize Combustible Gas Indicator, O<sub>2</sub> meter, proper colormetric indicator and other air sampling measurements to assure that areas are safe to enter for continued response operations.
  - Shut down any valves that are causing a continued product flow to separator.
  - Flush Area (ON LOADING PAD). If product has spread, make efforts to contain on pad. Absorb spill with absorbent pads. If necessary dam area with absorbent booms. Place spill stoppers over any catch basins to keep product from entering waterway.
  - Absorb spill with absorbent pads. If necessary dam area with absorbent booms. Place spill stoppers over any catch basins to keep product from entering any waterway or storm sewers.
  - Collect residual product with explosion proof pump or vacuum truck.
  - Fire Danger. Care should be taken in working with a spill that a serious fire hazard is not created by recovery attempts. In many cases, small amounts of gasoline might best be treated by containment and evaporation to minimize the risk of fire. It is of utmost importance that unauthorized persons and equipment be kept out of the area when a spill has occurred involving a flammable liquid.
  - Area Declared Safe. Do not start any trucks until all product is flushed and vapors or fumes have cleared the loading rack area and the Terminal Superintendent declares the emergency over and safe to resume operations.

**LEAKS/SPILLS**

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

- \_\_\_\_\_ Use all appropriate emergency shutdown systems.
- \_\_\_\_\_ Shut down all engines/motors.
- \_\_\_\_\_ Block all line and ship manifold discharge valves.
- \_\_\_\_\_ If hose rupture, drain line into barge, drums, buckets, and block line to stop spill into water.
- \_\_\_\_\_ Notify Security Control at extension 1399.
- \_\_\_\_\_ Notify Oil Movements Supervisor.
- \_\_\_\_\_ Utilize Combustible Gas Indicator, O<sub>2</sub> meter, proper colormetric indicator and other air sampling measurements to assure that areas are safe to enter for continued response operations.
- \_\_\_\_\_ If other than hose rupture, determine source of leak and stop if safe to do so.
- \_\_\_\_\_ 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.
- \_\_\_\_\_ In the event of a gasoline spill, prevent any personnel or boats from entering area. Do not attempt to collect or contain product that has entered waterway.

**LEAKS/SPILLS**

## FIGURE 3.1 (Cont'd)

### SPECIFIC INCIDENT RESPONSE CHECKLIST

#### MARINE OPERATION SPILLS/LEAKS, (Cont'd)

- \_\_\_\_\_ Make all necessary repairs.
- \_\_\_\_\_ Return the line/vessel 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 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 as necessary.
- \_\_\_\_\_ Complete follow-up and written reporting, as the situation demands.

#### 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 continue safely? If yes, begin MOC Process, when complete 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 as necessary.
- \_\_\_\_\_ Complete follow-up and written reporting, as the situation demands

LEAKS/SPILLS

**FIGURE 3.1 (Cont'd)****SPECIFIC INCIDENT RESPONSE CHECKLIST****EQUIPMENT FAILURE**

- \_\_\_\_\_ Shut down all engines/motors.
- \_\_\_\_\_ Close upstream and downstream block valves. If applicable, use pumps on the line or vacuum trucks to remove product.
- \_\_\_\_\_ Utilize Combustible Gas Indicator, O<sub>2</sub> meter, proper colorimetric indicator and other air sampling measurements to assure that areas are safe to enter for continued response operations.
- \_\_\_\_\_ If safe to do so, 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 areas such as waterways, storm and process sewers, etc. to the greatest extent possible.
- \_\_\_\_\_ If located within containment area, insure that drainage valve(s) is “closed”.
- \_\_\_\_\_ Drain the line section, as the situation demands.
- \_\_\_\_\_ Request Internal Security or local authorities to establish traffic control in the area, 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, diversion, and recovery actions.
- \_\_\_\_\_ Inform local operators such as utilities, telephone company, railway as necessary.
- \_\_\_\_\_ Complete follow-up and written reporting, as the situation demands.

**EQUIPMENT FAILURE**

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

**EXPLOSIONS AND/OR FIRE, SPECIFIC RESPONSE**

**INDIVIDUAL DISCOVERING THE FIRE - (All Employees)**

- \_\_\_\_ Call security control at extension 1399.
- \_\_\_\_ Security control initiates the refinery alarm system.
- \_\_\_\_ Security control initiates activation by request of Shift Safety Personnel, the Spill Management Team and/or Volunteer Emergency Response Team, internal and external notifications.
- \_\_\_\_ Secure the operation by activating emergency shutdown procedures, close valves, etc., if safe to do so.
- \_\_\_\_ Notify Refinery Management or the supervisor on duty.
- \_\_\_\_ Return to the scene of the fire and, if 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 Volunteer Emergency Response Team to the scene of the fire and keep personnel and vehicles from entering the danger area.
- \_\_\_\_ Drivers with trucks at or near the incident should turn off truck and report to assigned check point(s) and await further instructions.
- \_\_\_\_ For dock fires, cease all marine and transfer operations. Close all manifold valves and secondary valves pertaining to the dock. Prepare foam system while awaiting arrival of the Fire Department and ensure that gates are open for emergency vehicles.
- \_\_\_\_ For ground fires, apply cooling water to all flame exposed metal. Stop the flow of product feeding the fire.
- \_\_\_\_ Evacuate area, as the situation demands.

**FIGURE 3.1 (Cont'd)****SPECIFIC INCIDENT RESPONSE CHECKLIST****EXPLOSIONS AND/OR FIRE, (Cont'd)****INDIVIDUAL DISCOVERING THE FIRE (in the absence of Supervision)**

- \_\_\_\_ In the event of fire in the absence of a member of supervision or the Refinery Operator, any PRSI employee on duty is designated as the individual in charge until relieved of duty.
- \_\_\_\_ The individual discovering the fire will adhere to the instructions issued in the PRSI EAP.
- \_\_\_\_ Ensure security control (1399) and immediate supervision is notified by telephone or radio.
- \_\_\_\_ Prior to the arrival of a member of supervision, the individual will remain in charge and will direct the fire department/Volunteer Emergency Response Team to the scene of the fire.

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

## FIGURE 3.1 (Cont'd)

### SPECIFIC INCIDENT RESPONSE CHECKLIST

#### **VAPOR CLOUD (from a massive spill, line rupture, etc.), SPECIFIC RESPONSE**

- \_\_\_\_\_ The person who discovers the vapor cloud will notify the security control at extension 1399 or ER, Radio Channel #1 or 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 rally point (north, south, east or west) for roll call and further instructions.
- \_\_\_\_\_ After all personnel have been accounted for Security Control, Refinery Management, Supervisor, or Gauger/Operator will initiate the following actions as deemed necessary:
  1. Notify the Security Control at extension 1399.
  2. Shut down transfer operations.
  3. Evacuation of adjacent property.
  4. Only the fire department will be permitted to enter the affected area.
- \_\_\_\_\_ Contact the appropriate agencies and potentially affected neighbors (refer to Figure 2.5).

VAPOR CLOUD

## FIGURE 3.2

### PRODUCT SPECIFIC RESPONSE CONSIDERATIONS for GASOLINE SPILLS

**Flash Point Range:**

**Below 100°F**

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

*Suggested physical response actions for these products are detailed below. It is important to note however, that each situation is unique and must be individually responded to. These procedures are considerations only. Actual circumstances may dictate that procedures followed may differ somewhat from those listed below. **The following are intended for guideline purposes only.***

These materials float on water and are extremely flammable. Containment of these materials may allow explosive concentrations to accumulate. The preferred response is to minimize impact to water and protect shorelines (storm sewers, creeks, rivers, etc.) from contamination, allow evaporation to occur, and contain/clean-up remaining product.

- \_\_\_ Identify source and stop discharge if possible.
- \_\_\_ Make appropriate notifications to regulatory agencies and internal PRSI Management/Environmental Support. (Refer to Figure 2.5 for notifications.)
- \_\_\_ Obtain explosimeter and other air sampling measurements to assure that areas are safe to enter for continued response operations.
- \_\_\_ Eliminate sources of vapor ignition.
- \_\_\_ Stay upwind and evacuate nonessential personnel.
- \_\_\_ Advise people in the area of any potential threat and/or initiate evacuation. Inform local operators such as utilities, telephone company, railway, and tunnels as the situation demands.
- \_\_\_ Minimize area of surface soil impacted by free product (e.g. damming). Contact with surface runoff or standing water should be prevented whenever possible.
- \_\_\_ Recover pooled hydrocarbon as soon as possible.
- \_\_\_ Free hydrocarbons may be floated with water to aid recovery if increased vapors and agitation can be avoided. The water will act as a barrier to reduce further infiltration of pure hydrocarbon into the soil. (NOTE: This water will later have to be removed and probably treated.)
- \_\_\_ If free hydrocarbon **IS NOT** present, do not add water to the impacted area.

**FIGURE 3.2 (Cont'd)****PRODUCT SPECIFIC RESPONSE CONSIDERATIONS  
for  
GASOLINE SPILLS**

- Remove heavily impacted soil (saturated with hydrocarbons, or very strong hydrocarbon smell) as soon as possible after product/water removal.
- Place in a bin/rolloff or a waste pile lined on the bottom and covered on the top with plastic sheeting to prevent contact with rainwater and contamination of other areas.
- Drums may be used for very small spill cleanups.
- If removal of heavily-impacted soil is delayed or contaminated soil is left in place pending final disposition, the following action should be taken if the possibility of rain exists to minimize contact with rainfall:
  - Cover area with plastic sheeting, overlap seams, weigh down with sandbags;
  - Use shallow ditches to divert rainwater around contaminated site; and
  - Promptly remove any rainwater that does accumulate on the site.
- The following steps should be taken together with Environmental Support to minimize long term risk from the site:
  - Sample contaminated soil still in place;
  - Characterize and dispose of removed soil;
  - Estimate proper cleanup target;
  - Remove and dispose of more soil, if necessary;
  - Install groundwater monitoring wells or monitor existing wells, if necessary; and
  - Provide follow-up communication with regulatory agencies, if necessary.
- Recover the product and affected soil. Be alert for underground cables and water bearing formations. Remember that product may penetrate deeper if impermeable natural layers are disturbed.
- Due to the low flash point of these products: (1) Use non-sparking systems, (2) Have fire trucks or firefighting equipment nearby, (3) Warn all involved of the product's flammability, and (4) Allow product to evaporate to the greatest extent possible.
- Determine the direction and expected duration of spill movement. Refer to the maps provided in Figure 6.1 for an overview of the area.
- Request local authorities to establish traffic control in the area and to post a - "High Flammability" advisory, as the situation demands.
- 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.

### 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, PRSI 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 to contain the spill and to protect socio-economic and environmentally sensitive areas. Booms may also be used 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.

In accordance with the USCG Final Rule (FR Vol. 74, No. 167) dated August 31, 2009, certain facilities must identify in their response plan, and ensure the availability of through contract or other approved means, dispersant application resources and aerial oil tracking capability. The requirement for dispersants is limited to facilities that operate in preauthorized areas. For this COTP zone, preauthorized area is defined as at least 3 nautical miles offshore and in at least 33 feet of water. Therefore, this Facility is currently operating outside the designated, preauthorized area and is not required to amend the plan to address the dispersant requirements.

### 3.3 OIL CONTAINMENT, RECOVERY AND DISPOSAL (Cont'd)

Additionally, the Rule states that facilities operating exclusively on “inland rivers” are not required to comply with the new aerial observation requirements. Coast Guard Headquarters has determined that “inland rivers,” as used in the CAPS Final Rule, is equivalent to the term “inland area,” which is defined in 33 CFR 154.1020 as “the area shoreward of the boundary lines defined in 46 CFR part 7...” Therefore, the Facility is currently operating within an “inland river” and is not required to amend the plan to address aerial oil tracking requirements.

Through the use of Clean Channel Association (CCA), the Facility has the capabilities of responding to and providing aerial oil tracking resources for a worst case spill scenario as required by the US Coast Guard. CCA will supply aerial surveillance aircraft, pilots, trained personnel to support oil spill operations and observation personnel who have been trained in the protocols of oil spill reporting and assessment.

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 PRSI's Incident Commander and the On-Scene Coordinators determine that further response and cleanup is no longer necessary.

\* Note: All Facility response personnel have been informed that detergents or other surfactants are prohibited for use on-water and that dispersants can only be used with the approval of the Regional Response Team.

### 3.4 STORAGE/DISPOSAL

Strict rules designed to ensure safe and secure handling of waste materials govern PRSI's 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.
- H<sub>2</sub>O should be minimized if possible. All H<sub>2</sub>O and spill product will be processed through PRSI recovered oil system.
- 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 PRSI pre-approved sites which have the necessary permits to accept the type of waste to be discharged.

PRSI's Manager of Environmental 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

PRSI'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 PRSI 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 PRSI's Houston Area Safety Council (HASC) Program.
- 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.

#### 3.6.1 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 Incident Commander 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

All air monitoring will be conducted by trained personnel. The Incident Commander must ensure that Safety Monitors' equipment is maintained and ready for use.

## 3.6 SAFETY AWARENESS (Cont'd)

### 3.6.2 Air Monitoring (Cont'd)

- The air monitoring equipment shall be activated and checked at the location in which it is stored.
- Air monitoring measurements which are to be made prior to entry into the spill area include, but are not limited to;
  - 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:

#### ***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, Refinery personnel know and understand the importance of the removal of hazardous substances from their person if they are contaminated. Within the Refinery, eyewash stations and safety showers are located strategically 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) through PRSI Medical Department.

## 3.6 SAFETY AWARENESS (Cont'd)

### 3.6.3 Decontamination (Cont'd)

Contaminated clothing should be allowed to dry, protected from an ignition source, and 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 Safety Data Sheets (SDS) are available to aid health professionals treating the injured parties. SDS 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.
- Additional information regarding decontamination requirements can be found in the Refinery's EAP.

### 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.

<b>Personal Protective Equipment (PPE)</b>	
<p><b><u>LEVEL A</u></b></p> <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>	<p><b><u>LEVEL B</u></b></p> <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>
<p><b><u>LEVEL C</u></b></p> <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>	<p><b><u>LEVEL D</u></b></p> <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>
<p><b><u>MODIFIED LEVEL C</u></b> Same as Level C except no APR requirements.</p>	

### 3.7 EMERGENCY MEDICAL TREATMENT AND FIRST AID

The Facility has arrangements for medical emergencies and first aid. For medical advice and consultation on matters of Refinery health, contact PRSI's HR or Medical Department. The Refinery has an arrangement with a local ambulance service and hospital for the transportation and care of injured employees. This information can also be found in the Safety Policy and Procedures Manual.

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.
- **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.
- SDS 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 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 PRSI Management Representative.

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

## 4.0 RESPONSE TEAMS

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### 4.1 INTRODUCTION

PRSI utilizes the NIMS Incident Command System (ICS) to manage emergency response activities. The ICS is a management tool, which is readily adaptable to very small incidents as well as those of considerable significance. The ICS shall be implemented for all discharge incidents with staffing levels adjusted as required to meet the specific needs (size and severity) of the incident.

First response to a discharge originating from the Facility will be provided by the Level 1 Spill Management Team. In the event that the response operation is beyond the capability of the Level 1 Spill Management Team, the Incident Commander will consult with the Environmental Representative to evaluate the severity of the situation and determine whether activation of the Level 2 or Level 3 Spill Management Team is necessary.

If an incident escalates to require significant ICS staffing (Level 2 or Level 3), then additional support resources may be activated. Corporate management may activate supplemental teams to evaluate the incident, report back and to provide staffing to the ICS if required. Additional support can be established at the Emergency Operations Center or Alternate Emergency Operations Center to provide technical, logistical and operational support. Finally, a team comprised of refinery and corporate staff can be formed to provide a focal point of communications and coordination. This group coordinates policies, procedures, and develops and selects appropriate strategies.

A detailed explanation of the Incident Command System and the roles and responsibilities for primary members of the Spill Management Team is provided in Appendix B.

### 4.2 QUALIFIED INDIVIDUAL

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 Spill Response agencies.
- Assess the interaction of the spilled substance with water, chemicals, 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 clean-up activities.
- Direct clean-up activities until properly relieved of this responsibility.

The Manager of Environmental serves as Qualified Individual (QI) and selected HSE Staff serve as the Alternate Qualified Individuals (AQI). A QI or AQI is available at the facility 24 hours per day. The AQI shall replace the QI in the event of his absence and have the same responsibilities and authority.

## 4.3 SPILL MANAGEMENT TEAM ACTIVATION

The first person on scene will function as the initial Incident Commander (*typically the Gauger/Operator/Oil Movements Representative*) and person-in-charge until relieved by an authorized supervisor. Once the Oil Movements Supervisor or Environmental or Safety Shift Specialist arrive on-scene, he/she will assume the position of Incident Commander (IC). Transfer of command will take place as more senior management respond to the incident and as the situation demands. For Level 1 response operations, the role of IC will typically be assumed and retained by the Oil Movements Supervisor. For response involving fire or other hazardous situations, the Emergency Response Supervisor will assume the control.

For spill response operations outside the capabilities of the Level 1 or Level 2 Spill Responders, the Emergency Response Supervisor or his alternate will assume the role of the Incident Commander and will determine the need for mobilization of additional Spill Management Team Members (Level 2 and Level 3 team members). The number of positions/personnel required to staff each Level of the SMT will depend on the size and complexity of the incident. The Spill Management Team is detailed in Figures 4.1 and 4.2 and telephone references are provided in Figure 2.2. 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.

### 4.3 SPILL MANAGEMENT TEAM ACTIVATION (Cont'd)

SPILL MANAGEMENT TEAM			
Response Level	Incident Class (Section 1.6)	Typical IC	Team Composition / Location
1	1	<ul style="list-style-type: none"> <li>● Oil Movements Shift Supervisor/ Superintendent</li> <li>● Safety Representative</li> <li>● Fire or hazardous incident:</li> <li>● Emergency Response Supervisor</li> <li>● Shift Safety Specialist</li> </ul>	<ul style="list-style-type: none"> <li>● Oil Movements Staff</li> <li>● Environmental Representative</li> <li>● Safety Representative</li> <li>● OSRO Representative</li> </ul> <p>Location: On-site</p>
2	2	<ul style="list-style-type: none"> <li>● Oil Movements Supervisor</li> <li>● Emergency Response Supervisor</li> <li>● Shift Safety Specialist</li> <li>● Manager of Environmental</li> </ul>	<ul style="list-style-type: none"> <li>● Oil Movements Staff</li> <li>● Selected HSE Staff</li> <li>● Safety Staff</li> <li>● OSRO Representatives</li> </ul> <p>Location: On-site with command functions in the Emergency Operations Center (EOC)</p>
3	3	<ul style="list-style-type: none"> <li>● Manager of Environmental</li> <li>● Emergency Response Supervisor</li> </ul>	<ul style="list-style-type: none"> <li>● Oil Movements Staff</li> <li>● Selected HSE Staff</li> <li>● Safety Staff</li> <li>● Refinery Staff</li> <li>● Corporate Staff</li> <li>● OSRO Representatives</li> </ul> <p>Location: EOC</p>

The duties of each position may be performed by the IC directly or delegated as the situation demands.

#### **Organization**

The Facility Spill Management Team includes five (5) functional areas: Command, Operations, Planning, Logistics, and Finance. The functional areas are illustrated in Figure 4.2.

#### **Responsibilities**

The responsibilities of the Facility Spill Management Team are as follows:

- Operations, Planning, Logistics, and Finance report directly to Command.
- When IC does not assign the position, IC retains that responsibility.

### 4.3 SPILL MANAGEMENT TEAM ACTIVATION (Cont'd)

- The five (5) functional areas of the Team are modular in design and can be expanded with additional staff, reporting under the main areas, to meet the requirements of large scale or complex emergencies.
- The IC can set up functional groups or assign groups that are assigned to geographical areas.
- Detailed job descriptions are provided in Appendix B for the ICS positions on the Facility Spill Management Team.

### 4.4 INCREASING THE SPILL RESPONSE

In the event that the requirements are beyond the response capability of the local Spill Management Team:

- The Incident Commander (IC) will request additional assistance from members of the Facility Spill Management Team.
- The Incident Commander will notify appropriate internal and external parties.
- The Incident Commander will authorize and implement the activation of any response/clean-up contractor that may be required.

### 4.5 SPILL MANAGEMENT TEAM TRAINING

PRSI requires that all response personnel, including contractors and casual labor, have the appropriate training to serve in their capacity during a spill response. Team members will receive training in the following areas:

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

- All Team Members should review this 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 the Team Members.

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

- Some of the Team Members are required under federal and state regulations to have the proper up-to-date HAZWOPER training level to function in their position. PRSI employees at a minimum receive "8-Hour HAZWOPER" training. All "Non-PRSI" personnel responding to a PRSI spill will be required to satisfy the applicable HAZWOPER training requirements of 29 CFR 1910.120.

#### ***Spill Training***

- PRSI team members may also receive supplemental training in other general topics pertinent to their spill response role. This training may be accomplished by attendance to PRSI and third party training classes and seminars. Timing of training will vary based on the availability of classes. NIMS training will be required for team members to perform their job functions.

## 4.5 SPILL MANAGEMENT TEAM TRAINING (Cont'd)

### **Volunteers**

- Volunteers, that are not PRSI employees, will not be utilized by PRSI for responding to spills and no provisions are in place to accommodate for their training.

### **Training Records**

- Training records (sample logs are included in Appendix K) for all team members are maintained at the Facility by the Training Department for as long as the individuals are assigned duties under the response plan. PRSI also periodically checks the OSRO's training records to ensure that they are maintaining their records for a minimum period of five (5) years.

## 4.6 RESPONSE TEAM EXERCISES

Spill Response and Spill Management Team members, various agencies, contractors and other response resources will participate in emergency response exercises as required by federal, state, and local regulations and as detailed in the "National Preparedness for Response Exercise Program" (PREP). PRSI will utilize announced and unannounced notification exercises, equipment deployment exercises, tabletop exercises, and/or various combinations to ensure that each component of the Plan is exercised as required. The Manager of Environmental will ensure exercise planning and logistics in accordance with the following guidelines. The following table depicts the minimum triennial cycle for exercises at the Facility.

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	Spill Management Team Tabletop Exercise
3	Annual	Equipment Deployment Exercise ( <i>OSRO owned equipment</i> )
3	Annual	Unannounced Exercise ( <i>this Exercise may take the place of a required Tabletop or an Equipment Deployment Exercise</i> )
1 (maximum)	Once every 3 years	Government-initiated Unannounced Exercise ( <i>this Exercise may take the place of a required Tabletop and an Equipment Deployment Exercise</i> )
<p><b>Note:</b> Each component of the response plan must be exercised at least once in the Triennial Cycle. At least one (1) Spill Management Team Tabletop Exercise in a triennial cycle must involve simulation of the Worst Case Discharge Scenario.</p>		

## 4.6 RESPONSE TEAM EXERCISES (Cont'd)

### *Monthly QI Notification Exercise*

- **Scope:** Exercise communication between facility personnel and the Qualified Individual(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 Qualified Individual 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.

or the equipment necessary to respond to a Small/Average Most Probable Discharge at the Facility, whichever is less.
- **Objective:** Demonstrate the ability of the personnel 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 training sessions as long as the activities are properly documented.

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

- **Review:** The Facility should ensure that the OSRO(s) has completed the equipment deployment exercise requirements and has maintained the necessary documentation. The OSRO is not required to deploy equipment at the Facility. They may deploy equipment at any location so long as it occurs within a similar operating environment.
- **Scope:** OSRO shall deploy and operate response equipment (OSRO) identified in the response plan. The equipment to be deployed must include the following at a minimum:

## 4.6 RESPONSE TEAM EXERCISES (Cont'd)

- 1,000' of each representative type of boom (solid log flotation, air inflated, self inflated, fire boom, and special purpose boom)
  - One (1) of each type of skimming system.
- **Objective:** OSRO shall 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 is required to 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.
  - QI internal/external notification to regulatory agencies
- **General:** A minimum of one Response Team Tabletop Exercise in a triennial cycle will involve simulation of the 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.
- **Objective:** Conduct proper notifications to respond to unannounced scenario of a Small/Average Most Probable Discharge.
 

Demonstrate that the response is timely, conducted with an adequate amount of equipment for the scenario, and properly conducted.

## 4.6 RESPONSE TEAM EXERCISES (Cont'd)

- **General:** This exercise is only applicable to those facilities which are randomly chosen.

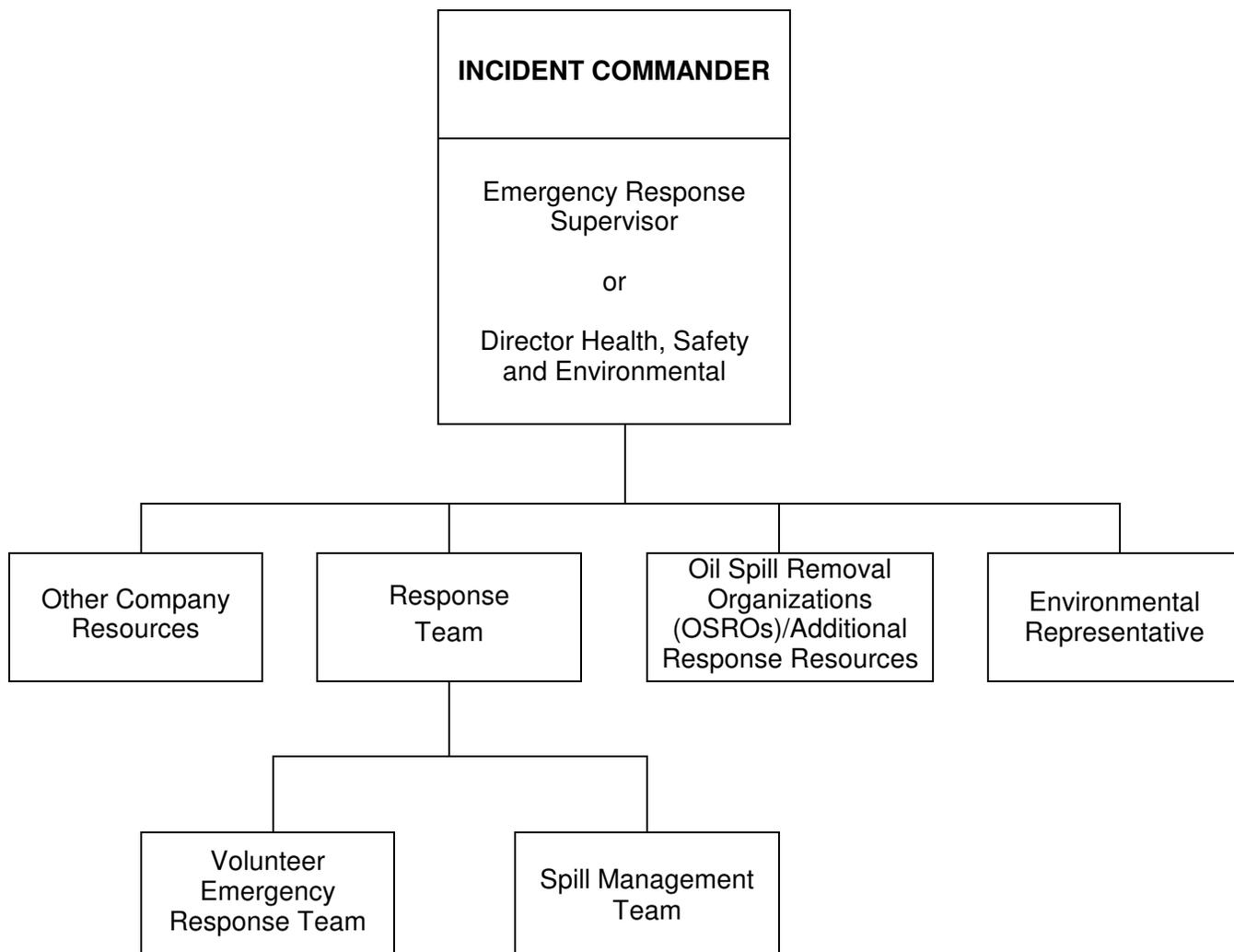
### ***Exercise Records***

- These exercises should be documented on a log form which contains the following information (sample log forms are included in Appendix K):
  - 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.
- Records of these exercises will be maintained on file at the Facility for a minimum period of five (5) years.

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

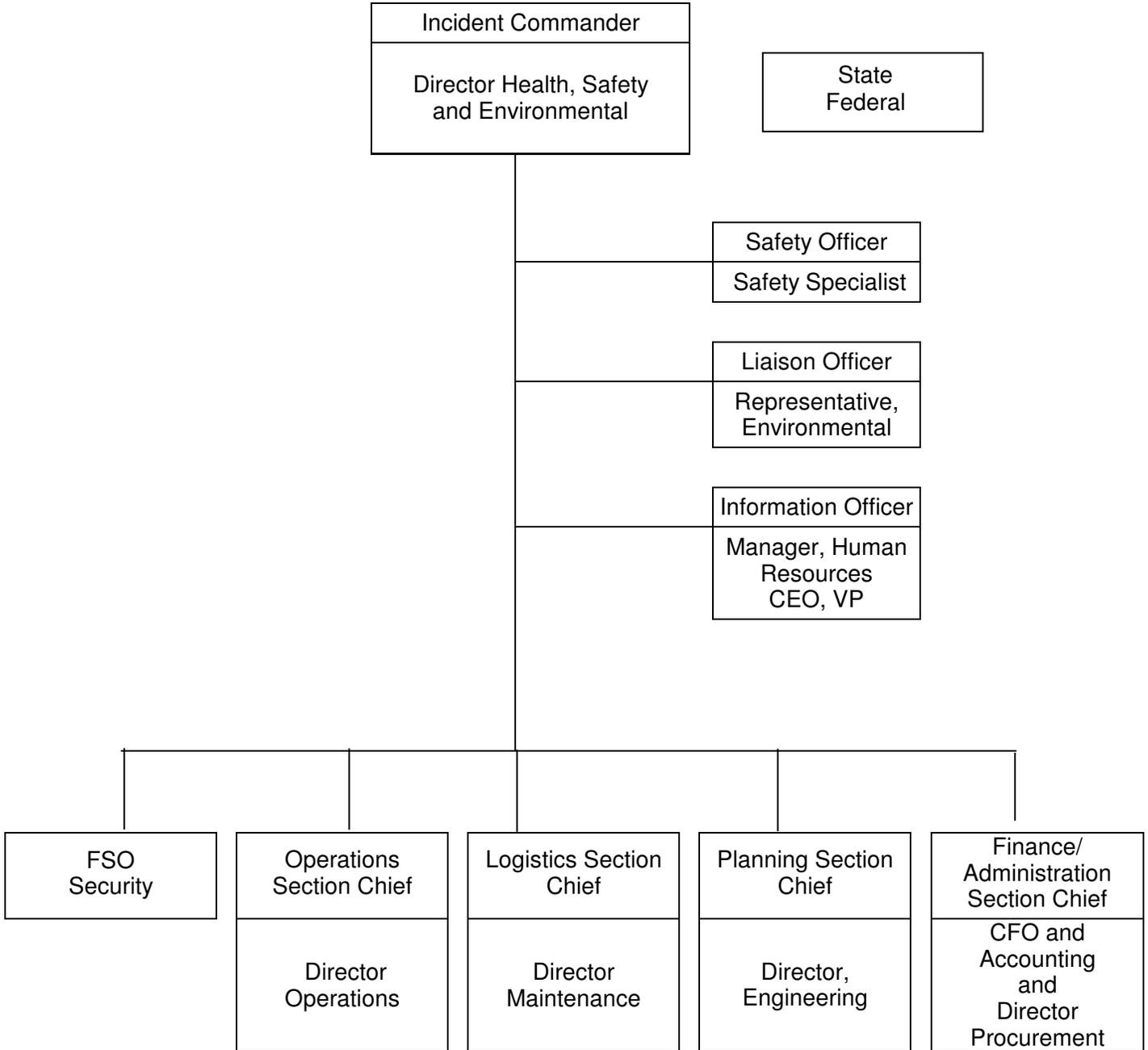
The Safety Officer will be responsible for preparing a Site Safety and Health Plan that will establish site specific policies, practices, and procedures to protect workers and the public from coming into contact with potential chemical and/or physical hazards. A Site Safety and Health Plan (format provided in Appendix K) 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 an acceptable level.
- 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.

**FIGURE 4.1****SPILL MANAGEMENT TEAM  
(Level 1 or Level 2 Incidents)**

**FIGURE 4.2**

**PASADENA REFINING SYSTEM, INC.  
 SPILL MANAGEMENT TEAM  
 (Level 2 or Level 3)**



**FIGURE 4.3**  
**QUALIFIED INDIVIDUAL AUTHORIZATIONS**



Pasadena Refining System, Inc. (PRSI) has recognized Alisa White as an emergency response Qualified Individual in the Integrated Contingency Plan (Facility Information section, Figure 1.3) as per regulation 33 CFR Part 154.1026

As an emergency response Qualified Individual this person has the authority to:

- Activate the PRSI contracted oil spill removal organization(s)
- Act as liaison with the pre-designated Federal On-Scene Coordinator (OSC)
- Obligate funds required to carry out response activities

The Qualified Individual is not responsible for contracting funds or obligating funds for response resources beyond the authority contained in their designation from the owner or operator of the facility.

A handwritten signature in black ink, appearing to read 'John Edmunds', is written over a horizontal line.

John Edmunds  
PRSI Chief Operating Officer

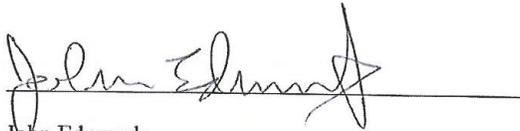


Pasadena Refining System, Inc. (PRSI) has recognized Don Davis as an emergency response Qualified Individual in the Integrated Contingency Plan (Facility Information section, Figure 1.3) as per regulation 33 CFR Part 154.1026

As an emergency response Qualified Individual this person has the authority to:

- Activate the PRSI contracted oil spill removal organization(s)
- Act as liaison with the pre-designated Federal On-Scene Coordinator (OSC)
- Obligate funds required to carry out response activities

The Qualified Individual is not responsible for contracting funds or obligating funds for response resources beyond the authority contained in their designation from the owner or operator of the facility.

  
John Edmunds  
PRSI Chief Operating Officer



Pasadena Refining System, Inc. (PRSI) has recognized Tobey Taylor as an emergency response Qualified Individual in the Integrated Contingency Plan (Facility Information section, Figure 1.3) as per regulation 33 CFR Part 154.1026

As an emergency response Qualified Individual this person has the authority to:

- Activate the PRSI contracted oil spill removal organization(s)
- Act as liaison with the pre-designated Federal On-Scene Coordinator (OSC)
- Obligate funds required to carry our response activities

The Qualified Individual is not responsible for contracting funds or obligating funds for response resources beyond the authority contained in their designation from the owner or operator of the facility.

A handwritten signature in black ink, appearing to read "John Edmunds", is written over a horizontal line.

John Edmunds  
PRSI Chief Operating Officer

## 5.0 RESPONSE EQUIPMENT/RESOURCES

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The following sections outline the various response equipment/resources available from the Facility, other PRSI facilities, Channel Industries Mutual Aid (CIMA), Oil Spill Removal Organizations, and other outside resources.

### 5.1 FACILITY RESPONSE EQUIPMENT

The Facility is equipped with spill response and fire extinguishing equipment, in addition to the required boom, which is utilized only during actual spill events. The Facility also stores a quantity of absorbents readily available if the need arises. Figure 5.1 lists the contracted OSROs for this Facility. Appendix C lists the Facility spill response and fire extinguishing equipment.

The Facility also has contracts and arrangements in place with Oil Spill Removal Organizations, other clean-up contractors and Mutual Aid Organizations for response to a discharge. The Qualified Individual has the authority to activate other PRSI resources or that of private contractors and other experts and consultants as the situation demands.

#### ***Refinery Fire Equipment***

The Facility is protected by a 70-75 psi fire water system with water supplied by Coastal Water Authority. The Facility has installed three (3) back-up fire pumps (2500 GPM at 150 psi), one (1) fire water pond (with three (3) fire truck connections) and a dockside connection available for a fireboat to pump into the fire main if the pressure should drop.

The Facility has strategically preinstalled foam chambers and fire department connections outside the dike areas for the majority of the tanks. For those tanks without foam chambers and installed fire department connections, the Facility has three portable foam/water pumper, portable foam tanks and monitors available for firefighting purposes. Facility firefighting equipment is maintained in ready status at the firehouse located next to the administration building and at pre-deployed strategic locations throughout the Facility.

#### ***Red Bluff Tank Farm***

The tank farm is protected by a 135-150 psi fire water system. Supply for the system is a 4 million gallon pond and 3-2500 gpm fire water pump. Two jockey pumps are used to keep the system at normal operating pressure. Hydrate manifolds with a minimum of 3-6" outlets are located throughout the tank farm for quick access.

In addition to the fire water system there are also two wheeled unit fire extinguishers located on either end of the main tank farm road. The pump stations are protected by foam monitors each with a 270 gallon foam tote. Most storage tanks in the tank farm have engineered foam chambers installed as well for quick application of foam should that be needed.

#### ***Dock Fire Equipment***

The dock area is outfitted with one (1) 8" water main, one (1) water monitor, two (2) foam monitors, one (1) hose reel, three (3) portable fire extinguishers, and one (1) 30-minute SCBA.

## 5.2 EQUIPMENT TESTING

PRSI conducts regular maintenance and testing of all equipment as part of its scheduled maintenance program. Refer to the equipment list, located in Appendix C, for specific information for each piece of equipment.

## 5.3 OTHER COMPANY RESOURCES

Additional PRSI spill response equipment and manpower resources may be available to supplement the response operation. These resources include:

- A general inventory of communications equipment, audio/video equipment and other support items.

## 5.4 CONTRACT RESOURCES

In the event of a discharge which is beyond the initial response capabilities of the Spill Management Team (Tier(s) I, II & III), contract manpower and equipment resources can be obtained through Oil Spill Removal Organization(s) (OSRO). These OSRO's can provide manpower and containment/clean-up equipment for the response operation on land, water, or adjacent shorelines. The resources will be secured from a PRSI approved contractor. Notification/implementation of these resources will typically be handled by Refinery Management (QI). 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 Manager of Environmental will insure that each OSRO has a comprehensive maintenance program and applicable training/drills programs in place. The Facility is provided updated documentation on an annual basis and records are maintained for a five (5) year period.)*

## 5.5 COOPERATIVE/MUTUAL AID RESOURCES

- The Clean Channel Association (CCA) is an industry supported oil spill response cooperative covering the Houston Ship Channel, Galveston Bay, and surrounding waters. The CCA is designed to supply oil spill containment and clean-up equipment to local members for use in responding to a spill. CCA is organized to provide maximum flexibility in responding to calls for assistance from members or non-members. Assistance may range from advice on prevention, containment, and clean-up procedures to providing equipment and direction for major spill clean-up operations. However, the company responsible for, or in charge of, the spill clean-up operation will direct and coordinate the clean-up effort.

A complete description of the spill response equipment available from CCA is provided in Appendix C.

- Channel Industries Mutual Aid (CIMA) is an organization of over 100 oil and chemical companies along the Houston Ship Channel who agree to assist each other in the event of an emergency incident. During an incident, companies can callout their participating CIMA neighbors to augment and assist with incident manning and equipment needs. This system allows participants to expeditiously pool local resources to deal with an incident until private and government resources can arrive to assist in operations.

## 5.6 MARINE SPILL RESPONSE CORPORATION (MSRC)

Marine Spill Response Corporation (MSRC) resources are not currently available to the Facility.

## 5.7 EXPERTS AND CONSULTANTS

PRSI 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. Implementation of these services should be coordinated through the Manager of Environmental.

## 5.8 VOLUNTEERS

Volunteers, that are not PRSI employees, will not be utilized by PRSI for responding to spills originating from the Facility. All volunteers will be referred to the State or Federal On-Scene Coordinator (EPA/USCG/GLO).

## 5.9 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, Spill Management Team (Tier(s) I, II & III) members, and Volunteer Emergency Response Team are demonstrated in the organization charts shown in Figures 4.1 through 4.6. 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.

### 5.9.1 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).

## 5.9 COMMUNICATIONS (Cont'd)

### 5.9.2 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 radios, telephones, FAX machines, and computers and will be maintained by Facility personnel. Refer to Appendix C for a listing of the Facility communications equipment. In the event of a Worst Case Discharge, field communications will be enhanced with other PRSI and contract resources as the situation demands.

### 5.9.3 Communication Types

**Radios** - Handheld and vehicle mounted radio's 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 radios with spare batteries and chargers 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.

Note: Cellular phones broadcast on open channels and are subject to monitoring by outside resources (scanner).

**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

USCG Classified Oil Spill Removal Organization (OSRO)								
OSRO Name	Contract Number	Actual Response Time	Environment Type	Facility Classification Level				High Volume Port
				MM	W <sup>1</sup>	W <sup>2</sup>	W <sup>3</sup>	
Garner Environmental Services, Inc.	B-92-13336	2 hours	River/Canal	X	X	X	X	Yes
			Inland	X	X	X	X	
Oil Mop, LLC	B-07-10062	2 hours	River/Canal	X	X	X	X	Yes
			Inland	X	X	X	X	
Anderson Pollution Control	LOI	2 hours	River/Canal	X	X	X	X	Yes
			Inland	X	X	X	X	
Clean Channel Association	Member	5 hours	River/Canal	X	X	X	X	Yes
			Inland	X	X	X	X	

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

**The AMPD coverage is provided by Facility owned spill response equipment.**

## 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 for non-coastal/inland environments. The Federal, State, and local authorities will further clarify these categories at the time of the response. The categories are defined as follows:

<b>HIGH SENSITIVITY</b>	
<ul style="list-style-type: none"> <li>● Areas which are high in productivity, abundant in many species, extremely sensitive, difficult to rehabilitate, or inhabited by threatened/endangered species.</li> <li>● Areas which consist of shallow seagrass flats, mangroves, tidally influenced marshes/wetlands, and sheltered tidal flats with vegetated margins.</li> </ul>	
<b>MODERATE SENSITIVITY</b>	
<ul style="list-style-type: none"> <li>● Areas of moderate productivity, somewhat resistant to the effects of oiling.</li> <li>● Areas which consist of the riparian zone along freshwater rivers with saltwedge, oyster reefs, exposed tidal flats, dredged spoil deposits, and partially exposed bay margins.</li> </ul>	
<b>LOW SENSITIVITY</b>	
<ul style="list-style-type: none"> <li>● Areas of low productivity, man-made structures, and/or high energy.</li> <li>● Areas which consist of gravel, sand – shell substrate, fine-grained sand, seawalls, jetties, bulkheads, revetments, and erosional scarps.</li> </ul>	

### 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:

### ***Environmental:***

- 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 and 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.

### ***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.

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

### *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 and many other types of wildlife.
- Protection booming and clean-up efforts are high priority in these areas.

## 6.3 WILDLIFE PROTECTION AND REHABILITATION

PRSI 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 PRSI's 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 worked with closely 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 Fig 6.5.

### 6.3.2 Wildlife Rescue

PRSI 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.

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

### 6.3.2 Wildlife Rescue (Cont'd)

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.
  - Use of herding with aircraft, boats, vehicles, or people (as appropriate).
  - Use of capture and relocation.

\*Note: All Facility response personnel have been instructed not to handle wildlife that have been affected by oil spills.

### 6.3.3 Search and Rescue - Points to Consider

- **PRSI's involvement 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 on their own. No one should handle wildlife without proper training, supervision and permits. 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 CONTAINMENT PRIORITIES, METHODS, AND PROCEDURES

It is important to recognize that each release will be unique due to differing circumstances. Factors encountered during the early stages of the response may change significantly over the course of the entire response. Therefore, it is impractical to provide specific procedures for all of the various circumstances that may be encountered responding to a release. However, it is practical to provide procedures for various containment methods that spill responders can use once the release has been discovered and analyzed.

Before the procedures are listed, it needs to be noted that safety remains the first priority during all response activities. Followed by containment and isolation from ignition sources.

### 6.4.1. CONTAINMENT PRIORITIES

Following is a list of containment priorities that may need consideration prior to actual containment activities.

- a. Prevent liquid or vapor from reaching ignition sources such as: vehicles, houses, farm buildings, machinery, electrical equipment, office buildings, or other types of installations that may have open flames, electric power or other types of ignition sources.
- b. Prevent liquid from reaching water sources such as: lakes, streams, rivers, ponds and wet land type areas whether they are presently wet or dry.
- c. Prevent liquid from entering any area that is suspected to contain endangered plants or wildlife.
- d. Prevent liquid from entering any area that contains livestock or prevent livestock from gaining access to any area impacted by the released liquid.
- e. Prevent liquid from entering storm drains or sewers by plugging or covering opening. Dirt dams or sand -bags may provide the most practical method to accomplish this.

### 6.4.2. CONTAINMENT METHODS

Successful containment methods will vary depending on the area impacted by the release. Following are methods that will provide for successful containment and protection of sensitive areas depending on the circumstances. It will be up to the discretion of the Operations Section Chief to determine the best method or methods for a release.

## 6.4 CONTAINMENT PRIORITIES, METHODS, AND PROCEDURES (Cont'd)

### 6.4.2 CONTAINMENT METHODS (Cont'd)

- a. Earthen dikes and dams are practical methods of containment in many release situations. Native materials at the site may be utilized for this purpose depending on their suitability. Equipment needs for constructing a dam may require only a hand shovel or it could require a backhoe or other type of earth moving equipment. The Operations Section Chief will determine what equipment is needed for earth moving. When a dam is used on an active stream, it will be necessary to install an underflow tube to relieve stream pressure. Otherwise the stream will eventually flow over the top of the dam.
- b. Diversion structures such as ditches or berms are often used in conjunction with dams to enhance their effectiveness. Typically, the same type of equipment is needed to construct either.
- c. Spill containment booms should be deployed if the release has reached or threatens to reach water. Depending on the velocity of the water it may be advisable to deploy additional booms downstream.
- d. Adsorbents are suitable for use when the liquid is not moving. However, they must be disposed of properly.

Collection pits or lagoons constructed at the end of a boom or diversion may prove useful for liquid removal.

## 6.5 CONFINEMENT METHODS FOR SPILLS ON LARGE STREAMS AND RIVERS

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 is 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 ½ knot (0.8 ft./sec.). However, if the current of the entire river is ½ 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.

## 6.5 CONFINEMENT METHODS FOR SPILLS ON LARGE STREAMS AND RIVERS (Cont'd)

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.

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.

## 6.6 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.

## 6.7 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 with the chart in Figure 6.3.

## 6.8 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.

## 6.9 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 Texas General Land Office and National Oceanic & Atmospheric Administration's Texas Oil Spill Planning and Response Atlas as the base. The maps include a key to the reference symbols located on each map.

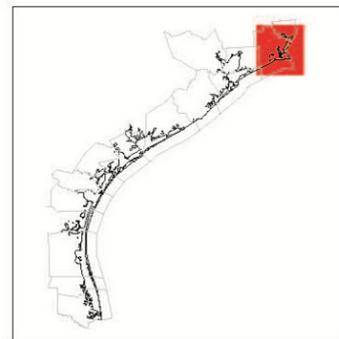
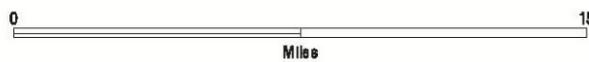
Remember these maps are to be utilized as guidelines only. During an actual response effort, Federal, State and Local agencies should be contacted to provide further assistance in the proper identification and protection of the various environmental and socio-economic sensitive areas.

# Sabine Lake Area Index Map

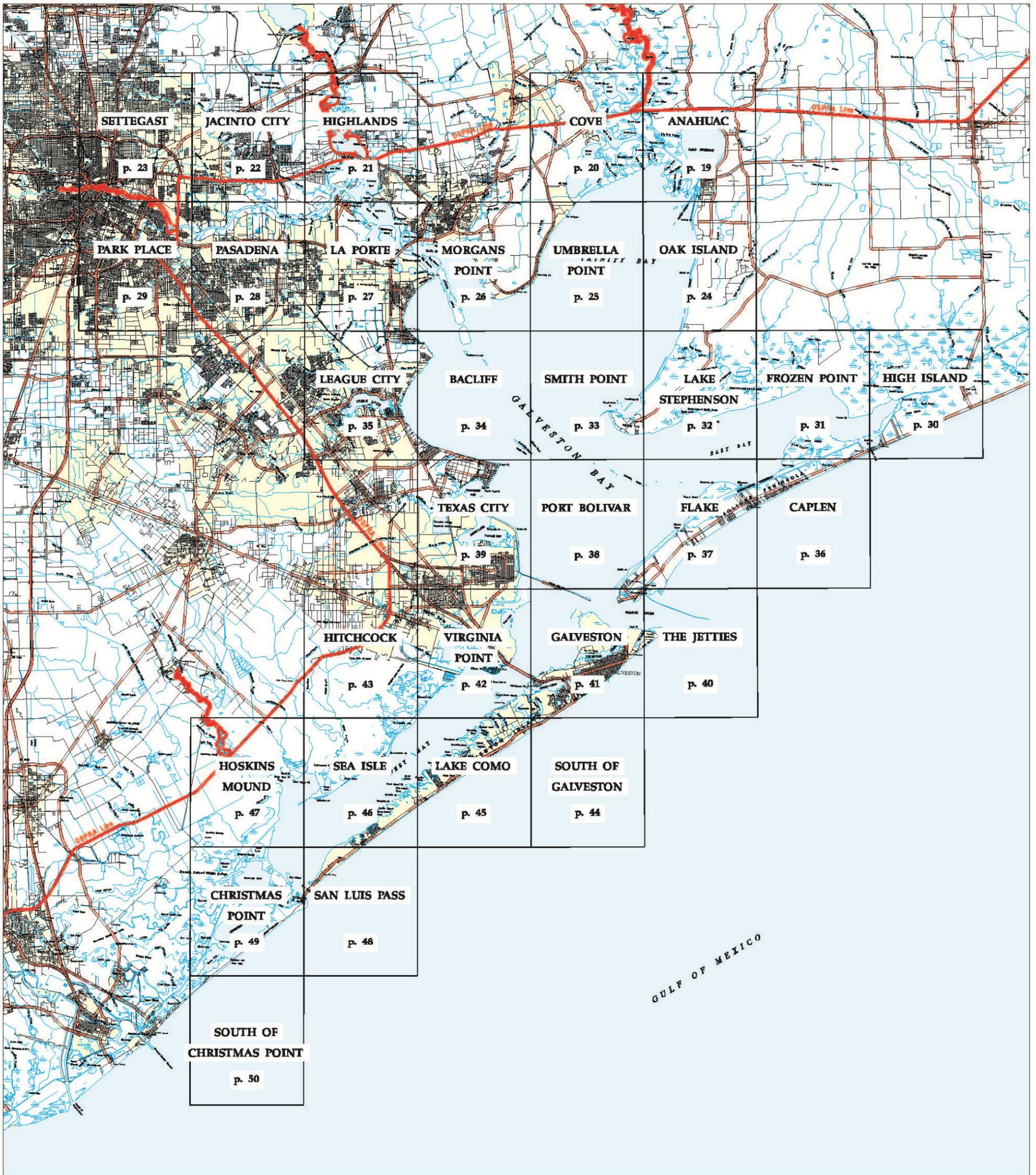


SCALE 1:310,083

One inch represents 4.89 miles

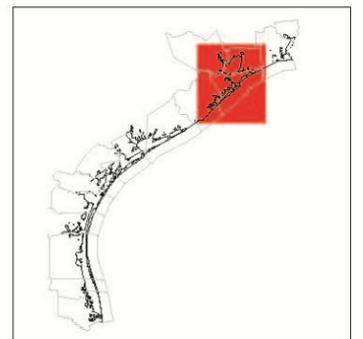
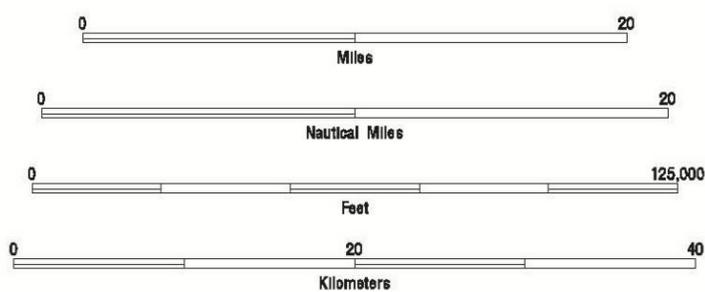


# Galveston Bay System Index Map

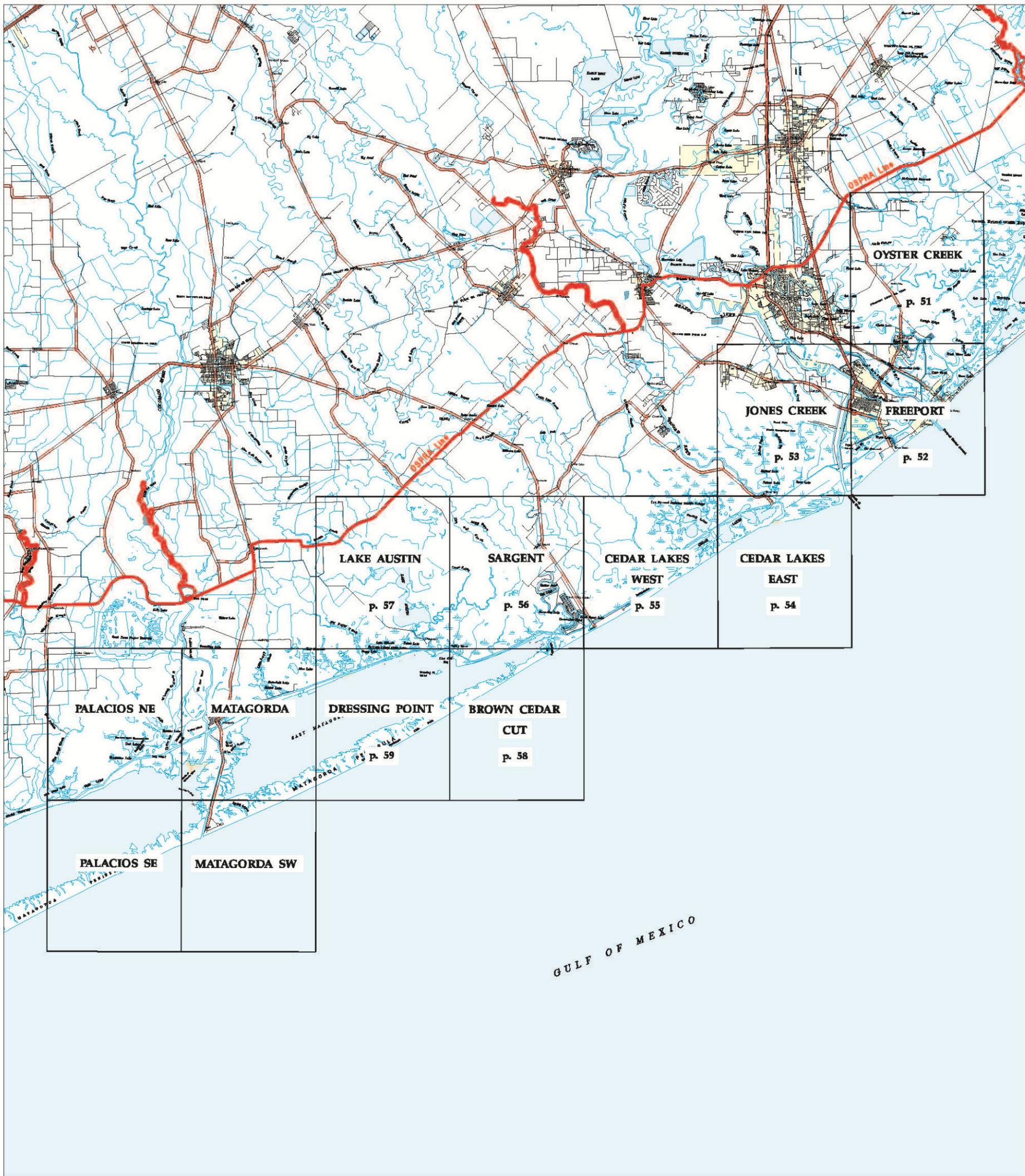


SCALE 1:436,444

One inch represents 6.89 miles

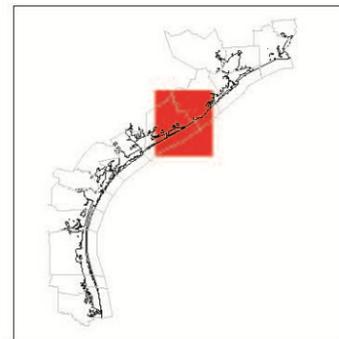
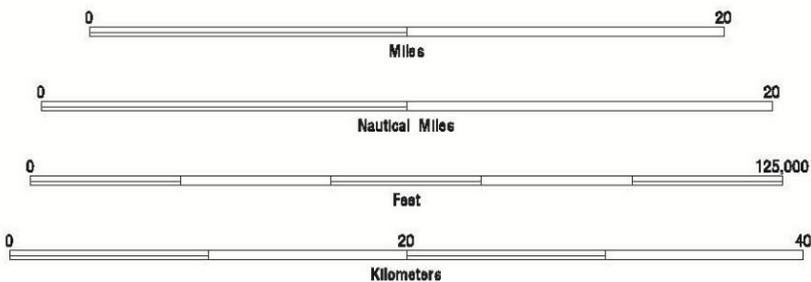


# Freeport - East Matagorda Bay Index Map



SCALE 1:370,320

One inch represents 5.84 miles











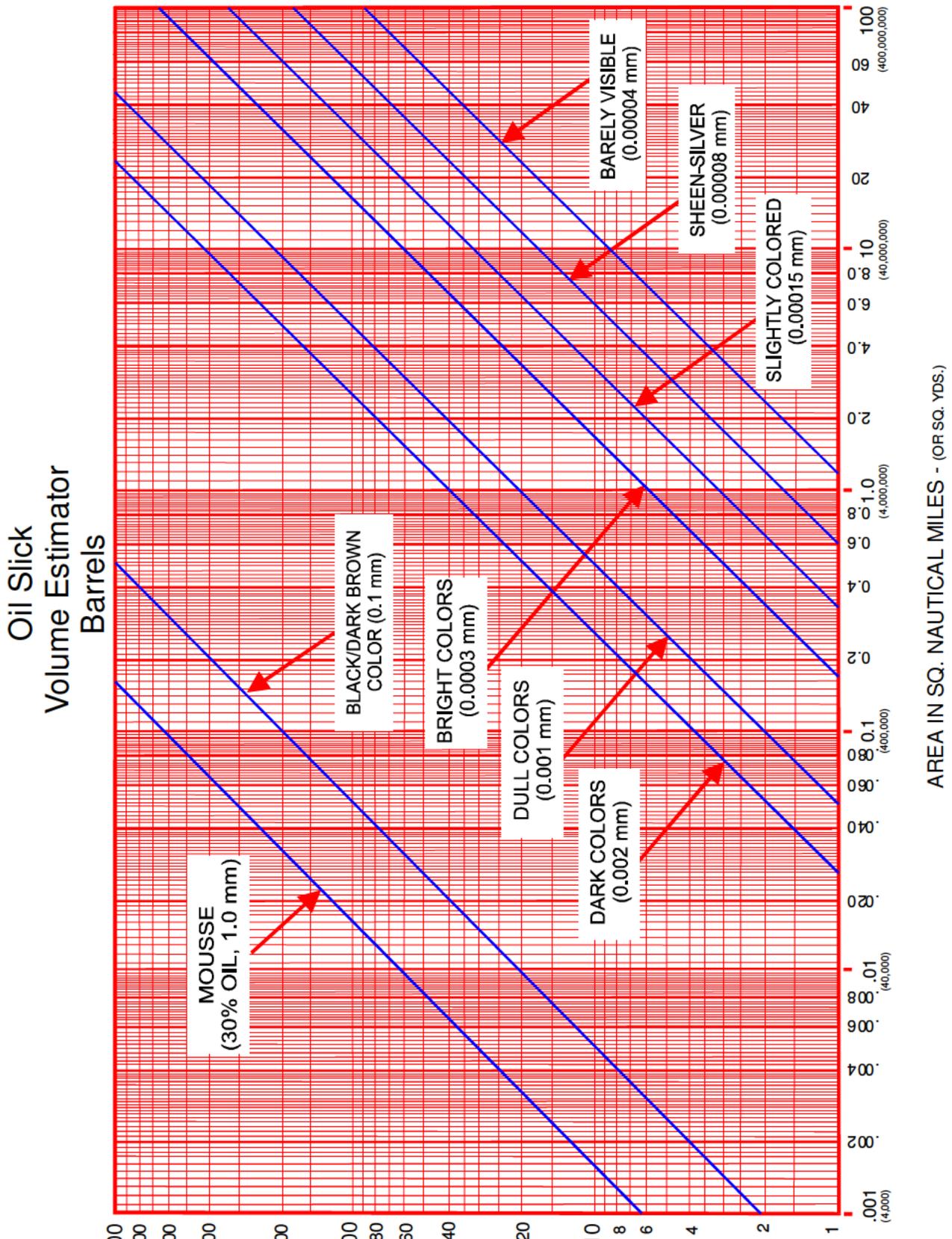




**FIGURE 6.2****ENVIRONMENTAL SENSITIVITY MAP DATA SHEETS**

The following Environmental Sensitivity Map Data Sheets contained on the enclosed CD have been made available by the Texas General Land Office and correspond to the maps in Figure 6.1. The Environmental sensitivity Map Data Sheets contain biological resource data to aid spill responders in making planning and response judgements.

FIGURE 6.3



**FIGURE 6.4****SPILL INFORMATION NEEDED FOR OIL SPILL TRAJECTORY**

Please provide all or part of the following information as it becomes available.

<b>INCIDENT INFORMATION</b>			
Date/Time of spill (to closest hour):			
Location of source (Latitude/Longitude):			
Last known location of spill (Latitude/Longitude):			
Type of oil (API, if known):		Estimated volume of initial release:	
If continuing release - How much:		For how long:	

<b>ON-SCENE WEATHER CONDITIONS</b>			
Present time:		Air temperature:	
Wind direction:		Wind speed:	
Wave height::		Water temperature	
Current direction:		Current speed:	
Forecast (if known):			
Additional information:			

## FIGURE 6.5

## ENDANGERED/THREATENED SPECIES LISTING

The following is list of endangered and threatened species with known or possible occurrence in the county of Harris.

<b>ANIMALS</b>	
Common Name	Scientific Name
Amphipod, Peck's cave	<i>Stygobromus (=Stygonectes) pecki</i>
Bat, Mexican long-nosed	<i>Leptonycteris nivalis</i>
Bear, Louisiana black	<i>Ursus americanus luteolus</i>
Beetle, American burying	<i>Nicrophorus americanus</i>
Beetle, Coffin Cave mold	<i>Batrisodes texanus</i>
Beetle, Comal Springs dryopid	<i>Stygoparnus comalensis</i>
Beetle, Comal Springs riffle	<i>Heterelmis comalensis</i>
Beetle, Helotes mold	<i>Batrisodes venyivi</i>
Beetle, Kretschmarr Cave mold	<i>Texamaurops reddelli</i>
Beetle, Tooth Cave ground	<i>Rhadine persephone</i>
Crane, whooping except where EXPN	<i>Grus americana</i>
Curlew, Eskimo	<i>Numenius borealis</i>
Darter, fountain	<i>Etheostoma fonticola)</i>
Falcon, northern aplomado	<i>Falco femoralis septentrionalis</i>
Flycatcher, southwestern willow	<i>Empidonax traillii extimus</i>
Gambusia, Big Bend	<i>Gambusia gaigei</i>
Gambusia, Clear Creek	<i>Gambusia heterochir</i>
Gambusia, Pecos	<i>Gambusia nobilis</i>
Gambusia, San Marcos	<i>Gambusia georgei</i>
Ground beetle, [unnamed]	<i>Rhadine exilis</i>
Ground beetle, [unnamed]	<i>Rhadine infernalis</i>
Harvestman, Bee Creek Cave	<i>Texella reddelli</i>
Harvestman, Bone Cave	<i>Texella reyesi</i>
Harvestman, Cokendolpher Cave	<i>Texella cokendolpheri</i>
Manatee, West Indian	<i>Trichechus manatus</i>
Margay Mexico southward	<i>Leopardus (=Felis) wiedii</i>
Meshweaver, Braken Bat Cave	<i>Cicurina venii</i>
Meshweaver, Government Canyon Bat Cave	<i>Cicurina vespera</i>
Meshweaver, Madla's Cave	<i>Cicurina madla</i>
Meshweaver, Robber Baron Cave	<i>Cicurina baronia</i>
Minnow, Devils River	<i>Dionda diaboli</i>
Minnow, Rio Grande silvery	<i>Hybognathus amarus</i>
Ocelot	<i>Leopardus (=Felis) pardalis</i>
Owl, Mexican spotted	<i>Strix occidentalis lucida</i>
Plover, piping except Great Lakes watershed	<i>Charadrius melodus</i>
Prairie-chicken, Attwater's greater	<i>Tympanuchus cupido attwateri</i>
Pseudoscorpion, Tooth Cave	<i>Tartarocreagris texana</i>
Pupfish, Comanche Springs	<i>Cyprinodon elegans</i>
Pupfish, Leon Springs	<i>Cyprinodon bovinus</i>

## FIGURE 6.5 (Cont'd)

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

<b>ANIMALS (Cont'd)</b>	
Common Name	Scientific Name
Salamander, Barton Springs	<i>Eurycea sosorum</i>
Salamander, San Marcos	<i>Eurycea nana</i>
Salamander, Texas blind	<i>Typhlomolge rathbuni</i>
Sawfish, smalltooth	<i>Pristis pectinata</i>
Sea turtle, green except where endangered	<i>Chelonia mydas</i>
Sea turtle, hawksbill	<i>Eretmochelys imbricate</i>
Sea turtle, Kemp's ridley	<i>Lepidochelys kempii</i>
Sea turtle, leatherback	<i>Dermochelys coriacea</i>
Sea turtle, loggerhead	<i>Caretta caretta</i>
Shiner, Arkansas River Arkansas R. Basin	<i>Notropis girardi</i>
Snail, Pecos assiminea	<i>Assiminea pecos</i>
Snake, Concho water	<i>Nerodia paucimaculata</i>
Spider, Government Canyon Bat Cave	<i>Neoleptoneta microps</i>
Spider, Tooth Cave	<i>Leptoneta myopica</i>
Tern, least interior pop.	<i>Sterna antillarum</i>
Toad, Houston	<i>Bufo houstonensis</i>
Vireo, black-capped	<i>Vireo atricapilla</i>
Warbler (=wood), golden-cheeked	<i>Dendroica chrysoparia</i>
Whale, finback	<i>Balaenoptera physalus</i>
Whale, humpback	<i>Megaptera novaeangliae</i>
Wolf, gray Lower 48 States, except where delisted and where EXPN. Mexico.	<i>Canis lupus</i>
Wolf, red except where EXPN	<i>Canis rufus</i>
Woodpecker, ivory-billed entire	<i>Campephilus principalis</i>
Woodpecker, red-cockaded	<i>Picoides borealis</i>
Tern, least interior pop.	<i>Sterna antillarum</i>
Toad, Houston	<i>Bufo houstonensis</i>
Vireo, black-capped	<i>Vireo atricapilla</i>

FIGURE 6.5 (Cont'd)

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

<b>PLANTS</b>	
Common Name	Scientific Name
Ambrosia, South Texas	<i>Ambrosia cheiranthifolia</i>
Ayenia, Texas	<i>Ayenia limitaris</i>
Bladderpod, white	<i>Lesquerella pallida</i>
Bladderpod, Zapata	<i>Lesquerella thamnophila</i>
Cactus, black lace	<i>Echinocereus reichenbachii</i> var. <i>albertii</i>
Cactus, Chisos Mountain hedgehog	<i>Echinocereus chisoensis</i> var. <i>chisoensis</i>
Cactus, Lloyd's Mariposa	<i>Echinomastus mariposensis</i>
Cactus, Nellie cory	<i>Coryphantha minima</i>
Cactus, Sneed pincushion	<i>Coryphantha sneedii</i> var. <i>sneedii</i>
Cactus, star	<i>Astrophytum asterias</i>
Cactus, Tobusch fishhook	<i>Ancistrocactus tobuschii</i>
Cat's-eye, Terlingua Creek	<i>Cryptantha crassipes</i>
Cory cactus, bunched	<i>Coryphantha ramillosa</i>
Dawn-flower, Texas prairie	<i>Hymenoxys texana</i>
Dogweed, ashy	<i>Thymophylla tephroleuca</i>
Frankenia, Johnston's	<i>Frankenia johnstonii</i>
Ladies'-tresses, Navasota	<i>Spiranthes parksii</i>
Manioc, Walker's	<i>Manihot walkerae</i>
Oak, Hinckley	<i>Quercus hinckleyi</i>
Phlox, Texas trailing	<i>Phlox nivalis</i> ssp. <i>Texensis</i>
Pitaya, Davis' green	<i>Echinocereus viridiflorus</i> var. <i>davisii</i>
Pondweed, Little Aguja (=Creek)	<i>Potamogeton clystocarpus</i>
Poppy-mallow, Texas	<i>Callirhoe scabriuscula</i>
Rush-pea, slender	<i>Hoffmannseggia tenella</i>
Sand-verbena, large-fruited	<i>Abronia macrocarpa</i>
Snowbells, Texas	<i>Styrax texanus</i>
Sunflower, Pecos	(=puzzle, =paradox) ( <i>Helianthus paradoxus</i> )
Wild-rice, Texas	<i>Zizania texana</i>

# **SPILL PREVENTION, CONTROL AND COUNTERMEASURE (SPCC) PLAN**

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# **SPILL PREVENTION, CONTROL AND COUNTERMEASURE (SPCC) PLAN**

## **PASADENA REFINING SYSTEM, INC.**

### **PASADENA REFINERY AND RED BLUFF TANK FARM**

**MARCH 2010**

**PASADENA REFINING SYSTEM, INC.  
Pasadena Refinery  
111 Red Bluff Road  
Pasadena, TX 77506**

*Prepared by:*

**Witt O'Brien's  
818 Town & Country Blvd., Suite 200  
Houston, TX 77024  
(281) 320-9796 Phone • (281) 320-9700 FAX**

## PROFESSIONAL ENGINEER CERTIFICATION

By means of this Professional Engineer Certification, I hereby attest, to the best of my knowledge and belief, to the following:

- I am familiar with the requirements of 40 CFR Part 112 and have verified that this Plan has been prepared in accordance with the requirements of this Part.
- I or my agent have visited and examined the Facility(s).
- I have verified that this Plan has been prepared in accordance with good engineering practice, including consideration of applicable industry standards.
- I have verified that the required inspection and testing procedures have been established as described in this Plan.
- I have verified that the Plan is adequate for the Facility.
- My certification of this Plan in no way relieves the owner/operator of the Facility(s) of their duty to prepare and fully implement the Plan in accordance with the requirements of 40 CFR Part 112. I in no way assume any liability of whatsoever kind or nature by my certification.
- The owner/operator, by "Management Approval" located on the following page, acknowledges this certification and the compliance measures described herein.



Engineer  
(Seal)

Signature of Registered Professional Engineer

Eric G. Politte, P.E.

Printed Name of Registered Professional

Date 1-15-03

Registration No. 77962

State Texas

## PROFESSIONAL ENGINEER CERTIFICATION FOR SPECIFIC FACILITY MODIFICATION

### *Facility Modification*

- Date of Review: February, 2005
- Description of Change: 1. Change of ownership.
- Impact of Change: 1. Administrative changes to Company name, personnel, and contact information.

### *Professional Engineer Certificate*

- I have evaluated the change in Facility design and have determined that it does not materially affect the Facility's potential for a discharge of oil into or upon the navigable waters of the United States or adjoining shorelines.
- The Plan, as it currently stands, and the original certification therein remains effective as provided with the exception noted above which is further certified below.



Registered Professional Engineer

Eric G. Politte, P.E.  
Response Management Associates, Inc.  
State of Texas Registration No: 77962

Date: 2-18-05

## PROFESSIONAL ENGINEER CERTIFICATION FOR SPECIFIC FACILITY MODIFICATION

### *Facility Modification*

- Date of Review: March 27, 2007
- Description of Change:
  1. Demolition of tanks 51, 206, 320, 319, and 345 at the refinery.
  2. Rebuild of tank 51 in accordance with API 650. The new tank is in the same location and is the same size as the demolished tank 51.
  3. Construction of tank 827 (b) (3), (b) (7)(F) in accordance with API 650, at the refinery.
  4. Demolition of tanks 103, 109, and 111 at the Red Bluff Tank Farm.
- Impact of Change:
  1. The secondary containment walls for the demolished tanks were unaffected, except for tank 51.
  2. The east wall of the tank 51 secondary containment area was modified to allow the movement of heavy equipment. The wall was repaired and provides adequate secondary containment.

### *Professional Engineer Certificate*

- I have evaluated the change in Facility design and have determined that it does not materially affect the Facility's potential for a discharge of oil into or upon the navigable waters of the United States or adjoining shorelines.
- The Plan, as it currently stands, and the original certification therein remains effective as provided with the exception noted above which is further certified below.

(506)



Registered Professional Engineer

A handwritten signature in black ink, appearing to read "Eric G. Politte", written over a horizontal line.

Eric G. Politte, P.E.  
Response Management Associates, Inc.  
State of Texas Registration No: 77962

Date: 3/27/07

## PROFESSIONAL ENGINEER CERTIFICATION FOR SPECIFIC FACILITY MODIFICATION

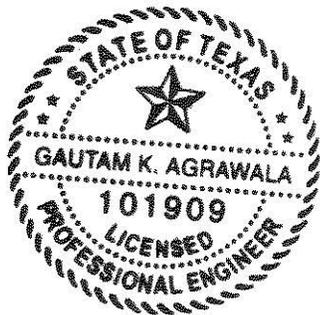
### *Facility Modification*

- Date of Review: April 14, 2009
- Description of Change: 1. Installation of Tank 205
- Impact of Change:
  1. Attestation on secondary containment's ability to retain spilled product until cleanup occurs remains unchanged.
  2. Secondary containment volume for the tank is adequately sized.

### *Professional Engineer Certificate*

- I have evaluated the change in Facility design and have determined that it does not materially affect the Facility's potential for a discharge of oil into or upon the navigable waters of the United States or adjoining shorelines.
- This technical amendment is only valid for the certification for the item(s) listed above and further certified below.

(Seal)



Registered Professional Engineer

A handwritten signature in black ink, appearing to read "Gautam K. Agrawala".

Gautam K. Agrawala, Ph.D., P.E.  
 Compliance Consultant  
 O'Brien's Response Management Inc.  
 State of Texas Registration No: 101909  
 State of Texas Firm Registration No: F-2180

Date of Seal/Signature: 05/06/09

# PROFESSIONAL ENGINEER CERTIFICATION FOR SPECIFIC FACILITY MODIFICATION

## *Facility Modification*

- Date of Review: May 09, 2011
- Description of Change
  1. Installation of Tank 210, and demolition of Tank 66, 101, and 112.
- Impact of Change:
  1. Attestation on secondary containment's ability to retain spilled product until cleanup occurs remains unchanged.
  2. Secondary containment volume for the Tank 210 is adequately sized.

## *Professional Engineer Certificate*

- I have evaluated the change in Facility design and have determined that it does not materially affect the Facility's potential for a discharge of oil into or upon the navigable waters of the United States or adjoining shorelines.
- This technical amendment is only valid for the certification for the certification for the item(s) listed above and further certified below.

(Seal)



Registered Professional Engineer

A handwritten signature in blue ink that reads "Gautam K. Agrawala".

Gautam K. Agrawala, Ph.D., P.E.  
Compliance Consultant  
O'Brien's Response Management Inc.  
State of Texas Registration No: 101909  
State of Texas Firm Registration No.: F-2180

Date of Seal/Signature: 05/23/2011

## MANAGEMENT ACKNOWLEDGEMENT OF FIVE (5) YEAR REVIEW

- Terminal Management will document management review of the SPCC Plan and/or changes in Facility design.
- **Non-technical amendments** (i.e. phone numbers, name changes, non-technical text changes, etc.) are not certified by a Professional Engineer and are documented in the Revision Record of the ICP Foreword, dated below, signed, and checked as "Non-Technical".
- **Technical amendments** (i.e. commissioning or decommissioning containers; replacement, reconstruction, or movement of containers; etc.) are certified by a Professional Engineer and documented in the Revision Record of the ICP Foreword, dated below, signed, and checked as "Technical". Amendments will be detailed with a stand alone certified technical PE certification page behind the initial Professional Engineer Certification.
- An amendment made under this section will be prepared within six (6) months of the change and implemented as soon as possible but not later than six (6) months following preparation of the amendment.

### **Acknowledgement of Five (5) Year SPCC Plan Review Completion**

- As required by 40 CFR, Part 112.5(b), Management will review this SPCC Plan at least each five (5) years and document the review on the form below. If no amendment is required, date, sign, and check as "None".
- This review included an evaluation of more effective prevention and control technology that would significantly reduce the likelihood of a spill event from the facility.
- As a result of this review and evaluation, technical changes in facility design, construction, operation or maintenance that would materially affect the facility's potential for discharge into navigable waters of the United States or adjoining shorelines will be recertified by a registered Professional Engineer.

Date	Signature	Title	Plan Amendments			PE Certified	
			None	Technical	Non-Technical	Y	N
2/17/05		VP			✓		✓
3/19/2010							

## MANAGEMENT APPROVAL

Owner/Operator responsible for Facility: Pasadena Refining System, Inc.

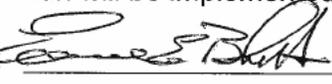
Facility Name and (Physical) Location: Pasadena Refinery and Red Bluff Tank Farm

111 Red Bluff Road

Pasadena, TX 77506

- By signature below, the Manager approves this Plan and acknowledges the P.E. Certification and that the elements identified within this Plan have been implemented and will be maintained.
- This page may be used for the initial Management Approval or for subsequent change of management and/or change of designated person accountable.

- This SPCC Plan will be implemented as herein described.

Signature: 

Designated person accountable for oil spill prevention at the Facility:

- This SPCC Plan will be implemented as herein described.

Name: Eric Bluth

Name: \_\_\_\_\_

Date: Vice President

Title: \_\_\_\_\_

Title: \_\_\_\_\_

- This SPCC Plan will be implemented as herein described.

Signature: \_\_\_\_\_

Designated person accountable for oil spill prevention at the Facility:

Name: \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

- This SPCC Plan will be implemented as herein described.

Signature: \_\_\_\_\_

Designated person accountable for oil spill prevention at the Facility:

Name: \_\_\_\_\_

Name: \_\_\_\_\_

Date: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

# **SPILL PREVENTION, CONTROL AND COUNTERMEASURE PLAN**

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# **SPILL PREVENTION, CONTROL AND COUNTERMEASURE PLAN**

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## 1.0 INTRODUCTION AND PLAN CONTENT

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### 1.1 INTRODUCTION

Throughout this Spill Prevention, Control and Countermeasure (SPCC) Plan the Pasadena Refinery and Red Bluff Tank Farm are referred to as the Facility. In some areas of this Plan it will be explicitly stated that the data is for one specific area of the Facility.

The Facility has the following general operating and design characteristics:

- Unrefined petroleum is received via pipeline and marine vessel.
- Refined products are stored and then distributed via marine vessel, tank truck and pipeline.
- Total aboveground fixed bulk storage capacity of approximately (b) (3), (b) (7)(F) gallons.
- Nearest potential receiving water is the Houston Ship Channel.
- The Facility's daily maximum throughput is 102,598.05 Bbls a day.
- Facility operates under NAICS 32411 classification.
- Facility is not located on any Indian Lands.
- Facility began operation in approximately 1920.

The focus of the SPCC Plan is on spill prevention, control, and countermeasures. In the event of an actual spill event, the Facility will implement the "Integrated Contingency Plan" (ICP) which was prepared in accordance with the Oil Pollution Act of 1990. The ICP is a separately maintained document which provides details on notification procedures, response actions, resource documentation, identification of environmental sensitivities, and other pertinent spill response issues.

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

This SPCC Plan is integrated into the Facility's Integrated Contingency Plan (ICP) as a stand-alone section tabbed "SPCC Plan". The integrated documents have been streamlined to maximize their usefulness in the event of an emergency response, as well as for training and regulatory compliance. Specific references are made in this SPCC Plan to certain sections, figures, and appendices of the ICP for data that provides a primarily response oriented function (Facility diagrams, summary Facility information, notification data, etc.) or to consolidate certain supporting appendices (regulatory cross-references, documentation forms, glossary/acronyms, etc.). Specific references are made out of the ICP into certain sections and figures of this SPCC Plan for data that provides primarily spill prevention, control and countermeasures information (discharge detection methods, containment and drainage detail, hazard identification tank tables, security, etc.).

## 1.2 PLAN PURPOSE/OBJECTIVES

This SPCC is intended to provide a ready reference and guide to assist Facility personnel in establishing and maintaining an efficient and effective prevention, control, and countermeasures program for potential discharge incidents from the Facility.

The specific objectives of the Plan are to define the typical Pasadena Refining System, Inc. and specific Facility spill prevention, control, and countermeasures practices and procedures including:

- Designated person accountable for oil spill prevention.
- Training and Inspection Programs.
- Facility Drainage.
- Bulk Storage Containers.
- Transfer Operations, Pumping, and In-Plant Processes.
- Tank Truck Loading/Unloading Rack.
- Security.

## 1.3 PLAN DISTRIBUTION PROCEDURES

The Manager of Environmental will coordinate the distribution of this SPCC plan with the ICP in which this plan has been incorporated. Distribution will be handled in the following manner:

- Distribution of the Plan is controlled by the number on the cover page of the ICP. A distribution list is included in the Foreword of the ICP to facilitate control and to identify the current holders of the Plan.
- The Facility shall maintain a complete copy of the Plan at the Facility if it is normally attended at least four (4) hours per day or at the nearest field office if the Facility is not so attended. The Plan will be available to the EPA Regional Administrator and agency representatives for on-site review during normal working hours.

## 1.4 PLAN REVIEW AND UPDATE PROCEDURES

The "Designated Person Accountable for Oil Spill Prevention" (identified on the Certification Page in the Foreword) with support from Regulatory Compliance will coordinate the following plan review and update procedures.

### ***Facility Changes requiring Plan Revision***

- This Plan will be revised when there are changes in the Facility's design, construction, operation, or maintenance that materially affects the Facility's potential for the discharge of oil into or upon the navigable waters of the United States or adjoining shorelines. Such amendments shall be written within six (6) months or sooner and fully implemented as soon as possible, but not later than six (6) months after the preparation of the amendment(s).

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

### *Facility Changes requiring Plan Revision (Cont'd)*

Changes requiring revision may include, but are not limited to:

- Commission or decommission of containers.
- Replacement, reconstruction, or movement of containers.
- Reconstruction, replacement, or installation of piping systems.
- Construction or demolition that might alter secondary containment structures and/or drainage systems.
- Revision of standard operating or maintenance procedures at the Facility.

### *Five-Year Review*

- At least once each five (5) years the Facility will complete a review and evaluation of this SPCC Plan and record the date of the review on the log located in the Foreword Section of this Plan. This review will include the following at a minimum:
  - Applicability of new prevention and control technology which may significantly reduce the likelihood of a spill event from the Facility if such technology has been field-proven at the time of the review.
  - Accuracy of the SPCC Plan as compared to the current Facility operation and SPCC Regulation.
  - Capacity and structural integrity of secondary containment structures.
  - SPCC inspections and records retention to ensure continuity for a minimum period of three (3) years.

### *Certification of Revisions*

- All amendments which could materially affect the facility's potential for discharge into navigable waters of the United States or adjoining shorelines, except for changes to personal and telephone references, must be certified by a Registered Professional Engineer to satisfy the requirements of 40 CFR Part 112 (see the Certification Page).

### *Inclusion of Amendments into the Plan*

- Regulatory Compliance will coordinate the word processing, publication, and distribution efforts of completing the revisions and maintaining the Plan.
- The plan holder, immediately upon receipt of any revisions, shall review and insert the revised pages into the Plan and discard the obsolete pages. This action should then be recorded on the "Revision Record" page in the Foreword.

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

### *Inclusion of Amendments into the Plan (Cont'd)*

- Plan review opportunities may occur during:
  - Spill Management Team Tabletop Exercises
  - Actual emergency responses

## 1.5 REGULATORY COMPLIANCE

This Plan addresses the following regulatory requirements:

- Federal Spill Prevention, Control, and Countermeasures Regulations: U.S. EPA Final Rule for Oil Pollution Prevention; Non-Transportation Related On-shore and Offshore Facilities (40 CFR Part 112) as amended November 13, 2009.

### ***SPCC requirements cited in the Facility's Integrated Contingency Plan (ICP) include:***

- Countermeasures for discharge discovery, response, and cleanup are described in ICP Sec. 3.
- Methods of disposal are described in ICP App. F.
- Spill Notification and a Notification Data Sheet are provided in ICP Sec. 2.

A detailed cross reference between the format of this Plan and that of the applicable regulations is provided in Appendix A of the ICP.

- This Plan complies with more stringent state rules that are promulgated under the Texas Oil Spill Prevention and Response Act of 1991 (31 TAC 19.13) as published in October 30, 2002.

### ***General Applicability***

This requirement applies to owners or operators of non-transportation-related onshore and offshore facilities engaged in drilling, producing, gathering, storing, processing, refining, transferring, distributing or consuming oil and oil products, and that meet each of the following criteria:

- Due to their location, could reasonably be expected to discharge oil in harmful quantities into or upon the navigable waters of the United States or adjoining shorelines **and**;
- An aggregate aboveground excluding containers less than 55 gallons **or**;

## 1.5 REGULATORY COMPLIANCE (Cont'd)

### *General Applicability (Cont'd)*

- Has an underground storage capacity in excess of 42,000 gallons and not subject to the technical requirements of 40 CFR Part 280 or Part 281 (Underground Storage Tank (UST) regulations).

### *Submission of Spill Documentation*

The Facility shall submit the documentation required by 40 CFR Part 112.4 to the EPA Regional Administrator within sixty (60) days whenever the Facility has a discharge event(s) which meets one of the following conditions:

- Discharge more than 1,000 gallons of oil (or oil products) into or upon the navigable waters of the United States or adjoining shorelines in a single spill event **or**,
- Discharges of more than 42 gallons of oil (or oil products) into the navigable waters of the United States in two (2) spill events within any 12 month period.

Documentation to be included with this Plan submission includes the following:

- Name of the facility;
- Name(s) of the owner or operator of the facility;
- Location of the facility;
- Maximum storage or handling capacity of the facility and normal daily throughput;
- The corrective actions and/or countermeasures taken, including an adequate description of equipment repairs and/or replacements;
- Description of the facility, including maps, flow diagrams, and topographical maps;
- The cause(s) of such spill, including a failure analysis of system or sub-system in which the failure occurred;
- Additional preventive measures taken or contemplated to minimize the possibility of recurrence;
- Such other information as the Regional Administrator may reasonably require pertinent to the Plan or spill event.

## 1.6 IMPRACTICABILITY

The containment and/or diversionary structures or equipment to prevent a discharge are not practicable for the following Facility:

- One 10-inch pipeline is located in an undiked area. Reasons for its impracticability and safeguards to minimize damage to the environment are discussed in Section 3.2 of this Plan.
- Due to the impracticability of the Facility listed above, an oil spill contingency plan is addressed by the ICP.
- A written commitment of manpower, equipment and materials required to expeditiously control and remove any quantity of oil discharged is provided in the ICP.

## 2.0 TRAINING AND INSPECTIONS

---

### 2.1 PERSONNEL TRAINING AND DISCHARGE PREVENTION PROCEDURES

#### *Training (Initial)*

- The Facility provides the following minimum initial training to oil-handling personnel:
  - Operation and maintenance of equipment to prevent oil discharges;
  - Oil discharge procedure protocols;
  - Applicable oil spill prevention (State & Federal) laws, rules, and regulations;
  - General facility operations; and,
  - The contents of the facility SPCC Plan and applicable pollution control laws, rules, and regulations.
- Operation and maintenance manuals for major equipment are maintained in the operations building, operations control, and satellite work sites.
- All truck drivers that perform loading and unloading activities at the Facility are the interface between the Facility's "oil-handling" personnel and DOT-related activities. All truck drivers using PRSI Facilities are appropriately trained to carry out their activities in a safe and environmentally sound manner.
- Training for all oil-handling personnel is conducted by:
  - Computer-based
  - On-the-Job Training (Operation & Maintenance)
- The Facility has an Integrated Contingency Plan (ICP), which was prepared in compliance with the Oil Pollution Act of 1990, and is available to all personnel. The ICP is also a tool for applicable training and drills.
- Training records are maintained at the Facility for a minimum period of three (3) years.
- Training records are available through PRSI training department.

#### *Briefings (Annual)*

- Examples of training and inspection forms are provided in Appendix K.
- The Facility conducts prevention briefings for oil-handling personnel at least once a year to assure adequate understanding of the SPCC Plan for the Facility.
- The program is conducted through computer-based training. The computer based training consists of various courses, including SPCC Plan that can be accessed by computer. At a minimum, oil-handling personnel are trained in the operation and maintenance of equipment to prevent discharges, discharge procedure protocols, applicable pollution control laws, rules, regulations, general facility operations and the contents of the Facility SPCC Plan.

## 2.1 PERSONNEL, TRAINING, AND DISCHARGE PREVENTION PROCEDURES (Cont'd)

### *Briefings (Annual)*

- The Computer Based Training (CBT) include discussion of potential discharges or component failures and precautionary measures.
- Records are maintained at the Facility for a minimum period of three (3) years.

## 2.2 INSPECTIONS AND RECORDS

Facility inspection and record keeping requirements are detailed throughout this SPCC Plan. Generally, the Facility has developed and documented the following programs:

- Weekly Inspection Checklist
- Weekly Separator/#2 Trap Report
- Special Inspection Checklist
- API 653 – Tank In-Service Inspection Checklist; Inspections are performed every 5 years, all inspection records are available from PRSI Inspection Department.
- API 653 – Tank Out-of-Service Inspection Checklist; Inspection intervals may vary however, all tanks will be inspected prior to placing in service.
- External Floating Roof Seal Inspection; Inspections are performed on 2<sup>nd</sup> and 4<sup>th</sup> quarters, yearly, data is available from both PRSI Environmental and Inspections Departments.
- Operator's Log
- Facility personnel make daily visual inspections of the Facility during daily gauging, daily walk through inspection and during marine receipts and any discrepancies are noted in operator's log.
- Visible discharges, which result in a loss from an oil container will be promptly corrected.
- Monthly pipeline visual inspections are conducted by aerial one (1) per month and fourteen (14) per year ground inspections. Corrosion rates of the process piping are monitored by a computerized monitoring system.
- Internal and external mechanical/instrumental non-destructive tank testing is scheduled on a periodic basis determined by the condition found in the last internal inspection in accordance with API 653. Visual inspections and any necessary repairs are made whenever a tank is taken out of service.

## 2.2 INSPECTIONS AND RECORDS (Cont'd)

- The Facility is using the environmental equivalency allowed for shop-built tanks less than 30,000 gallons. This deviation is based on good engineering practice after considering the tank installation and alternative measures implemented by the Facility. The tanks are elevated and/or located over a concrete pad/floor or have an impermeable liner, which functions as a release prevention barrier to ensure any release is observed before reaching the ground.
  - The personnel performing these inspections are knowledgeable of storage facility operations, characteristics of the liquid stored, the type of aboveground storage tank and its associated components.
  - If signs of leakage or deterioration from the tank are observed by Facility personnel, the tank will be inspected by a qualified tank inspector and repaired, as required or appropriate, for continued use.
- Container levels are checked prior and after every transfer
- Records of the inspections are maintained on file at the Facility for a minimum period of three (3) years. Sample forms are provided in Appendix K of the ICP.
- If a field-constructed aboveground container undergoes a repair, alteration, reconstruction, or change in service that might affect the risk of a discharge or failure due to brittle fracture, the container will be evaluated.

## 3.0 FACILITY DRAINAGE

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### 3.1 DIKED STORAGE AREA DRAINAGE AND STORMWATER DRAINAGE PROCEDURES

Drainage of accumulated stormwater or other liquids which may be discharged or spilled from the storage facilities into the diked storage area is typically controlled as follows.

- The preferred method for removal of accumulated storm water is by manual drainage to trap #2 (Refinery Tank Farm) and to trap #3 (Red Bluff Tank Farm).
- In the event that drainage of contaminated liquids from a containment area is required, the use of a vacuum truck, pump, etc., will be evaluated for effluent removal. Contaminated liquids will not be discharged off of the property.
- The drainage from the diked storage areas are controlled by manual valves kept closed except when draining to No. 2 Trap (Refinery Tank Farm) or No. 3 Trap (Red Bluff Tank Farm) oil/water separator. Water, which is gravity drained from these areas, is directed to the drainage system, which flows into the oil/water separator where oil is removed before discharge via TPDES permit.
- All drainage from the Refinery tank farm is directed to No. 2 Trap oil/water separator. The oil/water separator is visually inspected weekly and cleaned as required by mechanical or manual means. Processed water is discharged to the Houston Ship Channel in accordance with TPDES permit.
- All drainage from Red Bluff Tank Farm is directed to No. 3 Trap oil/water separator. The oil/water separated is visually inspected weekly and cleaned as required by mechanical or manual means. Processed water is discharged into Little Vince Bayou in accordance with TPDES permit.
- The dike walls are constructed of fill dirt and the drainage system is constructed of metal pipe, concrete and/or open ditches.
- Discharges occur only while the Facility and the drainage operation is attended.
- Flapper-type drain valves are not used to drain diked areas. Drain valves are gate-type valves.
- All drainage events are conducted in accordance with the Tank Farm Drainage Procedure.
- Dike drainage is conducted by the operator and logged in the operator's log.
- Operation logs and applicable forms are retained at the Facility for a minimum period of three (3) years.

### 3.2 UN-DIKED AREA DRAINAGE

Drainage from undiked areas is controlled as follows:

- Drainage from the eastern half of the refinery is pumped to process wastewater tank 97 to the extent possible or diverted to stormwater tank 400. Both tanks are components of the wastewater treatment system, which eventually is processed through the CPI oil/water separator.
- Drainage from the western half of the refinery can flow directly to the CPI or be diverted to tank 400. Wastewater from tanks 400 and 97 eventually flow to the CPI. Oil recovered at the CPI is pumped back to tank (328) and reintroduced into the refinery system for processing.
- Drainage from the coke area is drained into trap No. 1 or can be diverted to tank 65. Wastewater from tank 65 is diverted to the Facility CPI oil/water separator.
- Drainage from the Red Bluff Tank Farm is channeled to the Facility #3 Trap oil/water separator.
- Tank Farm oil/water separators, (Trap No. 2, and Trap No. 3) are mechanically vacuumed or manually absorbed with materials as required, prior to discharge to Houston Ship Channel and Little Vince Bayou in accordance with TPDES permits.
- The Facility wastewater is channeled to the CPI wastewater treatment system where oil is removed from the water and all processed water is forwarded to the Gulf Coast Water Disposal Authority (GCA) Washburn Tunnel Plant for further treatment and discharged in accordance with TPDES permit.
- The majority of the piping is contained within the diked area(s) except for the section noted on the "Spills Potentials List" in Section 8.
- It is impractical to provide secondary containment for this section of undiked piping due to the following reasons:
  - The piping is located immediately adjacent to fencing along the property edge.
  - Installation of secondary containment would alter the overall stormwater management plan of the Facility.
- This section, due to its location, would be impracticable to contain and equivalent environmental measures have been developed as follows:
  - The piping is subject to routine inspections during operating rounds.
  - The piping is located in a highly visible area.
  - The Facility maintains response equipment on site to utilize in the event that a spill did escape the Facility.

### 3.2 UN-DIKED AREA DRAINAGE (Cont'd)

- The risk of leaks originating from piping is low since it is observed frequently enough to detect excessive corrosion, defective pipe supports, or other anomalies which could compromise the integrity of the pipe.
- In the event that a spill did originate from undiked piping, the Facility would immediately activate its Contingency Plan to mitigate the spill before leaving the property.
- Stormwater run-off from other undiked areas in the Facility is not controlled due to its origination from non-spill potential areas.
- The undiked process areas, as well as the diked storage areas, are visually inspected daily by operation personnel.

## 4.0 BULK STORAGE CONTAINERS

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### 4.1 CONTAINER DESIGN AND CONSTRUCTION

The Facility's bulk oil and oil product storage containers have been designed in accordance with industry standards. The containers have the following design characteristics:

- Bulk storage containers are constructed of a material that is compatible with the oil and oil products stored and with the conditions of storage.
- The majority of bulk storage containers are constructed of welded steel and bolted steel to API standards.
- Containers are operated within "Safe Fill" levels positioned below the capacity limits of the container.
- The large bulk storage containers (tank farms) are equipped with ground-level sight gauges and are hand-gauged at regular intervals.
- Refinery and Red Bluff containers are manually gauged every shift and prior to and after product transfer.

### 4.2 SECONDARY CONTAINMENT

Facility bulk oil and oil product storage containers are situated within secondary containment constructed of compacted soil. The containment areas are designed as follows:

- All bulk storage containers are completely surrounded by compacted earthen dike walls with earthen floors.
- The containment areas are designed to contain the entire contents of the largest single container plus sufficient freeboard to allow for precipitation. Additional (tertiary) containment is provided by the Facility wastewater treatment system and associated piping, drains, and storage facilities.
- The containment areas are sufficiently impervious to contain a discharge from an aboveground facility with line of sight inspection capability (tanks, containers, piping, etc.) until clean up occurs.
- Based on soils data available for the Facility, containment areas are sufficiently impervious to contain a discharge from an aboveground facility with line of site inspection capability (tanks, containers, piping, etc.) until clean up occurs.
- The Facility has a strong tank integrity program which significantly increases the chances of detecting corrosion or anomalies in the tank shell before it becomes compromised. More detail on the tank integrity program is provided later in this section.

## 4.2 SECONDARY CONTAINMENT (Cont'd)

- Discharges would be detected during weekday visual inspections and while conducting normal operations. In the event of a discharge, response and recovery operations, including use of contract resources, would commence immediately upon detection as described in the Facility Response Plan.
- The Facility is equipped with a series of monitoring wells and recovery wells. The monitoring wells are utilized for monitoring the potential impact or movement of a discharge below the surface and hence provides an additional means of detecting discharges. The recovery wells provide an additional means of keeping discharged product within the boundaries of the facility until clean up occurs. These recovery wells provide the additional response capability necessary for those underground facilities with no line of site inspection capability (tank bottoms, underground piping, buried containers, etc.).
- Facility personnel maintain a high level of training and awareness on the Facility's Integrated Contingency Plan (ICP) and are capable of implementing this contingency plan in the event of a discharge.
- Additional details on secondary containment are provided in Section 8.0 of this Plan.

## 4.3 COMPLETELY AND PARTIALLY BURIED OR BUNKERED METALLIC STORAGE TANKS

- There are no completely or partially buried or bunkered metallic storage tanks. However, the following underground process vessels are utilized within the Facility:
  - CPI oil/water separator (Refinery)
  - Trap 2 separator (Refinery)
  - Trap 3 separator (Tank Farm)

## 4.4 MOBILE OR PORTABLE OIL STORAGE CONTAINERS

- Mobile and portable storage containers may be brought on-site during various operations. These portable containers will be positioned or located so as to prevent spilled oil from reaching navigable waters.
- Mobile and portable containers, which the Facility utilizes for maintenance and testing operations, remain attended the full time they are in operation.
- These containers will be located where they will not be subject to periodic flooding or washout.
- A secondary means of containment, such as dikes, catch basins, or the Facility stormwater drainage system, is provided for the largest single compartment or container plus sufficient freeboard for precipitation.

## 4.5 INTERNAL HEATING COILS

- Internal heating coils which discharges steam into an open water course are not installed or utilized in the operation of this Facility.
- The following tanks are heated by steam coils; 51, 204 and 205.
- The heating medium is 150 psi steam, Tank 51 is 450 psi steam.
- Blowdown is to the wastewater treatment system or into the diked areas.
- Tank 301 has a bayonet heater with exhaust steam to the refinery condensate system.

## 4.6 CONTAINER INSPECTION PROGRAMS

All containers containing oil and oil products are inspected in the following manner:

- Internal and external mechanical/instrumental non-destructive tank testing is scheduled on a periodic basis determined by the condition found in the last internal inspection in accordance with API 653. Visual inspections and any necessary repairs are made whenever a tank is taken out of service.
- Storage containers are professionally inspected on a periodic basis in accordance with API 653. Non-destructive thickness testing is performed. Records of tests are available at the Facility.
- The outside of the containers are visually inspected periodically by operating personnel during daily rounds for signs of deterioration, leaks, or the accumulation of liquids inside the containment areas.
- Periodic Visual Inspections (including containers, truck rack, secondary containment, aboveground piping, etc.) during operating personnel rounds and any deficiencies are noted in the operator's log.
- Monthly inspection of tank gauges and cathodic protection readings.
- Periodic inspections of the ground water monitoring system are performed.
- Inspection records are retained on file at the Facility for a minimum period of three (3) years.

#### 4.6 CONTAINER INSPECTION PROGRAMS (Cont'd)

INSPECTION TYPE	FREQUENCY	INSPECTOR QUALIFICATION OR TRAINING	DOCUMENTATION	RECORD RETENTION
External Inspection - API 653 (in-service)	Lesser of 5 years OR 1/4 of the life of the shell	API 653 Certified Inspector	API 653 Certified Report	Life of the Tank
API 653 - Ultrasonic Testing of the Shell (in-service)	Lesser of 15 years OR 1/2 the life of the shell	Level II or Level III of ASNTSNT- TC - IA (See API 650 paragraph 6.3.2, 10 edition, Addendum 3)	API 653 Certified Report	Life of the Tank
Internal Inspection - API 653 (out-of-service)	Lesser of 10 years OR the life of the tank bottom	API 653 Certified Inspector	API 653 Certified Report	Life of the Tank

## 5.0 TRANSFER OPERATIONS, PUMPING AND IN-PLANT PROCESS

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### 5.1 BURIED PIPING INSTALLATIONS

Corrosion protection for buried piping is provided as follows:

- Buried piping installations are coated, wrapped, and cathodically protected.
- When a section of buried pipe is exposed, it is examined for deterioration and corrective action taken as necessary.
- If corrosion damage is found, additional examination and corrective action will be taken as indicated by the magnitude of damage.

### 5.2 OUT-OF-SERVICE PIPELINES

In the event that a Facility pipeline is removed from service or is placed in standby service for an extended time:

- The Facility connection at the transfer point is capped or blinded.
- The line is marked as to its origin.

### 5.3 ABOVEGROUND VALVES AND PIPELINES

- All aboveground valves and short runs of pipeline are regularly examined during operating personnel rounds. During these examinations, operating personnel assess the general condition and necessity for corrective actions of the items such as:
  - Flange joints
  - Valve glands and bodies
  - Pipe supports
  - Bleeder and gauge valves
  - Valve locks / seals
  - Expansion joints
  - Metal surfaces

### 5.3 ABOVEGROUND VALVES AND PIPELINES (Cont'd)

- A majority of the Facility's receipt and delivery piping is located outside of secondary containment. To insure the integrity of certain lines they are pressure tested annually (e.g. USCG, etc.).
- Records of these examinations are documented in the Facility inspection records. Facility management would be notified of any negative findings, and repairs would be implemented.
- Pipe supports are designed to minimize abrasion and corrosion and allow for expansion and contraction.

### 5.4 VEHICLE WARNING PROCEDURES

- Vehicular traffic granted entry into the Facility is warned verbally, or by appropriate signs, to ensure that the vehicle will not endanger aboveground piping.
- Aboveground piping at the loading rack is protected by steel/concrete guards.
- Facility personnel and contractors, within a geographical vicinity, are forewarned when maintenance of equipment within the above ground piping areas is required.

## **6.0 TANK TRUCK LOADING/UNLOADING RACK**

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### **6.1 LOADING/UNLOADING PROCEDURES**

The Facility's tank truck loading/unloading operations are conducted as follows:

- Only truck loading/unloading operations are conducted. There are no tank car (rail) operations conducted at this Facility.
- PRSI operators monitor all loading and unloading operations and are trained by Facility personnel prior to their first loading operation at the rack.
- All personnel involved in truck loading/unloading operations, including PRSI and non-PRSI personnel, are required to complete a review and demonstrate competency in loading instructions, procedures, and Facility rules."
- Signs displaying warnings are posted at the loading rack.
- Valves at rack and pumps are actuated via authorized operator. Possess consumption and other loading and unloading facilities are not available for use by other than authorized personnel
- Prior to filling and departure of any truck, the lower most drains and outlets on tank trucks are closely examined for leakage. Any sign of leakage is immediately corrected to prevent spills while in transit.
- Tank truck loading/unloading procedures meet the requirements and regulations established by the Department of Transportation.

### **6.2 DRAINAGE SYSTEMS**

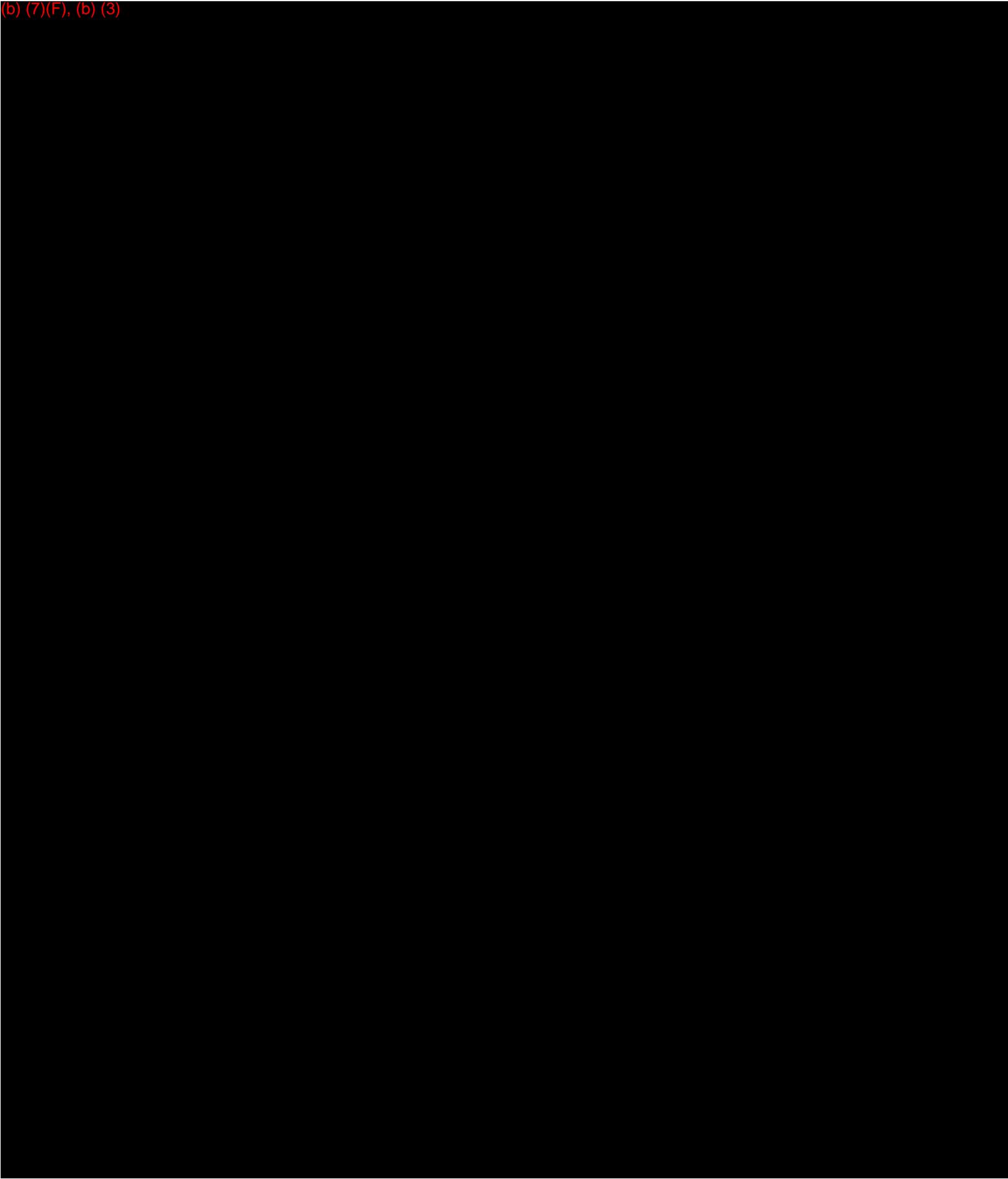
- The truck rack is set in a depressed concrete area with a center drain over a containment area. All spilled product is removed mechanically or manually.
- Stormwater drainage from all other parts of the facility is directed to the stormwater treatment system. The stormwater system consists of a Corrugated Plate Interceptor (CPI) oil/water separator, two (2) recovered oil storage tanks and three stormwater storage tanks. All wastewater processed through the CPI is pumped to the Gulf Coast Waste Disposal Authority (GCA) Washburn Tunnel for final treatment.
- Stormwater is directed to three (3) stormwater storage tanks (65, 97 and 400) which are routed through the Facility CPI oil/water separator. Processed wastewater from the CPI is then pumped to GCA Washburn Tunnel for final treatment.

## 6.2 DRAINAGE SYSTEMS (Cont'd)

- Recovered oil from the CPI oil/water separator is transferred to tank 328. Stored recovered oil is then reintroduced into the refinery oil process system.
- All drainage from the Refinery Tank Farm is directed to No. 2 Trap oil/water separator. The oil/water separator is visually inspected each shift and cleaned as required by mechanical or manual means. Processed water is discharged to the Houston Ship Channel in accordance with TPDES permit.
- All drainage from Red Bluff Tank Farm is directed to No. 3 Trap oil/water separator. The oil/water separated is visually inspected each shift and cleaned as required by mechanical or manual means. Processed water is discharged into Little Vince Bayou in accordance with TPDES permit.

## 7.0 SECURITY

(b) (7)(F), (b) (3)





## 8.0 FACILITY SPECIFIC DATA

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Note: Secondary containment survey data and volumetric calculations were provided by Crown Central Petroleum Corporation.

## POTENTIAL SPILL SOURCES AND HAZARD IDENTIFICATION CONTAINERS ABOVE GROUND STORAGE CONTAINERS

*(Tank = any container that stores oil)*

Container Number	Substance Stored (Oil & Haz. Substance)	Average Quantity Stored (Gallons)	Maximum Capacity (Gallons)	Tank Type (i.e., floating roof, fixed roof, etc.)	Year Built	Potential Failure	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 (Gallons)
1	Permanently Closed	(b) (7)(F), (b) (3)		Cone Roof	1920	Rupture	No loss history	Note "A"	(b) (7)(F), (b) (3)
9	Gasoline			Cone Roof	1969	Rupture	No loss history		
51	Coker Feed			Cone Roof	1926	Rupture	No loss history		
65	Stormwater			Internal Floating Roof	1926	Rupture	Corrosion 01-26-94 Excessive Rain 06-19-06		
66	Permanently Closed			Cone Roof	1926	Rupture			
85	Gas Oil			Cone Roof	1934	Rupture	No loss history		
97	Wastewater			Internal Floating Roof	1937	Rupture	Excessive Rain 10-16-06		
128	Permanently Closed			Cone Roof	1970	Rupture	No loss history	Note "B"	
129	Permanently Closed			Cone Roof	1970	Rupture	No loss history		
130	Permanently Closed			Cone Roof	1970	Rupture	No loss history		
202	Sour Water/ Hydrocarbon			Floating Roof	1940	Rupture	No loss history	Note "A"	
203	Slurry Oil			Cone Roof	1940	Rupture	No loss history		
204	Slurry Oil			Cone Roof	1940	Rupture	No loss history		
205	Slurry Oil			Floating Roof	2009	Rupture	No loss history	Note "A"	
210	Gas Oil			Cone Roof	2010	Rupture	No loss history		
301	Received Oil			External Floating Roof	2011	Rupture	No loss history		
307	No. 2 Fuel Oil			Cone Roof	1943	Rupture	No loss history		
308	No. 2 Fuel Oil			Cone Roof	1943	Rupture	No loss history		
309	Sour Water/ Hydrocarbon			Cone Roof	1943	Rupture	No loss history		

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## POTENTIAL SPILL SOURCES AND HAZARD IDENTIFICATION CONTAINERS ABOVE GROUND STORAGE CONTAINERS

*(Tank = any container that stores oil)*

Container Number	Substance Stored <i>(Oil &amp; Haz. Substance)</i>	Average Quantity Stored <i>(Gallons)</i>	Maximum Capacity <i>(Gallons)</i>	Tank Type <i>(ie. floating roof, fixed roof, etc.)</i>	Year Built	Potential Failure	Failure / Cause <i>(Record cause and date of any Tank failure which has resulted in a loss of tank contents)</i>	Direction of Flow	Secondary Containment Capacity <i>(Gallons)</i>
310	Gas Oil Ltc/Sour Water	(b) (7)(F), (b) (3)	(b) (7)(F), (b) (3)	Cone Roof	1943	Rupture	No loss history	Note "A"	(b) (7)(F), (b) (3)
311	Permanently Closed			Cone Roof	1943	Rupture	No loss history		
328	Recovered Oil			External Floating Roof	2000	Rupture	No loss history		
330	No. 2 Fuel Oil			Cone Roof	1999	Rupture	No loss history		
331	Diesel			Cone Roof	1955	Rupture	No loss history		
332	FCC/Gasoline			Floating Roof	1955	Rupture	No loss history		
335	Caustic			Floating Roof	1961	Rupture	No loss history		
336	Furnace Oil			Floating Roof	1961	Rupture	No loss history		
337	Furnace Oil			Floating Roof	1961	Rupture	No loss history		
339	Permanently Closed			Internal Floating Roof	1961	Rupture	No loss history		
340	Medium Reformate			Cone Roof	1961	Rupture	No loss history		
341	Medium Reformate			Cone Roof	1961	Rupture	Tank overfill 07-27-96		
342	Reformate			Floating Roof	1961	Rupture	Tank overfill 12-13-97		
343	Naptha			Internal Floating Roof	1961	Rupture	Overfill Naptha 02-26-06		
348	Permanently Closed			Cone Roof	1967	Rupture	No loss history		
349	Naptha	Internal Floating Roof	1967	Rupture	No loss history				

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## POTENTIAL SPILL SOURCES AND HAZARD IDENTIFICATION CONTAINERS ABOVE GROUND STORAGE CONTAINERS

(Tank = any container that stores oil)

Container Number	Substance Stored (Oil & Haz. Substance)	Average Quantity Stored (Gallons)	Maximum Capacity (Gallons)	Tank Type (ie. floating roof, fixed roof, etc.)	Year Built	Potential Failure	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 (Gallons)
350	Naptha	(b) (7)(F), (b) (3)		Internal Floating Roof	1967	Rupture	No loss history	Note "A"	(b) (7)(F), (b) (3)
351	Recovered Oil			Cone Roof	1968	Rupture	No loss history		
353	Medium Reformate			Cone Roof	1968	Rupture	No loss history		
400	Stormwater			External Floating Roof	1990	Rupture	Excessive Rain 10-17-94, 06-19-06, 10-16-06		
807	Crude			Floating Roof	1953	Rupture	No loss history		
808	Alkylate			Floating Roof	1965	Rupture	Bleeder Open 09-05-98		
810	Gasoline			Floating Roof	1965	Rupture	No loss history		
811	Gasoline			Floating Roof	1969	Rupture	No loss history		
812	Gasoline			Floating Roof	1969	Rupture	Mower broke bleeder 09-19-94		
813	Crude			Floating Roof	1969	Rupture	No loss history		
814	Naptha/Gasoline			Floating Roof	1976	Rupture	No loss history		
815	Crude			Floating Roof	1976	Rupture	No loss history		
816	Crude			Floating Roof	1976	Rupture	No loss history		
817	Crude/Condensate			Floating Roof	1977	Rupture	No loss history		
818	Gasoline			Floating Roof	1977	Rupture	No loss history		
820	No. 2 Fuel Oil			Floating Roof	1977	Rupture	No loss history		
822	Crude			Floating Roof	1978	Rupture	Overfill 06-15-03		
824	Reformate			Floating Roof	1978	Rupture	No loss history		
825	LSR			Floating Roof	1978	Rupture	Tank roof leak 05-27-98		
826	S-ZORB Gasoline			Floating Roof	1981	Rupture	No loss history		
827	Gasoline	Floating Roof	2007	Rupture	No loss history				
830	Crude	Floating Roof	1981	Rupture	No loss history				
831	Crude	Floating Roof	1981	Rupture	"T" Failure/Seal leak 03-13-97				

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## POTENTIAL SPILL SOURCES AND HAZARD IDENTIFICATION CONTAINERS ABOVE GROUND STORAGE CONTAINERS

*(Tank = any container that stores oil)*

Container Number	Substance Stored (Oil & Haz. Substance)	Average Quantity Stored (Gallons)	Maximum Capacity (Gallons)	Tank Type (ie. floating roof, fixed roof, etc.)	Year Built	Potential Failure	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 (Gallons)
-----	Condensate	(b) (7)(F), (b) (3)		Horizontal	1999	Rupture	No loss history	Note "A"	(b) (7)(F), (b) (3)
10 @ #1 Trap	Diesel			Horizontal	1978	Rupture	No loss history	Note "B"	
RCC Bldg.	Diesel			Horizontal	Unk.	Rupture	No loss history	Note "A"	
XX Tank @ Maintenance Bldg	Diesel			Vertical Poly	Unk.	Rupture	No loss history	Note "A"	
<b>TOTAL</b>									

**Note<sup>A</sup>:** Primary drainage is to the containment area, drainage outside of, or escaping containment would flow into the refinery or tank farm stormwater sewer system including an oil/water separator. Catastrophic tank failure could impact the Houston Ship Channel.

**Note<sup>B</sup>:** Drainage outside of secondary containment would flow into the refinery on tank farm stormwater sewer system including an oil/water separator. Catastrophic tank failure could impact the Houston Ship Channel.

## POTENTIAL SPILL SOURCES AND HAZARD IDENTIFICATION CONTAINERS ABOVE GROUND STORAGE CONTAINERS

*(Any container that stores oil)*

Container I.D. (East Refinery)	Substance Stored (Oil & Haz. Substance)	Average Quantity Stored (Gallons)	Maximum Capacity (Gallons)	Tank Type (ie. floating roof, fixed roof, etc.)	Year Built	Potential Failure	Rate of Flow (gpm)*	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 (Gallons)
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### OPERATIONAL EQUIPMENT AND OTHER SOURCES

#### Transformers – East Refinery

001-H	Insulating Oil	(b) (7)(F), (b) (3)	Transformer	Unknown	Leak/Rupture	----	No loss history	Note "B"	(b) (7)(F), (b) (3)
002-H	Insulating Oil		Transformer	Unknown	Leak/Rupture	----	No loss history		
00-3TK-1	Insulating Oil		Transformer	Unknown	Leak/Rupture	----	No loss history		
00-3TK-2	Insulating Oil		Transformer	Unknown	Leak/Rupture		No loss history		
00-3TK-3	Insulating Oil		Transformer	Unknown	Leak/Rupture		No loss history		
00-4TK-1	Insulating Oil		Transformer	Unknown	Leak/Rupture	----	No loss history		
00-4TK-2	Insulating Oil		Transformer	Unknown	Leak/Rupture		No loss history		
00-4TK-3	Insulating Oil		Transformer	Unknown	Leak/Rupture		No loss history		
00-5TK-1	Insulating Oil		Transformer	Unknown	Leak/Rupture	----	No loss history		
00-5TK-2	Insulating Oil		Transformer	Unknown	Leak/Rupture		No loss history		
00-5TK-3	Insulating Oil		Transformer	Unknown	Leak/Rupture		No loss history		
00-6TK-1	Insulating Oil		Transformer	Unknown	Leak/Rupture	----	No loss history		
00-6TK-2	Insulating Oil		Transformer	Unknown	Leak/Rupture		No loss history		
00-6TK-3	Insulating Oil		Transformer	Unknown	Leak/Rupture		No loss history		
01-1M	Insulating Oil		Transformer	Unknown	Leak/Rupture	----	No loss history		
01-2M	Insulating Oil		Transformer	Unknown	Leak/Rupture	----	No loss history		
02M-A	Insulating Oil		Transformer	Unknown	Leak/Rupture	----	No loss history		
02M-B	Insulating Oil		Transformer	Unknown	Leak/Rupture	----	No loss history		

\* Rate of flow on tanks and oil-filled operational equipment due to failure range from pin hole leaks with several gallons of oil released over a given time period to catastrophic failures resulting in complete loss of product.

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Pasadena Refinery

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## POTENTIAL SPILL SOURCES AND HAZARD IDENTIFICATION CONTAINERS ABOVE GROUND STORAGE CONTAINERS

*(Any container that stores oil)*

Container I.D. (East Refinery)	Substance Stored (Oil & Haz. Substance)	Average Quantity Stored (Gallons)	Maximum Capacity (Gallons)	Tank Type (ie. floating roof, fixed roof, etc.)	Year Built	Potential Failure	Rate of Flow (gpm)*	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 (Gallons)
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### OPERATIONAL EQUIPMENT AND OTHER SOURCES

#### Transformers – East Refinery (Cont'd)

02M-C	Insulating Oil	(b) (7)(F), (b) (3)		Transformer	Unknown	Leak/Rupture	----	No loss history	Note "B"	(b) (7)(F), (b) (3)
03M	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
04M	Insulating Oil			Transformer	New 2012	Leak/Rupture	----	No loss history		
05-1M	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
05-2M	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
06-1L	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
06-2L	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
07-1M	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
07-2M	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
08-1L	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
08-2L	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
09-1M	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
09-2M	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
10-1L	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
10-2L	Insulating Oil		Transformer	Unknown	Leak/Rupture	----	No loss history			
11M	Insulating Oil		Transformer	Unknown	Leak/Rupture	----	No loss history			

\* Rate of flow on tanks and oil-filled operational equipment due to failure range from pin hole leaks with several gallons of oil released over a given time period to catastrophic failures resulting in complete loss of product.

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## POTENTIAL SPILL SOURCES AND HAZARD IDENTIFICATION CONTAINERS ABOVE GROUND STORAGE CONTAINERS

*(Any container that stores oil)*

Container I.D. (East Refinery)	Substance Stored (Oil & Haz. Substance)	Average Quantity Stored (Gallons)	Maximum Capacity (Gallons)	Tank Type (ie. floating roof, fixed roof, etc.)	Year Built	Potential Failure	Rate of Flow (gpm)*	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 (Gallons)
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### OPERATIONAL EQUIPMENT AND OTHER SOURCES

#### Transformers – East Refinery (Cont'd)

12M	Insulating Oil	(b) (7)(F), (b) (3)	(b) (7)(F), (b) (3)	Transformer	Unknown	Leak/Rupture	----	No loss history	Note "B"	(b) (7)(F), (b) (3)
13L	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
14M	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
15L-S	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
15L	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
17L-A	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
17L-B	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
17L-C	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
18L-A	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
18L-B	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
18L-C	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
19M	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
20L	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
21L	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
22L-A	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
22L-B	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
22L-C	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		

\* Rate of flow on tanks and oil-filled operational equipment due to failure range from pin hole leaks with several gallons of oil released over a given time period to catastrophic failures resulting in complete loss of product.

## POTENTIAL SPILL SOURCES AND HAZARD IDENTIFICATION CONTAINERS ABOVE GROUND STORAGE CONTAINERS

*(Any container that stores oil)*

Container I.D. (East Refinery)	Substance Stored (Oil & Haz. Substance)	Average Quantity Stored (Gallons)	Maximum Capacity (Gallons)	Tank Type (ie. floating roof, fixed roof, etc.)	Year Built	Potential Failure	Rate of Flow (gpm)*	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 (Gallons)
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### OPERATIONAL EQUIPMENT AND OTHER SOURCES

#### Transformers – East Refinery (Cont'd)

23L-A	Insulating Oil	(b) (7)(F), (b) (3)	(b) (7)(F), (b) (3)	Transformer	Unknown	Leak/Rupture	----	No loss history	Note "B"	(b) (7)(F), (b) (3)
23L-B	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
23L-C	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
24L-A	Insulating Oil			Transformer	New 2011	Leak/Rupture	----	No loss history		
24L-B	Insulating Oil			Transformer	New 2011	Leak/Rupture	----	No loss history		
24L-C	Insulating Oil			Transformer	New 2011	Leak/Rupture	----	No loss history		
25L	Insulating Oil			Transformer	New 2012	Leak/Rupture	----	No loss history		
26L-A	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
26L-B	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
26L-C	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
27L-A	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
27L-B	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
27L-C	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
28L-A	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
28L-B	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		

\* Rate of flow on tanks and oil-filled operational equipment due to failure range from pin hole leaks with several gallons of oil released over a given time period to catastrophic failures resulting in complete loss of product.

## POTENTIAL SPILL SOURCES AND HAZARD IDENTIFICATION CONTAINERS ABOVE GROUND STORAGE CONTAINERS

*(Any container that stores oil)*

Container I.D. (East Refinery)	Substance Stored (Oil & Haz. Substance)	Average Quantity Stored (Gallons)	Maximum Capacity (Gallons)	Tank Type (ie. floating roof, fixed roof, etc.)	Year Built	Potential Failure	Rate of Flow (gpm)*	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 (Gallons)
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### OPERATIONAL EQUIPMENT AND OTHER SOURCES

#### Transformers – East Refinery (Cont'd)

28L-C	Insulating Oil	(b) (7)(F), (b) (3)	(b) (7)(F), (b) (3)	Transformer	Unknown	Leak/Rupture	----	No loss history	Note "B"	(b) (7)(F), (b) (3)
29L	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
30L-A	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
30L-B	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
30L-C	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
31L-A	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
31L-B	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
31L-C	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
32M	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
33L-A	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
33L-B	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
33L-C	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
34L-A	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
34L-B	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
34L-C	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
35L	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		

\* Rate of flow on tanks and oil-filled operational equipment due to failure range from pin hole leaks with several gallons of oil released over a given time period to catastrophic failures resulting in complete loss of product.

## POTENTIAL SPILL SOURCES AND HAZARD IDENTIFICATION CONTAINERS ABOVE GROUND STORAGE CONTAINERS

*(Any container that stores oil)*

Container I.D. (East Refinery)	Substance Stored (Oil & Haz. Substance)	Average Quantity Stored (Gallons)	Maximum Capacity (Gallons)	Tank Type (ie. floating roof, fixed roof, etc.)	Year Built	Potential Failure	Rate of Flow (gpm)*	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 (Gallons)
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### OPERATIONAL EQUIPMENT AND OTHER SOURCES

#### Transformers – East Refinery (Cont'd)

36L	Insulating Oil	(b) (7)(F), (b) (3)		Transformer	Unknown	Leak/Rupture	----	No loss history	Note "B"  (b) (7)(F), (b) (3)	
37L	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
38L-A	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
38L-B	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
38L-C	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
39M	Insulating Oil			Transformer	New 2007	Leak/Rupture	----	No loss history		
40L	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
41L	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
42L	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
431M	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
432M	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
431L	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
44-1L	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
44-2L	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
44-1M	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
44-2M	Insulating Oil		Transformer	Unknown	Leak/Rupture	----	No loss history			

\* Rate of flow on tanks and oil-filled operational equipment due to failure range from pin hole leaks with several gallons of oil released over a given time period to catastrophic failures resulting in complete loss of product.

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## POTENTIAL SPILL SOURCES AND HAZARD IDENTIFICATION CONTAINERS ABOVE GROUND STORAGE CONTAINERS

*(Any container that stores oil)*

Container I.D. (East Refinery)	Substance Stored (Oil & Haz. Substance)	Average Quantity Stored (Gallons)	Maximum Capacity (Gallons)	Tank Type (ie. floating roof, fixed roof, etc.)	Year Built	Potential Failure	Rate of Flow (gpm)*	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 (Gallons)
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### OPERATIONAL EQUIPMENT AND OTHER SOURCES

#### Transformers – East Refinery (Cont'd)

45L-A	Insulating Oil	(b) (7)(F), (b) (3)	(b) (7)(F), (b) (3)	Transformer	Unknown	Leak/Rupture	----	No loss history	Note "B"	(b) (7)(F), (b) (3)
45L-B	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
45L-C	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
SPARE-1	Insulating Oil			Transformer (Storage)	Unknown	Leak/Rupture	----	No loss history		
SPARE-2	Insulating Oil			Transformer (Storage)	Unknown	Leak/Rupture	----	No loss history		
SPARE-3	Insulating Oil			Transformer (Storage)	Unknown	Leak/Rupture	----	No loss history		
SPARE-5	Insulating Oil			Transformer (Storage)	Unknown	Leak/Rupture	----	No loss history		
101L	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
102L	Insulating Oil			Transformer	New 2009	Leak/Rupture	----	No loss history		
103L	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
104L	Lube Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
105L	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
106L	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
107L	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
108L	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		

\* Rate of flow on tanks and oil-filled operational equipment due to failure range from pin hole leaks with several gallons of oil released over a given time period to catastrophic failures resulting in complete loss of product.

**POTENTIAL SPILL SOURCES AND HAZARD IDENTIFICATION CONTAINERS  
ABOVE GROUND STORAGE CONTAINERS**

*(Any container that stores oil)*

Container I.D. (East Refinery)	Substance Stored (Oil & Haz. Substance)	Average Quantity Stored (Gallons)	Maximum Capacity (Gallons)	Tank Type (ie. floating roof, fixed roof, etc.)	Year Built	Potential Failure	Rate of Flow (gpm)*	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 (Gallons)
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**OPERATIONAL EQUIPMENT AND OTHER SOURCES**

**Transformers – East Refinery (Cont'd)**

110L	Insulating Oil	(b) (7)(F), (b) (3)		Transformer	Unknown	Leak/Rupture	----	No loss history		(b) (7)(F), (b) (3)
111L	Insulating Oil			Transformer	New 2007	Leak/Rupture	----	No loss history		
112L	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
115L	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
117L	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
118L	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
119L	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
120L	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
122L	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
123L	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
124L	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		

\* Rate of flow on tanks and oil-filled operational equipment due to failure range from pin hole leaks with several gallons of oil released over a given time period to catastrophic failures resulting in complete loss of product.

**POTENTIAL SPILL SOURCES AND HAZARD IDENTIFICATION CONTAINERS  
ABOVE GROUND STORAGE CONTAINERS**

*(Any container that stores oil)*

Container I.D. (East Refinery)	Substance Stored (Oil & Haz. Substance)	Average Quantity Stored (Gallons)	Maximum Capacity (Gallons)	Tank Type (ie. floating roof, fixed roof, etc.)	Year Built	Potential Failure	Rate of Flow (gpm)*	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 (Gallons)
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**OPERATIONAL EQUIPMENT AND OTHER SOURCES**

**Transformers – East Refinery (Cont'd)**

125L	Insulating Oil	(b) (7)(F), (b) (3)		Transformer	Unknown	Leak/Rupture	----	No loss history	Note "B"	(b) (7)(F), (b) (3)
126L	Insulating Oil		Transformer	Unknown	Leak/Rupture	----	No loss history			
127L	Insulating Oil		Transformer	Unknown	Leak/Rupture	----	No loss history			
128L	Insulating Oil		Transformer	Unknown	Leak/Rupture	----	No loss history			
132L	Insulating Oil		Transformer	Unknown	Leak/Rupture	----	No loss history			
133L	Insulating Oil		Transformer	Unknown	Leak/Rupture	----	No loss history			
134L	Insulating Oil		Transformer	Unknown	Leak/Rupture	----	No loss history			
135L	Insulating Oil		Transformer	Unknown	Leak/Rupture	----	No loss history			
136L	Insulating Oil		Transformer	Unknown	Leak/Rupture	----	No loss history			
137L	Insulating Oil		Transformer	Unknown	Leak/Rupture	----	No loss history			
138L	Insulating Oil		Transformer	Unknown	Leak/Rupture	----	No loss history			
139L	Insulating Oil		Transformer	Unknown	Leak/Rupture	----	No loss history			
140L	Insulating Oil		Transformer	Unknown	Leak/Rupture	----	No loss history			
141L	Insulating Oil		Transformer	Unknown	Leak/Rupture	----	No loss history			
142L	Insulating Oil		Transformer	Unknown	Leak/Rupture	----	No loss history			
143L	Insulating Oil	Transformer	Unknown	Leak/Rupture	----	No loss history				

\* Rate of flow on tanks and oil-filled operational equipment due to failure range from pin hole leaks with several gallons of oil released over a given time period to catastrophic failures resulting in complete loss of product.

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## POTENTIAL SPILL SOURCES AND HAZARD IDENTIFICATION CONTAINERS ABOVE GROUND STORAGE CONTAINERS

*(Any container that stores oil)*

Container I.D. (East Refinery)	Substance Stored (Oil & Haz. Substance)	Average Quantity Stored (Gallons)	Maximum Capacity (Gallons)	T.k Type (ie. floating roof, fixed roof, etc.)	Year Built	Potential Failure	Rate of Flow (gpm)*	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 (Gallons)
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### OPERATIONAL EQUIPMENT AND OTHER SOURCES

#### Transformers – East Refinery (Cont'd)

144L	Insulating Oil	(b) (7)(F), (b) (3)		Transformer	Unknown	Leak/Rupture	----	No loss history	Note "B"	(b) (7)(F), (b) (3)
145L	Insulating Oil			Transformer	New 2010	Leak/Rupture	----	No loss history		
201M-A	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
201M-B	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
201M-C	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
202L-A	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
202L-B	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
202L-C	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
203LA	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
203LB	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
204M	Insulating Oil			Transformer	New 2009	Leak/Rupture	----	No loss history		
205L	Insulating Oil			Transformer	New 2012	Leak/Rupture	----	No loss history		
206L-A	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
206L-B	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
206L-C	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
207L-A	Insulating Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
207L-B	Insulating Oil		Transformer	Unknown	Leak/Rupture	----	No loss history			

\* Rate of flow on tanks and oil-filled operational equipment due to failure range from pin hole leaks with several gallons of oil released over a given time period to catastrophic failures resulting in complete loss of product.

## POTENTIAL SPILL SOURCES AND HAZARD IDENTIFICATION CONTAINERS ABOVE GROUND STORAGE CONTAINERS

*(Any container that stores oil)*

Container I.D. (East Refinery)	Substance Stored (Oil & Haz. Substance)	Average Quantity Stored (Gallons)	Maximum Capacity (Gallons)	T.k Type (ie. floating roof, fixed roof, etc.)	Year Built	Potential Failure	Rate of Flow (gpm)*	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 (Gallons)
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### OPERATIONAL EQUIPMENT AND OTHER SOURCES

#### Transformers – East Refinery (Cont'd)

207L-C	Insulating Oil	(b) (7)(F), (b) (3)	Transformer	Unknown	Leak/Rupture	----	No loss history	Note "B"	(b) (7)(F), (b) (3)
208L	Insulating Oil		Transformer	Unknown	Leak/Rupture	----	No loss history		

\* Rate of flow on tanks and oil-filled operational equipment due to failure range from pin hole leaks with several gallons of oil released over a given time period to catastrophic failures resulting in complete loss of product.

## POTENTIAL SPILL SOURCES AND HAZARD IDENTIFICATION CONTAINERS ABOVE GROUND STORAGE CONTAINERS

*(Any container that stores oil)*

Container I.D. (West Refinery)	Substance Stored (Oil & Haz. Substance)	Average Quantity Stored (Gallons)	Maximum Capacity (Gallons)	Tank Type (ie. floating roof, fixed roof, etc.)	Year Built	Potential Failure	Rate of Flow (gpm)*	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 (Gallons)
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### OPERATIONAL EQUIPMENT AND OTHER SOURCES

#### Transformers – West Refinery

#22 PM / Services (91)	PERC	(b) (7)(F), (b) (3)	(b) (7)(F), (b) (3)	Transformer	Unknown	Leak/Rupture	----	No loss history	Note "B"	(b) (7)(F), (b) (3)
Finishing Room (93)	R-temp			Transformer	Unknown	Leak/Rupture	----	No loss history		
#21 (107)	Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
#22 PM (108)	TF-1			Transformer	Unknown	Leak/Rupture	----	No loss history		
#23 PM North (104)	R-temp			Transformer	Unknown	Leak/Rupture	----	No loss history		
East Beater Room (102)	R-temp			Transformer	Unknown	Leak/Rupture	----	No loss history		
West Beater Room (105)	R-temp			Transformer	Unknown	Leak/Rupture	----	No loss history		
Jagenberg Sheeter (106)	R-temp			Transformer	Unknown	Leak/Rupture	----	No loss history		
Water Treatment Plant (90)	Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
Cafeteria (85)	Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
Tank Farm (84)	Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
Main Office (86)	Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		

\* Rate of flow on tanks and oil-filled operational equipment due to failure range from pin hole leaks with several gallons of oil released over a given time period to catastrophic failures resulting in complete loss of product.

## POTENTIAL SPILL SOURCES AND HAZARD IDENTIFICATION CONTAINERS ABOVE GROUND STORAGE CONTAINERS

*(Any container that stores oil)*

Container I.D. (West Refinery)	Substance Stored (Oil & Haz. Substance)	Average Quantity Stored (Gallons)	Maximum Capacity (Gallons)	Tank Type (ie. floating roof, fixed roof, etc.)	Year Built	Potential Failure	Rate of Flow (gpm)*	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 (Gallons)
<b>OPERATIONAL EQUIPMENT AND OTHER SOURCES</b>										
<b>Transformers – West Refinery (Cont'd)</b>										
Water Treatment Plant (87)	Oil	(b) (7)(F), (b) (3)		Transformer	Unknown	Leak/Rupture	----	No loss history	Note "B"	(b) (7)(F), (b) (3)
PM-Sub (Beater Room) (88)	Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
24 PM (Position 11) (89)	Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
Corrosion Protection (81)	Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
Sandblast Office (82)	Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
Sand Blast Yard (83)	Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
#22/23 Impact System (109)	R-temp			Transformer	Unknown	Leak/Rupture	----	No loss history		
Pipe/Weld Shop (98)	Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
North Outfall (97)	Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
Main Office (96)	Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
Roll Grinder Building (94)	Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
#21 PM & Shop Lighting (95)	Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		
Asphalt Plant #110	Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		

\* Rate of flow on tanks and oil-filled operational equipment due to failure range from pin hole leaks with several gallons of oil released over a given time period to catastrophic failures resulting in complete loss of product.

<b>POTENTIAL SPILL SOURCES AND HAZARD IDENTIFICATION CONTAINERS ABOVE GROUND STORAGE CONTAINERS</b> <i>(Any container that stores oil)</i>										
Container I.D. (West Refinery)	Substance Stored (Oil & Haz. Substance)	Average Quantity Stored (Gallons)	Maximum Capacity (Gallons)	Tank Type (ie. floating roof, fixed roof, etc.)	Year Built	Potential Failure	Rate of Flow (gpm)*	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 (Gallons)
<b>OPERATIONAL EQUIPMENT AND OTHER SOURCES</b>										
<b>Transformers – West Refinery (Cont'd)</b>										
#1 Paper Mill (99)	Silicone	(b) (7)(F), (b) (3)		Transformer	Unknown	Leak/Rupture	----	No loss history	Note "B"	(b) (7)(F), (b) (3)
#2 Paper Mill (100)	Silicone			Transformer	Unknown	Leak/Rupture	----	No loss history		
#3 Paper Mill (101)	Silicone			Transformer	Unknown	Leak/Rupture	----	No loss history		
22 PM (92)	R-temp			Transformer	Unknown	Leak/Rupture	----	No loss history		
24 PM #12 (47)	Oil			Transformer	Unknown	Leak/Rupture	----	No loss history		

\* Rate of flow on tanks and oil-filled operational equipment due to failure range from pin hole leaks with several gallons of oil released over a given time period to catastrophic failures resulting in complete loss of product.

## POTENTIAL SPILL SOURCES AND HAZARD IDENTIFICATION CONTAINERS ABOVE GROUND STORAGE CONTAINERS

*(Any container that stores oil)*

Container I.D	Substance Stored (Oil & Haz. Substance)	Average Quantity Stored (Gallons)	Maximum Capacity (Gallons)	Tank Type (ie. floating roof, fixed roof, etc.)	Year Built	Potential Failure	Rate of Flow (gpm)*	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 (Gallons)
<b>OPERATIONAL EQUIPMENT AND OTHER SOURCES</b>										
<b>Other Sources</b>										
CPI Oil/Water Separator	Water with Hydrocarbons	0	0	Below Grade Separator	Unknown	Leak	3,500	No loss history	N/A	N/A
Trap 2 Separator	Water with Hydrocarbons	0	0	Below Grade Separator	Unknown	Leak	3,000	No loss history	N/A	N/A
Trap 3 Separator	Water with Hydrocarbons	0	0	Below Grade Separator	Unknown	Leak	2,000	No loss history	N/A	N/A
10" pipeline located on south side near Boilerhouse #2	Crude, VGO, Furnace Oil	NA	NA	Pipeline	Unknown	Leak/Rupture	2,800	No loss history	South toward drainage ditch	N/A
Ground Water Recovery Wells	Water with hydrocarbons	0	0	Pipeline	Unknown	Leak/Rupture	1.22	No loss history	Washburn Tunnel Service Road	N/A

\* Rate of flow on tanks and oil-filled operational equipment due to failure range from pin hole leaks with several gallons of oil released over a given time period to catastrophic failures resulting in complete loss of product.

## POTENTIAL SPILL SOURCES AND HAZARD IDENTIFICATION CONTAINERS ABOVE GROUND STORAGE CONTAINERS

*(Any container that stores oil)*

Rack I.D.	Substance Stored (Oil & Haz. Substance)	Truck Maximum Compartment Capacity (Gallons)	Year Built	Potential Failure (Equipment/Failure/Rupture/Leak/Overfill)	Rate of Flow (gpm)	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 (Secondary containment, curbing, sorbents)
<b>TRUCK LOADING/UNLOADING RACK</b>								
Truck Rack	Spent Caustic	9,000	Unknown	Leak or rupture of transfer hose	600 to 700	No Loss History	Toward center floor drain	In-plant drainage

<b>HAZARD IDENTIFICATION SURFACE IMPOUNDMENTS (SI)</b> <i>(Surface Impoundment = natural topographic depression, man-made excavation, or diked area)</i>						
SI Number	Substance Stored	Quantity Stored <i>(Gallons)</i>	Maximum Capacity <i>(Gallons)</i>	Surface Area	Year Built	Failure / Cause <i>(Record cause and date of any SI failure which has resulted in the loss of SI contents)</i>
		<p style="text-align: center;"><b>There are no hydrocarbon surface impoundments at this Facility.</b></p>				

## **MOBILE / PORTABLE STORAGE**

## PRSI AVERAGE DRUM/TOTE COUNT

<u>Product Name</u>	<u>Average # of drums or Totes or Volume Stored</u>	<u>Location</u>	<u>Containment</u>
<b>WAREHOUSE</b>			
ETHYLENE GLYCOL 50/50	5	Warehouse Storage Rack	Concrete berm
SYN FILM 480 OIL	1	Warehouse Storage Rack	Concrete berm
VAPOR PHASE ABSORBER VSC 200	2	Warehouse Storage Rack	Concrete berm
HOWDEN OIL PGS 2A	6	Warehouse Storage Rack	Concrete berm
TEGRA SYNTHETIC BARRIER FLUID	1	Warehouse Storage Rack	Concrete berm
MOBILE DTE HEAVY OIL	6	Warehouse Storage Rack	Concrete berm
MOBILE DTE BB	4	Warehouse Storage Rack	Concrete berm
NUTO H 46	2	Warehouse Storage Rack	Concrete berm
MOBILE DTE EXTRA HEAVY	5	Warehouse Storage Rack	Concrete berm
NUTO H 68	5	Warehouse Storage Rack	Concrete berm
UNIVOLT N 61	2	Warehouse Storage Rack	Concrete berm
ANTIFREEZE CRUISEMASTER	2	Warehouse Storage Rack	Concrete berm
MOBILE DTE MEDIUM	3	Warehouse Storage Rack	Concrete berm
SYNFILM GT 68	3	Warehouse Storage Rack	Concrete berm
REGAL R & O ISO 68	3	Warehouse Storage Rack	Concrete berm
CHEMLUBE SV ACTUATOR	2	Warehouse Storage Rack	Concrete berm
<b>Zone 1</b>			
Spent Sorbent drum	2	Szorb	Contain process Sewer
Vacuum Filter Drum	2	Szorb	Contain process Sewer
Sour Oil	5	FCC	Process Sewer
68 Oil	1	FCC	Process Sewer
Chemlube H special	1	FCC	Process Sewer
Royal Purple	7	BH#3	Process Sewer
Waste Oil	1	BH#3	Process Sewer
		BH#3	Process Sewer
<b>None</b>			
		Light Oil	
<b>Zone 2</b>			
Chevron 68	2	Crude	Polly-Dolley
Antifreeze Rack	1	Crude	Process Sewer
synthetic lubricant for CC46	1	Crude	Process Sewer
Extra heavy 160	1	Crude	Process Sewer
Dte 32	1	Hydrotreater	Contained ..
Chevron 68	1	Hydrotreater	Polly-Dolley
Waste Oil	1	Hydrotreater	Process Sewer
Pegasus 701	1	Hydrotreater	Process Sewer
Extra heavy 160	1	Hydrotreater	Process Sewer
Chevron 68	1	Coker	Process Sewer
Royal Purple	1	Coker	Process Sewer
68 Oil	1	Coker	Polly-Dolley
<b>ZONE 3</b>			
EC1008A TOTE 400 GAL EA	2	Reformer	Unit Process Sewer
EC-1020A TOTE 400 GAL	1	Reformer	Unit Process Sewer
CHEVRON REGAL ISO 150 TOTE 277 GAL	1	Reformer	Unit Process Sewer
ANTIFOAM DRUM	1	SRU	Drum Dolly
NONE	0	LPG	NA
<b>Zone 4</b>			
Alky Cooling Tower			
Heavy Med 68 Oil 55 gal.	2		Drum Dolly
None	0	Alky 2	NA
Synthetic Barrier Fluid	1	Main Depropanizer	Drum Dolly
Royal Purple GT68	1	Main Depropanizer	Drum Dolly
DTE Heavy Medium	1	Main Depropanizer	Drum Dolly
OIL (unmarked old drum)	1	Aux. Depropanizer	Drum Dolly
Chem Treat CL2032 55 gal.	1	Udex Cooling Tower	PO writtem for spill tray
Dixiechlor Sanitizer	2	Udex Cooling Tower	PO writtem for spill tray
<b>Zone 5</b>			
ROYAL PURPLE	1	Tank 61	PO writtem for spill tray
ROYAL PURPLE	1	Pump 296	PO writtem for spill tray
HYDRAULIC FLUID	1	Colonial Distillate Pump	Pump berm
LUBE OIL	1	Pump 279	PO writtem for spill tray
LUBE OIL	1	Pump 227	PO writtem for spill tray

<u>Chemical</u>	<u>Description</u>	<u>Container Size</u>	<u>Average inventory</u> gallons	<u>Location</u>	<u>Containment</u>
<b>Oil Movements</b> EC2449A	Asphaltene Dispersant	400 gallon tote	300	Near resid pump at Red Bluff Tank farm	No dike, sometimes stacked
<b>Light Oils</b> 5403 EC5459A	NACE Corrosion Inhibitor Dehaze Chemical	400 gallon tote 400 gallon tote	200 385	East side FCC dehaze pad	Unit Process Sewer Secondary containment.
<b>SRU</b> EC1030A	Corrosion Inhibitor	200 gallon tote	90	North side	Unit Process Sewer
<b>Crude Unit</b> EC2345A	Reverse Emulsion Breaker	400 gallon tote	300	East end of Crude Unit near SWS	Unit Process Sewer
<b>FCC</b> EC9000A EC3261A	Antimony Ni Passivation Antioxidant	400 gallon tote 400 gallon tote	300 250	North Center of Unit East end of Unit	Unit Process Sewer Unit Process Sewer
<b>Szorb</b> 5403 EC9079A EC3087A	NACE Corrosion Inhibitor antifoam dispersant	400 gallon tote 200 gallon tote 400 gallon tote	200 150 250	NE corner West side East side	Unit Process Sewer Unit Process Sewer Unit Process Sewer
<b>Reformer #3</b> EC1020A EC1008A	Corrosion Inhibitor neutralizer	400 gallon tote 400 gallon tote	100 100	East Side North side	Unit Process Sewer Unit Process Sewer
<b>Coker</b> EC3087A EC3261A EC1020A	dispersant Antioxidant Corrosion Inhibitor	400 gallon tote 400 gallon tote 200 gallon tote	150 200 100	West side West side North Side	Dike/process sewer Dike/process sewer Unit Process Sewer
<b>Storage Area near Warehouse</b> 5403 EC5459A EC3087A EC3261A EC9000A	NACE Corrosion Inhibitor Dehaze Chemical dispersant Antioxidant Antimony Ni Passivation	200 gallon tote 400 gallon tote 400 gallon tote 400 gallon tote 400 gallon tote	1 tote 1 tote 4 totes 2 totes 3 totes	East of whse gate East of whse gate East of whse gate East of whse gate East of whse gate	Containment Berm Containment Berm Containment Berm Containment Berm Containment Berm

<u>Chemical</u>	<u>Description</u>	<u>Container Size</u>	<u>Average Inventory</u>	<u>Location</u>	<u>Containment</u>
<b>Complex CT</b>					
<b>Chemical Totes</b>					
3DT 180	Phosphonate Corr Inhib	400 gallon tote	600 gal	Complex CT	PO written for appropriate containment
3DT 190	High Stress Dispersant	400 gallon tote	500 gal	Complex CT	PO written for appropriate containment
73550	Biode detergent	400 gallon tote	200 gal	Complex CT	PO written for appropriate containment
7338	Non-oxidizing biocide	400 gallon tote	500 gal	Complex CT	PO written for appropriate containment
7384	Cathodic Corr Inhib	400 gallon tote	200 gal	Complex CT	PO written for appropriate containment
3DT 129	Ortho PO4, Phosphonate	1100 gal bulk tank	600 gal	Complex CT	PO written for appropriate containment
3DT 192	Dispersant, Phosphonate	1100 gal bulk tank	600 gal	Complex CT	PO written for appropriate containment
<b>Alky CT</b>					
<b>Chemical Totes</b>					
3DT 180	Phosphonate Corr Inhib	400 gallon tote	500 gal	Alky CT	Cooling Tower Basin
3DT 190	High Stress Dispersant	400 gallon tote	600 gal	Alky CT	Cooling Tower Basin
3DT 129	Ortho PO4, Phosphonate	400 gallon tote	600 gal	Alky CT	Cooling Tower Basin
73550	Biode detergent	120 gallon tote	60 gal	Alky CT	Cooling Tower Basin
<b>Udex CT</b>					
<b>Chemical Totes</b>					
3DT 129	Ortho PO4, Phosphonate	400 gallon tote	500 gal	Udex CT	Cooling Tower Basin
3DT 192	Dispersant, Phosphonate	400 gallon tote	500 gal	Udex CT	Cooling Tower Basin
73550	Biode detergent	120 gallon tote	60 gal	Udex CT	Cooling Tower Basin
7338	Non-oxidizing biocide	400 gallon tote	500 gal	Udex CT	Cooling Tower Basin
<b>Storage area near warehouse</b>					
<b>Chemical</b>					
3DT 180	Phosphonate Corr Inhib	400 gallon tote	3-400 gal	Storage area near warehouse	Containment Berm
3DT 190	High Stress Dispersant	400 gallon tote	4-400 gal	Storage area near warehouse	Containment Berm
73550	Biode detergent	400 gallon tote	1-400 gal	Storage area near warehouse	Containment Berm
7338	Non-oxidizing biocide	400 gallon tote	2-400 gal	Storage area near warehouse	Containment Berm
7384	Cathodic Corr Inhib	400 gallon tote	2-400 gal	Storage area near warehouse	Containment Berm
3DT 129	Ortho PO4, Phosphonate	400 gallon tote	2-400 gal	Storage area near warehouse	Containment Berm
3DT 192	Dispersant, Phosphonate	400 gallon tote	3-400 gal	Storage area near warehouse	Containment Berm
3DT 701	Passivation chemical	6 gallon containers	20-5 gallon	Storage area near warehouse	Containment Berm

**DRAINAGE DIAGRAM**  
**PASADENA TANK FARM**

Drainage Diagram

Pasadena Refining System, Inc  
Pasadena, TX

DATE:	JOB No:	SCALE:	EDITED BY:
4/17/14	--	AS NOTED	MJDS

**WITT O'BRIEN'S** 818 TOWN & COUNTRY, STE 200  
HOUSTON, TEXAS 77024  
PHONE (281) 320-9796  
FAX (281) 320-9700

**DRAINAGE DIAGRAM**  
**RED BLUFF TANK FARM**

	PASADENA REFINING SYSTEM, INC. RED BLUFF TANK FARM PASADENA, TEXAS	JOB NO: 59083	DATE: 04-08-14	DRAINAGE DIAGRAM	WITT O'BRIEN'S	818 Town & Country Blvd., Suite 200 Houston, Texas 77024 Phone: (281) 320-9796
		DRAWN: EDH	SCALE: N/S			

**REFINERY  
TRANSFORMER LAYOUT**

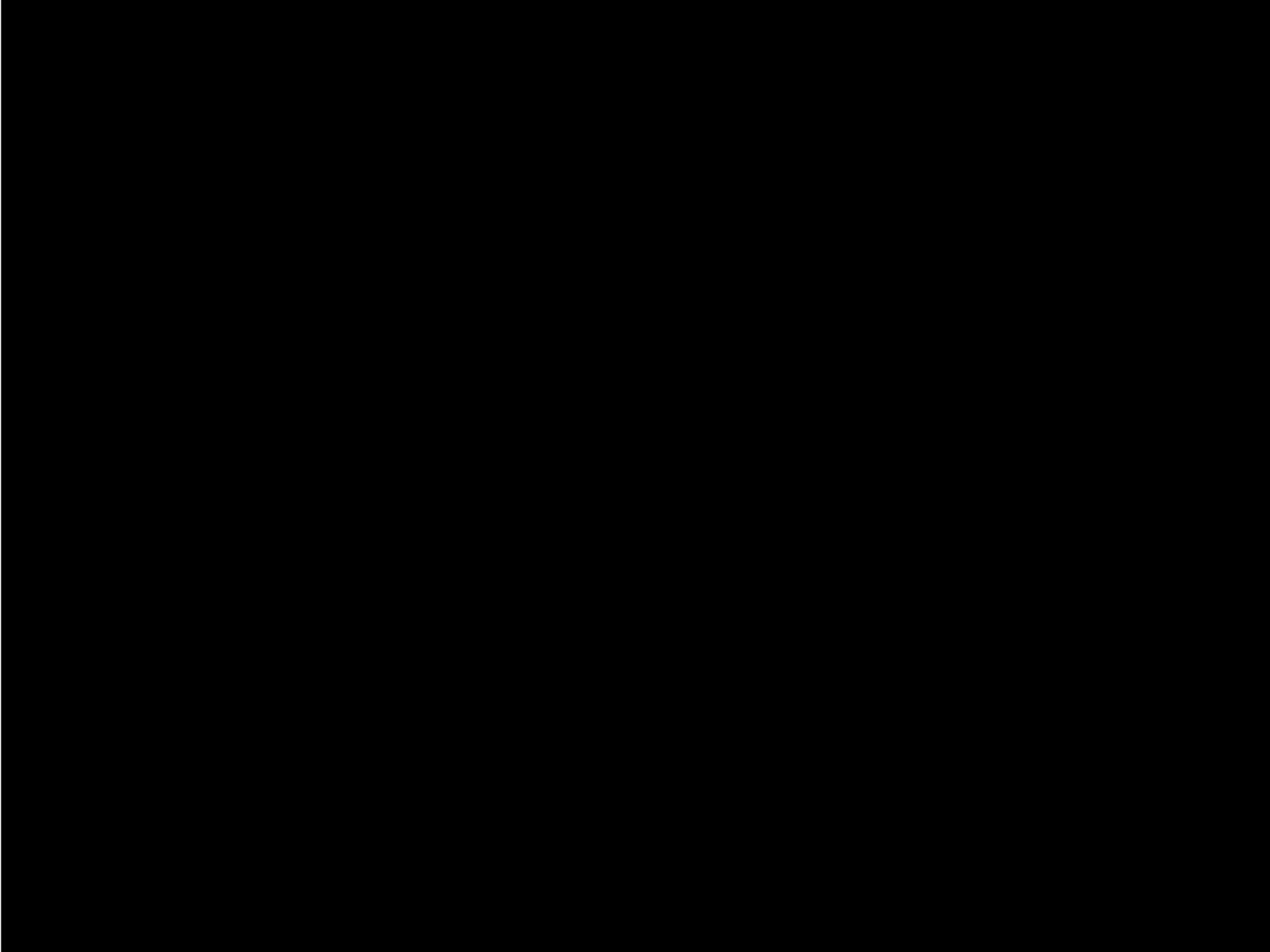


**RED BLUFF TANK FARM  
TRANSFORMER LAYOUT**



**PRSI WEST  
TRANSFORMER LAYOUT**

(b) (3), (b) (7)(F)





## APPENDIX A

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### REGULATORY CROSS REFERENCES

	<u>PAGE</u>
U.S. EPA 40 CFR Part 112 (OPA 90)	
Section 112.20 (h) .....	A-2
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U.S. Coast Guard 33 CFR 154 (OPA 90).....	A-7
U.S. EPA 40 CFR § 112.3, 5, 7, 8 (SPCC).....	A-14
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TGLO 31 TAC § 19.13 (TOSPRA) .....	A-22
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**U.S. EPA - OPA 90**  
**40 CFR Part 112.20(h) Final Rule - July 1, 1994**  
**CROSS REFERENCE**

§ 112.20 (h)	BRIEF DESCRIPTION	LOCATION in PLAN
(1)	<b>Emergency Response Action Plan</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 - Notifications
(1)(iii)	A description of information to pass to response personnel in the event of a reportable spill	ERAP - Notifications
(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 – Evacuation Diagram
(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>Facility information</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>Information about emergency response.</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	Fig 5.1
(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, App C,
	● equipment testing	App K,
(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
(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

**U.S. EPA – OPA 90**  
**40 CFR Part 112.20(h) Final Rule - July 1, 1994**  
**CROSS REFERENCE (Cont'd)**

§ 112.20 (h)	BRIEF DESCRIPTION	LOCATION in PLAN
(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	§ 1.2, App G
(5)(ii)	A discharge of 2,100 gallons or less provided this amount is less than the WCD amount	§ 1.2, 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	§ 1.2, App G
(6)	<b>Discharge detection systems</b> ... Describe the procedures and equipment used to detect discharges	SPCC Plan
(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, App H, SPCC Plan
(8)	<b>Self-inspection, training, and meeting logs.</b>	----
(8)(i)	A checklist and record of inspection for:	----
	● tanks	SPCC Plan, App K
	● secondary containment	SPCC Plan, App K
	● 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	SPCC Plan, App K
	● training sessions	App K
	● drills/exercises	App K
(9)	<b>Diagrams</b>	----
	● site plan	Fig 1.2
	● drainage plan	SPCC Plan
(10)	<b>Security systems.</b> The review plan shall include a description of facility security systems.	SPCC Plan
(11)	<b>Response plan cover sheet</b>	App M

**U.S. EPA - OPA 90**  
**40 CFR Part 112.21 Final Rule - July 1, 1994**  
**CROSS REFERENCE**

§ 112.21	BRIEF DESCRIPTION	LOCATION in PLAN
(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 - OPA 90**  
**40 CFR Part 112, Appendix F Final Rule - July 1, 1994**  
**CROSS REFERENCE**

Appendix F to Part 112	BRIEF DESCRIPTION	LOCATION in PLAN
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. Facility 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	Fig 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 D
1.3.6	Qualified Individual's Duties	§ 4.2
1.4	<b><i>Hazard Evaluation</i></b>	----
1.4.1	Hazard Identification	App H, SPCC Plan
1.4.2	Vulnerability Analysis	App H
1.4.3	Analysis of the Potential for an Oil Spill	App H, SPCC Plan
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	SPCC Plan
1.6.2	Automated Discharge Detection	SPCC Plan

**U.S. EPA - OPA 90**  
**40 CFR Part 112, Appendix F Final Rule - July 1, 1994**  
**CROSS REFERENCE (Cont'd)**

Appendix F to Part 112	BRIEF DESCRIPTION	LOCATION in PLAN
1.7	<b>Plan Implementation</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	§3.1, Fig 3.1, SPCC Plan
1.8	<b>Self-Inspection, Drills/Exercises, and Response Training</b>	----
1.8.1	Facility Self-Inspection	SPCC Plan
1.8.1.1	Tank Inspection	SPCC Plan
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	Crisis 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, SPCC Plan
1.9	<b>Diagrams</b>	----
	(1) Site Plan Diagram	Fig 1.2
	(2) Site Drainage Plan Diagram	SPCC Plan
	(3) Site Evacuation Plan Diagram	App D
1.10	<b>Security</b>	SPCC Plan
2.0	<b>Response Plan Cover Sheet</b>	App M
3.0	<b>Acronyms</b>	App L

**U.S. COAST GUARD - OPA 90**  
**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.	§5.0, App C
(b)(5)(iv)	Communications plan	§5.8
(b)(5)(v)	Site-specific safety and health plan.	§4.8, 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

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**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 Crisis 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
(b)(3)(iii)	... descr be 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)	Equipment and supplies to meet... §154.1045, §154.1047 or...	§5.1, 5.2, 5.3, 5.4, Fig 5.1, App G, H, SPCC Plan
(b)(3)(iv)(B)	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)(v)	...job descriptions for each spill management team member...	App B
(b)(3)(vi)	For facilities... that operate in waters where dispersant use is pre-authorized ... list appropriately trained dispersant-application personnel...	§3.3

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§ 154.1035	DESCRIPTION OF GUIDELINE ITEM	SECTION(S)
(b)(3)(vi)(A)..(C)	... staging site...platform type...location...resource provider	§3.3
(b)(3)(vi)(D)	...identify only the oil spill removal organization and not the information in (b)(3)(vi)(A) through (b)(3)(vi)(C)above	§3.3
(b)(3)(vii)	... list of resource providers... to provide aerial oil tracking capability...	§3.3
(b)(3)(vii)(A)	The identification of a resource provider; and	§3.3
(b)(3)(vii)(B)	Type and location of aerial surveillance aircraft ...	§3.3
(b)(3)(viii)	For mobile facilities ... the oil spill removal organization and the Spill Management Team in the applicable geographic-specific appendix... in (b)(3)(iv)... for each COTP zone...	N/A
(b)(3)(ix)	For mobile facilities ... the oil spill removal organization and the Spill Management Team in the applicable geographic-specific appendix... in (b)(3)(iv)(A)... for each COTP zone...	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 descr bed...	----
(b)(4)(iii)(B)(1)	Distances calculated...	App G
(b)(4)(iii)(B)(1)(i)	For persistent oils... the distance from the facility... in 48 hours...	N/A
(b)(4)(iii)(B)(1)(ii)	For persistent oils... 15 miles from the facility down current during ebb tide...	App G
(b)(4)(iii)(B)(1)(iii)	For persistent oils... the distance from the facility... in 24 hours...	N/A
(b)(4)(iii)(B)(1)(iv)	For persistent oils... 5 miles from the facility down current during ebb tide...	N/A
(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 ...descr be any actions to be taken or procedures to be used to ensure that all recovered oil and oil contaminated debris ...	App F
(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, SPCC Plan

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<b>§ 154.1035</b>	<b>DESCRIPTION OF GUIDELINE ITEM</b>	<b>SECTION(S)</b>
(e)(1)(iv)	...must contain information on the oil(s) and hazardous material...	Fig 1.3 §3.1, Fig 3.1, 3.2, SDS at Facility
(e)(1)(iv)(A)	The generic or chemical name	Fig 1.3 §3.1, Fig 3.1, 3.2, SPCC Plan, SDS at Facility
(e)(1)(iv)(B)	A description of the appearance and odor	Fig 1.3 §3.1, Fig 3.1, 3.2, SDS at Facility
(e)(1)(iv)(C)	The physical and chemical characteristics	Fig 1.3 §3.1, Fig 3.1, 3.2, SDS at Facility
(e)(1)(iv)(D)	The hazards involved in handling the oil(s) and hazardous...	Fig 1.3 §3.1, Fig 3.1, 3.2, SDS at Facility
(e)(1)(iv)(E)	A list of firefighting procedures and extinguishing agents...	Fig 1.3 §3.1, Fig 3.1, 3.2, SDS at Facility
(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
(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, 5.8
(e)(5)	<i>Site-specific safety and health plan</i> ...	§4.8, App K
(e)(6)	<i>List of acronyms and definitions</i> ...	App L

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§ 154.1045	DESCRIPTION OF GUIDELINE ITEM	SECTION
<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
(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

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§ 154.1045	DESCRIPTION OF GUIDELINE ITEM	SECTION
(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 handles, stores, or transports Group II through IV petroleum oils... must identify their response plan...	§3.3
(i)(1)	... must be capable of commencing dispersant-application operations at the site of a discharge within 7 hours...	§3.3
(i)(2)	Dispersant response resources must include all of the following:	§3.3
(i)(2)(i)	Sufficient volumes of dispersants for application as required by...	§3.3
(i)(2)(ii)	Dispersant-application platforms capable of delivering...	§3.3
(i)(2)(iii)	Dispersant-application systems that are consistent in design with...	§3.3
(i)(2)(iv)	Dispersant-application personnel trained in and capable of ...	§3.3
(i)(3)	Dispersant stockpiles, application platforms and other support resources must...	§3.3
(j)	... identify response resources necessary to provide aerial oil tracking.... The aerial oil tracking resources must:	§3.3
(j)(1)	Be capable of arriving at the site of the discharge... up to 50 miles from shore...	§3.3
(j)(2)	Be capable of support OSROs continuously for three 10-hour operational periods during the initial 72 hours of discharge.	§3.3
(j)(3)	Include appropriately located aircraft and personnel capable of...	§3.3
(j)(4)	Include sufficient number of aircraft, pilots, and trained observation personnel...	§3.3
(j)(4)(i)	The protocols of oil-spill reporting and assessment...	§3.3
(j)(4)(ii)	The use of assessment techniques in ASTM F1779-08...	§3.3
(k)	... identify response resources with firefighting capability ...	§3.3
(l)	... identify equipment and required personnel ... to protect fish and wildlife and sensitive environments.	§5.0, App C
(l)(1)	... the identified response resources must include the quantities of boom sufficient to protect ...	§5.0, App C
(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)	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
(m)(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
(m)(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
(n)	Appendix C ... quantity of response resources ... for the maximum most probable discharge volume, and for each worst case discharge response tier.	App C, G
(n)(1)	Included in Appendix C of this part is a cap that recognizes the practical and technical limits of response capabilities ...	App G
(n)(2)	Table 5 in 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
(o)(1)....(2)	The Coast Guard will initiate a review of cap increases and other requirements contained within this subpart ... best available technologies... oil spill tracking technology.	-----

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**CROSS REFERENCE (Cont'd)**

<b>§ 154.1050</b>	<b>DESCRIPTION OF GUIDELINE ITEM</b>	<b>SECTION</b>
(a)	...must identify the training to be provided to each individual with responsibilities under the plan.	§ 4.5
(b)	A facility owner or operator shall ensure the maintenance of records sufficient to document training of facility personnel....	§ 4.5
(c)	Where applicable, a facility owner or operator shall ensure that an oil spill removal organization identified in a response plan to meet the requirements of this subpart maintain records sufficient to document training....	§ 4.5
(d)	The facility owner or operator remains responsible for ensuring that all private response personnel are trained to meet the Occupational Safety and Health Administration (OSHA) standards for emergency response operations in 29 CFR 1910.120.	§ 4.5
<b>§ 154.1055</b>	<b>DESCRIPTION OF GUIDELINE ITEM</b>	<b>SECTION</b>
(a)(1)	Qualified individual notification exercises...	§ 4.6
(a)(2)	Spill management team tabletop exercises...	§ 4.6
(a)(3)(i)	Equipment deployment exercises...facility owned and operated.	§ 4.6
(a)(3)(ii)	Equipment deployment exercises...oil spill removal organization equipment.	§ 4.6
(a)(4)	Emergency procedures exercises (optional)	---

## U.S. EPA – SPCC 40 CFR § 112.3,5,7,8

40 CFR § 112	BRIEF DESCRIPTION	SECTION
112.3	Requirement to prepare and implement a Spill Prevention Control and Countermeasure Plan	---
(a,b,c)	Owners or operators must prepare and implement a Plan...	SPCC §1.5
(d)	A licensed Professional Engineer must review and certify a Plan for it to be effective...	SPCC PE Certification Page
(e)	Maintain a complete copy of the Plan at the facility if the facility is normally attended at least 4 hours per day, or at the nearest field office...	SPCC §1.3
112.5	Amendment of Spill Prevention Control and Countermeasures Plan by owners or operators	---
(a)	Amend the SPCC ...when there is a change in facility design, construction, operation or maintenance which materially affects the facility's potential for the discharge of oil...	SPCC §1.4
(b)	...complete a review and evaluation of the SPCC at least once every five years... amend the SPCC within six months of the review...implement within six months of preparation of any amendment.	SPCC §1.4
(c)	Have a Professional Engineer certify any technical amendment...	SPCC §1.4
112.7	Guidelines for the preparation and implementation of a Spill Prevention Control and Countermeasures Plan	---
---	...must prepare a Plan...have full approval of management...in writing.	SPCC Management Approval Page, Entire SPCC Plan
---	If the plan calls for additional facilities or procedures, methods, or equipment not yet fully operational, these items should be discussed in separate paragraphs, and the details of installation and operational start-up should be explained separately.	---
---	...follow the sequence specified (or cross-reference)...	App. A (Cross Reference)
(a)(2)	Comply with all applicable requirements in this part... [or] state reasons for non-conformance ... and describe alternate methods...	---
(a)(3)	Describe ... physical layout ... and include diagram ....	SPCC § 1.1, SPCC § 8.0
(a)(3)(i)	... [address in your Plan] ... the type of oil in each container and its ... capacity ...	SPCC § 8.0
(a)(3)(ii)	... discharge prevention measures including routine handling of products ...	SPCC § 2.2, 6.1
(a)(3)(iii)	...Drainage or discharge controls ... and procedures for control of a discharge ...	SPCC § 3.0
(a)(3)(iv)	Countermeasures for discharge discovery, response, and cleanup (both ... facility's ... and contractor ....)	SPCC § 3.0
(a)(3)(v)	Methods of disposal of recovered materials ...	App. F
(a)(3)(vi)	Contact list and phone numbers ...	ICP § 2.0
(a)(4)	Relate information ... [on a discharge] ...	ICP Fig. 2.3
(a)(5)	Organize portions of the Plan ... that will make them readily usable....	TOC
(b)	Where experience indicates a reasonable potential for equipment failure ... include in your Plan a prediction of the direction, rate of flow, and total quantity of oil....	SPCC § 8.0

**U.S. EPA – SPCC**  
**40 CFR § 112.3,5,7,8 (Cont'd)**

<b>40 CFR § 112</b>	<b>BRIEF DESCRIPTION</b>	<b>SECTION</b>
(c)(1)	Onshore facilities.	---
(c)(1)(i)	Dikes, berms or retaining walls sufficiently impervious to contain spilled oil	SPCC § 3.1, 4.2, 8.0
(c)(1)(ii)	Curbing	SPCC § 3.1, 4.2, 8.0
(c)(1)(iii)	Sumps and collection systems	SPCC § 3.1, 4.2, 8.0
(c)(1)(iv)	Culverting, gutters or other drainage systems	SPCC § 3.1, 4.2, 8.0
(c)(1)(v)	Weirs, booms or other barriers	N/A
(c)(1)(vi)	Spill diversion ponds	SPCC § 3.1, 4.2, 8.0
(c)(1)(vii)	Retention ponds	SPCC § 3.1, 4.2, 8.0
(c)(1)(viii)	Sorbent materials	N/A
(c)(2)	Offshore Facilities.	---
(c)(2)(i)	Curbing, drip pans	N/A
(c)(2)(ii)	Sumps and collection systems	N/A
(d)	If you determine that the installation of structures or equipment listed in paragraphs (c) and (h)(1) of this section...is not practicable...clearly explain in your Plan...and provide...	SPCC § 1.6
(d)(1)	<i>A strong oil spill contingency plan following...40 CFR 109.</i>	ICP
(d)(2)	A written commitment of manpower, equipment and materials required to expeditiously control and remove any harmful quantity of oil discharged.	App. C
(e)	<i>Inspections and records</i>	---
	...in accordance with written procedures that you or the certifying engineer develop...with the SPCC Plan for a period of three years.	SPCC § 2.2
(f)	<i>Personnel, training and spill prevention procedures</i>	---
(f)(1)	...train your oil-handling personnel in the operation and maintenance of equipment to prevent the discharges...	SPCC § 2.1
(f)(2)	Designate a person...accountable for oil spill prevention...	SPCC Management Approval Page
(f)(3)	Schedule and conduct spill prevention briefings...highlight and descr be known spill discharges...or failures, malfunctioning components, and recently developed precautionary measures.	SPCC § 2.1
(g)	<i>Security (excluding oil production facilities).</i> Describe in you Plan how you secure and control access to the oil handling, processing and storage areas; secure master flow and drain valves; prevent unauthorized assess to starter controls on oil pumps; secure out-of-service and loading/unloading connections of oil pipelines, and address the appropriateness of security lighting to both prevent acts of vandalism and assist in the discovery of oil discharges.	SPCC § 7.0
(h)	<i>Facility tank car and tank truck loading/unloading rack</i>	---
(h)(1)	Where loading/unloading rack drainage does not flow into a catchment basin or treatment facility designed to handle discharges, use a quick drainage system... ...design any containment system to hold at least maximum capacity of any single compartment of a tank car or tank truck loaded or unloaded at the facility.	SPCC § 6.2

**U.S. EPA – SPCC**  
**40 CFR § 112.3,5,7,8 (Cont'd)**

<b>40 CFR § 112</b>	<b>BRIEF DESCRIPTION</b>	<b>SECTION</b>
(h)(2)	Provide an interlocked warning light or physical barrier system, warning signs, wheel chocks, or vehicle break to prevent vehicular departure before complete disconnect of flexible or fixed oil transfer lines.	SPCC § 6.1
(h)(3)	Prior to filling and departure of any tank car or tank truck, closely inspect for discharges the lowermost drain and all outlets of such vehicles should be closely examined for leakage, and if necessary, that they are tightened, adjusted, or replaced to prevent liquid leakage while in transit.	SPCC § 6.1
(i)	If a field-constructed aboveground container undergoes a repair, alteration, reconstruction, or change in service that might affect the risk of a discharge or failure due to brittle fracture...evaluate the container for risk...	SPCC § 2.2
(j)	In addition...include a complete discussion of conformance with applicable requirements...or any more stringent, with State rules, regulations and guidelines.	ICP § 1.5
(k)	<i>Qualified Oil-filled Operational Equipment.</i> The owner or operator of a facility with oil-filled operational equipment that meets the qualification criteria in paragraph (k)(1) of this sub-section may choose to implement for this qualified oil-filled operational equipment the alternate requirements as described in paragraph (k)(2) of this sub-section in lieu of general secondary containment required in paragraph (c) of this section.	N/A
(k)(1)	<i>Qualification Criteria – Reportable Discharge History:</i> n The owner or operator of a facility that has had no single discharge as described in §112.1(b) from any oil-filled operational equipment exceeding 1,000 U.S. gallons or no two discharges as described in § 112.1(b) from any oil-filled operational equipment each exceeding 42 U.S. gallon within any twelve month period in the three years prior to the SPCC Plan certification date, or since becoming subject to this part if the facility has been in operation for less than three years (other than oil discharges as described in § 112.1(b) that are the result of natural disasters, acts of war or terrorism); and	----
(k)(2)	<i>Alternative Requirements to General Secondary Containment.</i> If secondary containment is not provided for qualified oil-filled operational equipment pursuant to paragraph (c) of this section, the owner or operator of a facility with qualified oil-filled operational equipment must:	----
(k)(2)(i)	Establish and document the facility procedures for inspections or a monitoring program to detect equipment failure and/or a discharge; and	----
(k)(2)(ii)	Unless you have submitted a response plan under § 112.20, provide in your Plan the following:	----
(k)(2)(ii)(A)	An oil spill contingency plan following the provisions of part 109 of this chapter.	ICP
(k)(2)(ii)(B)	A written commitment of manpower, equipment, and materials required to expeditiously control and remove any quantity of oil discharged that may be harmful,	App. C
<b>112.8</b>	Spill Prevention, Control, and Countermeasure Plan requirements for onshore facilities (excluding production facilities)	----
(a)	Meet the general requirements for the Plan listed under § 112.7, and...	----
(b)(1)	Restrain drainage from diked storage areas by valves or other positive means to prevent a spill...into the drainage system or inplant effluent treatment system, except where plan systems are designed to handle such leakage. You may empty diked areas by pumps or ejectors; however you must be manually activate these pumps...and inspect the condition of the accumulation before starting...	SPCC § 3.0
(b)(2)	Use valves of manual, open-and-closed design... If facility drainage drains directly into water course...you must inspect and drain uncontaminated retained stormwater, as provided in...paragraphs (c)(3)(ii)(iii), and (iv).	SPCC § 3.1
(b)(3)	Design facility drainage systems from undiked areas... to flow into ponds, lagoons or catchment basins, designed to retain oil or return it to the facility. You must not locate catchment basins in areas subject to periodic flooding.	SPCC § 3.2
(b)(4)	If...not engineered as in paragraphs (b)(3), equip the final discharge of all ditches with a diversion system that would...retain the oil in the facility.	N/A
(b)(5)	Where drainage waters are treated in more than one treatment unit... provide two "lift" pumps and permanently install at least one of the pumps. Whatever techniques are used, facility drainage systems engineer... to prevent a discharge as described in § 112.1(b) in case there is an equipment failure or human error...	N/A

**U.S. EPA – SPCC**  
**40 CFR § 112.3,5,7,8 (Cont'd)**

<b>40 CFR § 112</b>	<b>BRIEF DESCRIPTION</b>	<b>SECTION</b>
(c)	<i>Bulk storage containers (onshore)</i>	---
(c)(1)	Not use a container for the storage of oil unless its material and construction are compatible with the material stored and conditions of storage...	SPCC § 4.1
(c)(2)	Construct all bulk storage tank installations (except mobile refuelers and other non-transportation-related tank trucks) so that you provide a secondary means of containment for the entire capacity of the largest single container plus sufficient freeboard to contain precipitation. You must ensure that diked areas are sufficiently impervious to contain discharged oil. Dikes, containment curbs, and pits are commonly employed for this purpose. You may also use an alternative system consisting of a drainage trench enclosure that must be arranged so that any discharge will terminate and be safely confined in a facility catchment basin or holding pond.	SPCC § 4.2, 8.0
(c)(3)	Not allow drainage of uncontaminated rainwater from the diked area into a storm drain or discharge of an effluent discharge into an open water course, lake, or pond, bypassing the in-plant treatment system unless you:	---
(c)(3)(i)	Normally keep the bypass valve sealed closed.	SPCC § 3.1
(c)(3)(ii)	Inspect the retained rainwater to ensure that its presence will not cause a discharge as described in § 112.1(b).	SPCC § 3.1
(c)(3)(iii)	Open the bypass valve and reseal it following drainage...under responsible supervision.	SPCC § 3.1
(c)(3)(iv)	Keep adequate records of such events.	SPCC § 3.1
(c)(4)	Protect any completely buried metallic storage tank installed on or after January 10, 1974 from corrosion by coatings or cathodic protection...	SPCC § 4.3
(c)(5)	Not use partially buried metallic tanks for the storage of oil unless the buried section of the tank is adequately coated...	SPCC § 4.3
(c)(6)	Test or inspect each aboveground container for integrity on a regular schedule and whenever you make material repairs. You must determine, in accordance with industry standards, the appropriate qualifications for personnel performing tests and inspections, the frequency and type of testing and inspections, which take into account container size, configuration, and design (such as containers that are: shop-built, field-erected, skid-mounted, elevated, equipped with a liner, double-walled, or partially buried). Examples of these integrity tests include, but are not limited to: visual inspection, hydrostatic testing, radiographic testing, ultrasonic testing, acoustic emissions testing, or other systems of non-destructive testing. You must keep comparison records and must also inspect the container's supports and foundations. In addition, you must frequently inspect the outside of the container for signs of deterioration, discharges, or accumulation of oil inside diked areas. Records of inspections and tests kept under usual and customary business practices satisfy the recordkeeping requirements of this paragraph.	SPCC § 2.2, 4.6
(c)(7)	Control leakage through defective internal heating coils by monitoring the steam return and exhaust lines...	SPCC § 4.5
(c)(8)	Engineer or update each container installation in accordance with good engineering practice to avoid discharges (and) provide at least one of the following devices:	---
(c)(8)(i)	High liquid level alarms with an audible or visual signal at a constantly attended operation or surveillance station. In smaller facilities, an audible air vent may suffice.	SPCC § 4.1
(c)(8)(ii)	High liquid level pump cutoff devices set to stop flow at a predetermined container content level.	SPCC § 4.1
(c)(8)(iii)	Direct audible or code signal communication between the container gauger and the pumping station.	SPCC § 4.1
(c)(8)(iv)	A fast response system for determining the liquid level of each bulk storage container such as digital computers, telepulse, or direct vision gauges.	SPCC § 4.1
(c)(8)(v)	You must regularly test liquid level sensing devices to ensure proper operation.	SPCC § 4.1

**U.S. EPA – SPCC**  
**40 CFR § 112.3,5,7,8 (Cont'd)**

<b>40 CFR § 112</b>	<b>BRIEF DESCRIPTION</b>	<b>SECTION</b>
(c)(9)	Observe effluent treatment facilities frequently enough to detect possible system upsets that could cause a discharge...	SPCC § 6.2
(c)(10)	Promptly correct visible discharges which result in a loss of oil from container including...seam, gaskets, piping, pumps, valves...	SPCC § 2.2
(c)(11)	Position or locate mobile or portable oil storage container to prevent a discharge as described in § 112.1(b). Except for mobile refuelers and other non-transportation-related tank trucks, you must furnish a secondary means of containment, such as a dike or catchment basin, sufficient to contain the capacity of the largest single compartment or container with sufficient freeboard to contain precipitation.	SPCC § 4.4
(d)	<i>Facility transfer operations, pumping, and facility process</i>	----
(d)(1)	Provide buried piping... installed or replaced on or after August 16, 2002, with a protective wrapping and coating...cathodically protect. If a section of buried line is exposed...carefully inspect it for deterioration. If you find corrosion damage, you must undertake additional examination and corrective action as indicated...	SPCC § 5.1
(d)(2)	Cap or blank-flange the terminal connection...and mark it as to origin when piping is not in service, or in standby service for an extended time.	SPCC § 5.2
(d)(3)	Properly design pipe supports to minimize abrasion and corrosion and allow for expansion and contraction.	SPCC § 5.3
(d)(4)	Regularly inspect all aboveground valves, piping, and appurtenances. ...also conduct integrity and leak testing on buried piping at the time of installation, modification, construction, relocation, or replacement.	SPCC § 5.3
(d)(5)	Warn all vehicles entering the facility to be sure that no vehicle will endanger aboveground piping or other oil transfer operations.	SPCC § 5.4

**DOT/PHMSA 49 CFR Part 194**  
**Interim Final Rule - December 28, 1992**  
**CROSS REFERENCE**

§ 194.105	BRIEF DESCRIPTION	LOCATION in PLAN																					
(a)	... determine the worst case discharge ... provide methodology, including calculations, used to arrive at the volume.	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) ...	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.	N/A																					
(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 (cubic meters).	N/A																					
(b)(4)	Operators may claim prevention credits for breakout tank secondary containment and other specific spill prevention measures as follows <table border="1" style="margin-left: 20px;"> <thead> <tr> <th style="text-align: left;">Prevention measure</th> <th style="text-align: left;">Standard</th> <th style="text-align: left;">Credit (%)</th> </tr> </thead> <tbody> <tr> <td>Secondary containment &gt; 100%</td> <td>NFPA 30</td> <td>50</td> </tr> <tr> <td>Built/repaired to API standards</td> <td>API STD 620/650/653</td> <td>10</td> </tr> <tr> <td>Overfill protection standards</td> <td>API RP 2350</td> <td>5</td> </tr> <tr> <td>Testing/cathodic protection</td> <td>API STD 650/651/653</td> <td>5</td> </tr> <tr> <td>Tertiary containment/drainage/treatment</td> <td>NFPA 30</td> <td>5</td> </tr> <tr> <td><b>Maximum allowable credit</b></td> <td></td> <td><b>75</b></td> </tr> </tbody> </table>	Prevention measure	Standard	Credit (%)	Secondary containment > 100%	NFPA 30	50	Built/repaired to API standards	API STD 620/650/653	10	Overfill protection standards	API RP 2350	5	Testing/cathodic protection	API STD 650/651/653	5	Tertiary containment/drainage/treatment	NFPA 30	5	<b>Maximum allowable credit</b>		<b>75</b>	N/A
Prevention measure	Standard	Credit (%)																					
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<b>Maximum allowable credit</b>		<b>75</b>																					

§ 194.107	BRIEF DESCRIPTION	LOCATION in PLAN
(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.	§5.0, Fig. 2.1, 2.2, 2.4, 2.5, App. C
(b)	Each response plan must be consistent with the NCP and each applicable ACP. An operator must certify that it has reviewed the NCP and each applicable ACP and that the response plan is consistent with the existing NCP and each existing applicable ACP.	Statement of NCP/ACP Consistency, §1.5
(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.	App. H
(c)(1)(iv)	The name, address, and telephone number of the oil spill response organization, if appropriate.	Fig. 2.5
(c)(1)(v)	Response activities and response resources.	§2.0, 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.	Fig. 2.2, App. K
(c)(1)(viii)	Equipment testing.	App. K
(c)(1)(ix)	Drill types, schedules, and procedures.	App. K
(c)(1)(x)	Plan review and update procedures.	§1.4
(c)(2)	An appendix for each response zone. Each response zone appendix must include the information required in paragraph (d)(1) (i) to (ix) of this section that is specific to the response zone and the worst case discharge calculations.	N/A
(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

**DOT/PHMSA 49 CFR Part 194**  
**Interim Final Rule - December 28, 1992**  
**CROSS REFERENCE (Cont'd)**

§ 194.113	BRIEF DESCRIPTION	LOCATION in PLAN
(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 name and telephone number of the qualified individual available on a 24-hour basis.	Fig. 1.3, 2.2
(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. 1.1, 1.3
(b)(5)	The basis for the operator's determination of significant and substantial harm.	Fig. 1.3
(b)(6)	The type of oil and volume of the worst case discharge.	SPCC – App. A, App. G

§ 194.115	BRIEF DESCRIPTION	LOCATION in PLAN
(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.	§2.0, 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.	§2.0, App. C

**DOT/PHMSA 49 CFR Part 194**  
**Interim Final Rule - December 28, 1992**  
**CROSS REFERENCE (Cont'd)**

§ 194.117	BRIEF DESCRIPTION	LOCATION in PLAN
(a)	Each operator shall conduct training to ensure that:	----
(a)(1)	All personnel know --	----
(a)(1)(i)	Their responsibilities under the response plan	§2.0, App. B
(a)(1)(ii)	The name and address of, and the procedure for contacting, the operator on a 24-hour basis	§2.0
(a)(1)(iii)	The name of, and procedures for contacting, the qualified individual on a 24-hour basis	§2.0
(a)(2)	Reporting personnel know --	----
(a)(2)(i)	The content of the information summary of the response plan.	§1.0
(a)(2)(ii)	The toll-free telephone number of the National Response Center	§2.0
(a)(2)(iii)	The notification process	§2.0, App. B
(a)(3)	Personnel engaged in response activities know --	----
(a)(3)(i)	The characteristics and hazards of the oil discharged	Fig. 3.3
(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, App. B, App. G
(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, App. B
(a)(3)(iv)	The proper firefighting procedures and use of equipment, fire suits, and breathing apparatus, where applicable.	Fig. 3.1, 5.2
(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	App. K
(b)(2)	Records for personnel engaged in response, other than operator personnel, shall be maintained as determined by the operator.	App. C, App. K
(c)	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 ...	App. B

**Texas Oil Spill Prevention and Response Act of 1991**  
**31 TAC Section 19.13; effective October 30, 2002**  
**Requirements for Discharge Prevention and Response Plans**  
**CROSS REFERENCE**

31 TAC 19.13	DESCRIPTION OF GUIDELINE ITEM	LOCATION IN PLAN
(a)	Applicability. The section applies to any person who operators a waterfront or offshore facility and must obtain a discharge prevention and response certificate.	----
(b)	Implementation of plans. An operator of any facility that requires a certification must develop and implement a written discharge prevention and response plan.....	Entire Plan
(c)	Required elements of discharge prevention and response plans.....include the following information	----
(1)	The owner and operator of the facility;	Fig. 1.3
(2)	The person or persons in charge of the facility, as required by §19.16 of this title (relating to Person in Charge);	Fig. 1.3
(3)	The name and address (both physical and mailing) of the facility;	Fig. 1.3
(4)	A description of the facility, including;	----
(A)	The location of the facility by latitude and longitude;	Fig. 1.3
(B)	The facility's primary activity;	Fig. 1.3
(C)	The types of oil handled, whether material safety data sheets (MSDS) have been prepared for them, and the location where the MSDS are maintained;	Fig. 1.3
(D)	The storage capacity of each tank used for storing oil;	SPCC Plan
(E)	The diameter of all lines through which oil is transferred;	Fig. 1.3, SPCC Plan
(F)	The average daily throughput of oil at the facility; and	App. H
(G)	The dimensions and capacity in barrels of the largest oil-handling vessel which docks at the facility.	Fig. 1.3
(5)	For a facility which normally does not have personnel on-site, a commitment to maintain in a prominent location a sign or placard which states that the GLO and National Response Center are to be notified of an oil spill.....	NA
(6)	A general description of measures taken by the facility to prevent unauthorized discharges of oil;	SPCC Plan
(7)	A plan to conduct an annual oil spill drill that entails notifying the GLO and National Response Center and keeping a log at the facility which documents when the notification drill was conducted and facility personnel who participated in it;	Fig. 2.4, § 4.6
(8)	If oil is transferred at the facility, emergency transfer procedures to be implemented if an actual or threatened unauthorized discharge of oil occurs at the facility;	§ 2.0, § 3.1, Fig. 3.1
(9)	Strategic plans to contain and clean up unauthorized discharges of oil from the facility;	SPCC Plan
(10)	A statement that all facility personnel who might be involved in an oil spill response have been informed that detergents or other surfactants are prohibited from being used on an oil spill in the water, and that dispersants can only be used with the approval of the Regional Response Team.....;	§ 3.3
(11)	A description of any secondary containment or diversionary structures or equipment at the facility to prevent discharged oil from reaching coastal waters, including the methodology for determining that the structures or equipment are adequate to prevent oil from reaching coastal waters.	SPCC Plan
(d)	Additional requirements for facilities classified as intermediate.....	NA
(e)	Additional requirements for facilities classified as large. In addition to the requirements in §19.13 (c).....include the following information:	----
(1)	Maps showing vehicular access to the facility, pipeline to and from the facility and nearby residential or other populous areas;	Fig. 1.2(d), Fig. 1.2(e)
(2)	A site plan of the facility showing:	----
(A)	The locations of all structures in which oil is stored;	Fig. 1.2, Fig. 1.2(c)
(B)	The location of all areas where oil is transferred at the facility; and	Fig. 1.2
(C)	Drainage and diversion systems at the facility, such as sewers, outfalls, catchment or containment systems or basins, sumps, and all watercourses into which surface runoff from the facility drains (all of which may be shown on the site plan or maps);	SPCC Plan Drainage Diagram
(3)	A plan to conduct an annual oil spill drill that includes the following elements:	----
(A)	Notifying the GLO and National Response Center;	Fig. 2.4
(B)	Notifying any third parties, such as discharge cleanup organizations, which have agreed to respond to an oil spill and confirming they would be able to respond to an oil spill at the facility on the day of the drill;	Fig. 2.4, Fig. 2.5
(C)	If the facility has spill response equipment stored on-site, deployment of a representative portion of the equipment which would be used to respond to the type of discharge most likely to occur at the facility; and	§ 4.6

**Texas Oil Spill Prevention and Response Act of 1991**  
**31 TAC Section 19.13, effective October 30, 2002**  
**Requirements for Discharge Prevention and Response Plans**  
**CROSS REFERENCE (Cont'd)**

	DESCRIPTION OF GUIDELINE ITEM	LOCATION IN PLAN
(D)	A log documenting when the annual drill was conducted and the facility personnel who participated in it;	App. K
(4)	A detailed description of the facility's discharge prevention and response capability, including:	---
(A)	Leak detection and safety systems to prevent accidental discharges of oil, including a description of equipment and procedures;	SPCC Plan
(B)	Schedules, methods, and procedures for testing and maintaining, and inspecting storage tanks, pipelines, and other equipment used for handling oil;	SPCC Plan
(C)	Schedules, methods, and procedures for conducting accidental discharge response drills;	§ 4.6
(D)	Whether the facility's oil spill response capability will primarily be based on contracts or agreements with third parties or on the facility's own personnel and equipment;	§ 5.1
(E)	Planned response actions, the chain of command, lines of communications, and procedures for notifying the GLO, emergency response and public safety entities, other agencies, and neighboring facilities in the event of an unauthorized discharge of oil;	Fig. 2.4, Fig. 2.5, § 3.1, Fig. 3.1, § 4.2, § 4.3, § 4.4
(F)	Oil spill response equipment and supplies located at the facility, their ownership and locations, and the time required to deploy them;	App. C
(G)	If the facility owns and maintains oil spill response equipment, the schedules, methods, and procedures for maintaining the equipment in a state of constant readiness for deployment;	App. C
(H)	If the operator has entered into any spill response or cleanup contracts or basic ordering agreements with a discharge cleanup organization, copies of the contracts or organizations or a narrative description of their teams;	App. C
(I)	The worst case unauthorized discharge of oil reasonably likely to occur at the facility and the rationale used to determine the worst case unauthorized discharge;	App. G
(J)	A description and map of environmentally sensitive areas that would be impacted by the worst case unauthorized discharge and plans for protecting these areas if an oil spill occurs at the facility;	§ 6.0
(K)	A description of response strategies that would be implemented to contain and clean up the worst case unauthorized discharge;	§ 6.0
(L)	Information on the facility's program for training facility personnel on accidental discharge prevention and response;	§ 4.6
(M)	Information on facility personnel who have been specifically designated to respond to an oil spill including any training they have received and where the training records are maintained;	Fig. 1.3, Fig. 2.2
(N)	Plans for transferring oil during an emergency; plans for recovering, storing, separating, transporting, and disposing of oily waste materials generated during an oil spill response; and	App. F
(O)	Plans for providing emergency medical treatment, site safety, and security during an oil spill.	§ 3.7

**U.S. EPA (RCRA)  
40 CFR PART 265.52  
Subpart D**

265.52	CONTINGENCY PLAN	LOCATION IN PLAN
(a)	Action to be taken by facility personnel	ICP-ERAP 20-34
(b)	SPCC Plan	ICP-SPCC
(c)	Local, Police, Fire, Hospitals, Contractors	ICP-ERAP 14-16
(d)	Emergency QI, contacts	ICP-ERAP 10-11
(e)	Emergency Equipment	ICP-ERAP 40-41 and Appendix C
(f)	Evacuation Plan	ICP-ERAP 33-34 and Appendix D

# Pasadena Refining System, Inc.

## Corporate Environmental Policy and Principles

Pasadena Refining System, Inc. and its subsidiaries are dedicated to conducting their operations in an environmentally sound and responsible manner. This commitment extends from the refining of crude oil to the distribution and marketing of our products. In keeping with this commitment, we will employ our best efforts to:

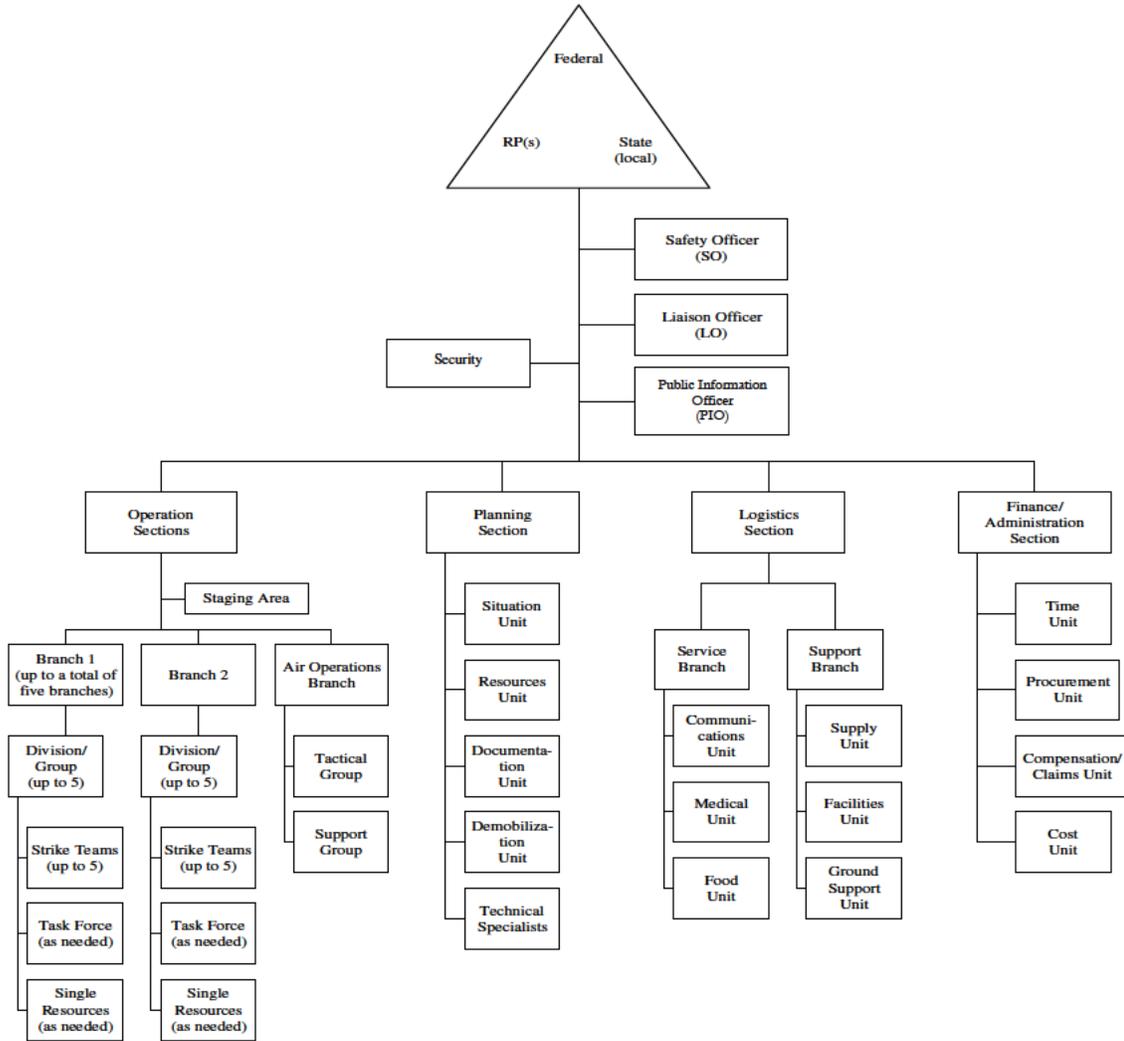
- ✓ Comply with all applicable environmental laws and regulations and work cooperatively with all levels of government in such matters;
- ✓ Maintain an effective environmental compliance program, which is supported by adequate resources and includes environmental training and regular audits;
- ✓ Assure that our products and waste materials are produced, stored, transported, distributed and disposed of in an environmentally safe manner;
- ✓ Encourage energy efficiency and conservation and minimize the generation of waste and the discharge of pollutants into the environment;
- ✓ Properly maintain our facilities and prominently integrate environmental considerations into the construction and expansion of our facilities;
- ✓ Implement emergency response planning programs to address threats to human health and the environment, including procedures for promptly alerting government officials about environmental incidents related to our operations; and
- ✓ Respond in a timely manner to community concerns about the environmental impact of our operations.
- ✓ Identified deficiencies must be mitigated promptly. Mitigation is preferably done by permanent elimination of the deficiency.

## **APPENDIX B**

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### **INCIDENT COMMAND SYSTEM (ICS) AND RESPONSE TEAM JOB DESCRIPTIONS**

# Standard Incident Command System



## INTRODUCTION

This appendix is intended to be a guidance document in forming a response management system for oil spills. This is based on the USCG published Incident Management Handbook (IMH) COMDTPUB P3120.17 dated April, 2001, which is the product of the Standard Oil Spill Response Management System (STORMS) Task Force comprised of representatives from United States Coast Guard, California Department of Fish and Game/Office of Oil Spill Prevention and Response, petroleum industry, oil spill response organizations and local government. The Task Force adopted the National Incident Management System (NIMS) Incident Command System (ICS) which is the predominant public domain response management system in use nationwide. This system is consistent with the National Contingency Plan (NCP). The IMH has been read and endorsed by Firescope California as ICS appropriate.

This system provides for maximum flexibility in varied situations, but specific training is required for effective implementation. The FOG is intended to be a tool to supplement that training rather than a stand alone document. By reading the general instructions, the common unit leader responsibilities, the position descriptions and checklists a responder will be guided in their duties within the ICS.

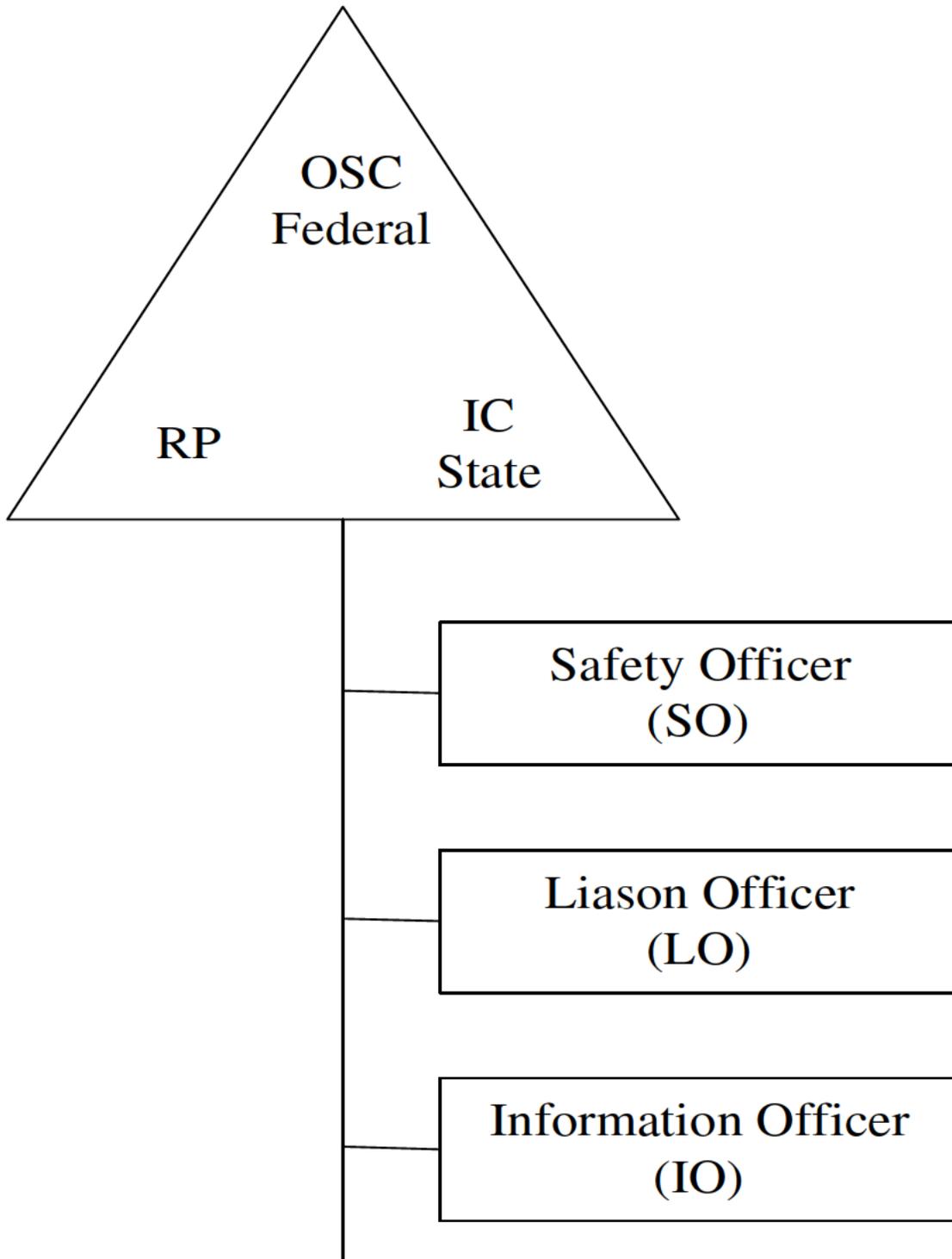
The prior diagram provides an outline of a generic response organization for pre-event planning. However, an actual organization will be event specific. Not all positions need be filled. The size of the organization is dependent on the magnitude of the incident and can be expanded or contracted as necessary.

Personnel with specialized skills (technical specialists), not specifically identified within the ICS, have the flexibility to integrate anywhere within the organization to meet the needs of the Incident Commander. This feature allows the greatest compatibility with other existing response management systems.

The following are responsibilities applicable to all ICS personnel:

1. Receive assignment, notification, reporting location, reporting time and travel instructions from your home agency.
2. Upon arrival at the incident, check-in at designated check-in locations. Check-in locations may be found at:
  - Incident Command Post,
  - Base or Camps, Staging Areas, Helibases,
  - Division Supervisors (for direct line assignments).
3. Agency representatives from assisting or cooperating agencies report to Liaison Officer at the Command Post after checking in.
4. All radio communications to Incident Communications Center will be addressed: "(Incident Name) Communications".
5. Use clear text and ICS terminology (no codes) in all radio transmissions.
6. Receive briefing from immediate supervisor.
7. Acquire work materials.
8. Organize, assign and brief subordinates.
9. Complete forms and reports required of the assigned position and send material through supervisor to Documentation Unit.
10. Respond to demobilization orders.
11. Brief subordinates regarding demobilization.

**Unified Command Structure/  
Incident Command System**



**INCIDENT COMMANDER**

Incident Commanders for oil discharges will, whenever possible and practical, be organized under the Unified Command Structure which includes, but not limited to:

- The predesignated federal On Scene Coordinator (OSC).
- The predesignated State Incident Commander (State IC).
- The representative of the Responsible Party (RP).

The Unified Command is responsible for the overall management of the incident. The Unified Command directs incident activities including the development and implementation of strategic decisions and approves the ordering and releasing of resources. The Unified Command may assign Deputy Incident Commanders to assist in carrying out Incident Command responsibilities.

**PUBLIC INFORMATION OFFICER**

The Public Information Officer is responsible for developing and releasing information about the incident to the news media, to incident personnel, and to other appropriate agencies and organizations.

Only one Information Officer will be assigned for each incident, including incidents operating under Unified Command and multijurisdictional incidents. The Information Officer may have assistants as necessary, and the assistants may also represent assisting agencies or jurisdictions.

**SAFETY OFFICER**

The Safety Officer is responsible for monitoring and assessing hazardous and unsafe situations and developing measures for assuring personnel safety. The Safety Officer will correct unsafe acts or conditions through the regular line of authority, although the Safety Officer may exercise emergency authority to stop or prevent unsafe acts when immediate action is required. The Safety Officer maintains awareness of active and developing situations, ensures the preparation and implementation of the Site Safety Plan, and includes safety messages in each Incident Action Plan.

**LIAISON OFFICER**

Incidents that are multi-jurisdiction, or have several agencies involved, may require the establishment of the Liaison Officer position on the Command Staff.

**AGENCY REPRESENTATIVES**

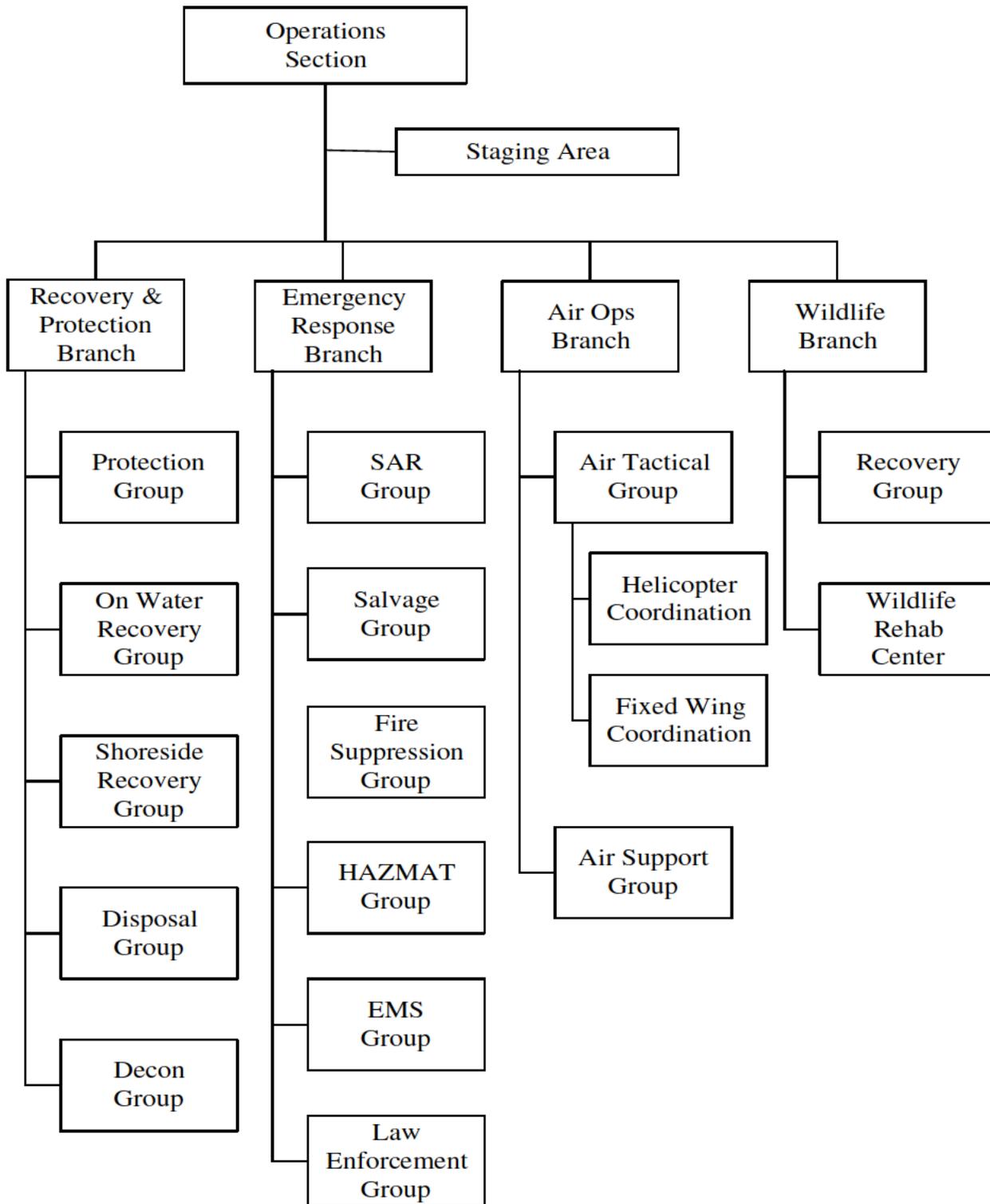
In many incidents involving multiple jurisdictions, an agency or jurisdiction will send a representative to assist in coordination efforts.

An Agency Representative is an individual assigned to an incident from an assisting or cooperating agency who has been delegated authority to make decisions on matters affecting that agency's participation at the incident. Agency Representatives report to the Liaison Officer, or to the Incident Commander in the absence of the Liaison Officer.

**NRDA REPRESENTATIVE**

The Natural Resource Damage Assessment (NRDA) Representative is responsible for coordinating NRDA needs and activities of the trustee team within the ICS spill response operations. This includes close coordination with the Liaison Officer for obtaining timely information on the spill and injuries to natural resources. The Representative will coordinate NRDA or injury determination activities.

## OPERATIONS SECTION



**OPERATIONS SECTION CHIEF**

The Operations Section Chief is responsible for the management of all operations directly applicable 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 Plans as necessary, and reports such to the Incident Commander.

**STAGING AREA MANAGER**

Under the Operations Section Chief, the Staging Area Manager is responsible for managing all activities within the designated staging areas.

**BRANCH DIRECTOR**

The Branch Directors when activated, are under the direction of the Operations Section Chief, and are responsible for the implementation of the portion of the Incident Action Plan appropriate to the Branches.

**DIVISION/GROUP SUPERVISOR**

The Division and/or Group 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/group, and reporting on progress of control operations and status of resources within the division/group.

**STRIKE TEAM/TASK FORCE LEADER**

The Strike Team/Task Force Leader reports to a Division/Group Supervisor and is responsible for performing tactical assignments assigned to the Strike Team or Task Force. The leader reports work progress, resources status, and other important information to a division/group supervisor, and maintains work records on assigned personnel.

**SINGLE RESOURCE**

The person in charge of a single tactical resource will carry the unit designation of the resource.

**AIR OPERATIONS BRANCH DIRECTOR**

The Air Operations Branch Director, who is ground based, is primarily responsible for preparing the air operations portion of the Incident Action Plan. The Incident Action Plan will reflect agency restrictions that have an impact on the operational capability or utilization of resources such as night flying or hours per pilot. After the Incident Action Plan is approved, air operations is responsible for implementing its strategic aspects, those that relate to the overall incident strategy as opposed to those that pertain to tactical operations like specific target selection. Additionally, the Air Operations Branch Director is responsible for providing logistical support to helicopters operating on the incident. Specific tactical activities including target selection, or suggested modifications to specific tactical actions in the Incident Action Plan, are normally performed by the Air Tactical Group Supervisor working with ground and air resources.

**AIR TACTICAL GROUP SUPERVISOR**

The Air Tactical Group Supervisor is primarily responsible for the coordination and scheduling of aircraft operations intended to locate, observe, track, survey, support dispersant applications, or other deliverable response application techniques, or report on the incident situation when fixed and/or rotary-wing aircraft are airborne at an incident. These coordination activities are performed by the Air Tactical Group Supervisor while airborne. The Air Tactical Group Supervisor reports to the Air Operations Branch Director.

**HELICOPTER COORDINATOR**

The Helicopter Coordinator is primarily responsible for the coordination of all tactical or logistical helicopter missions while in flight over the mission. The Helicopter Coordinator is also responsible for the coordination and scheduling of helicopter operations intended to locate, observe, track, survey, or report on the incident situation. The Helicopter Coordinator coordinates the application of dispersants, in-situ burning agents and bioremediation agents. The Helicopter Coordinator reports to the Air Tactical Group Supervisor.

**FIXED WING COORDINATOR**

The Fixed Wing Coordinator is primarily responsible for the coordination of assigned airborne fixed-wing aircraft operations at the incident. The Fixed Wing Coordinator is also responsible for the scheduling of fixed wing operations intended to locate, observe, track, survey, or report on the incident situation. The Fixed Wing Coordinator coordinates the application of dispersants, in-situ burning agents, and bioremediation agents. The Fixed Wing Coordinator reports to the Air Tactical Group Supervisor.

**AIR SUPPORT GROUP SUPERVISOR**

The Air Support Group Supervisor is primarily responsible for supporting and managing helibase and helispot operations, and maintaining liaison with fixed-wing air bases. This includes providing: 1) fuel and other supplies, 2) maintenance and repair of helicopters, 3) keeping records of helicopter activity, and 4) providing enforcement of safety regulations. These major functions are performed at helibases and helispots. Helicopters during landing and takeoff and while on the ground are under the control of the air support group's Helibase or Helispot managers. The Air Support Group Supervisor reports to the Air Operations Branch Director.

**HELIBASE MANAGER**

The Helibase Manager is primarily responsible for managing the helibase operations. This includes: 1) ensuring helibase is posted, 2) ensuring that helicopter fueling, maintenance, and repair services are provided, 3) supervising manifesting and loading of personnel and cargo, and 4) ensuring crash-rescue services are provided for the helibase. The Helibase Manager reports to the Air Support Group Supervisor.

**RECOVERY AND PROTECTION BRANCH DIRECTOR**

The Recovery and Protection Branch Director is responsible for overseeing and implementing the protection, containment and cleanup activities established in the Incident Action Plan. The Recovery and Protection Branch Director reports to the Operations Section Chief.

**PROTECTION GROUP SUPERVISOR**

Under the Recovery and Protection Branch Director, the Protection Group Supervisor is responsible for the deployment of containment, diversion, and absorbing boom in designated locations. Depending on the size of the incident, the Protection Group may be further divided into teams, task forces and single resources.

**ON WATER RECOVERY GROUP SUPERVISOR**

Under the Recovery and Protection Branch Director, the On Water Recovery Group Supervisor is responsible for managing on water recovery operations in compliance with the Incident Action Plan. The Group may be further divided into teams, task forces and single resources.

**SHORESIDE RECOVERY GROUP SUPERVISOR**

Under the Recovery and Protection Branch Director, the Shoreside Recovery Group Supervisor is responsible for managing shoreside cleanup operations in compliance with the Incident Action Plan. The group may be further divided into Strike Teams, Task Forces and single resources.

**DISPOSAL GROUP SUPERVISOR**

Under the Recovery and Protection Branch Director, the Supervisor of the Disposal Group Supervisor is responsible for coordinating the on site activities of personnel engaged in collecting, storing, transporting, and disposing of waste materials. Depending on the size and location of the spill, the disposal groups may be further divided into teams, task forces, and single resources.

**DECONTAMINATION GROUP SUPERVISOR**

Under the Recovery and Protection Branch Director, the Decontamination Group Supervisor is responsible for decontamination of personnel and response equipment in compliance with approved statutes.

**EMERGENCY RESPONSE BRANCH DIRECTOR**

The Emergency Response Branch Director is primarily responsible for overseeing and implementing emergency measures to protect life, mitigate further damage to the environment, and stabilize the situation.

**SEARCH AND RESCUE (SAR) GROUP SUPERVISOR**

Under the direction of the Emergency Response Branch Director, the SAR Group Supervisor is responsible for prioritization and coordination of all Search and Rescue missions directly related to a specific incident.

**SALVAGE GROUP SUPERVISOR**

Under the direction of the Emergency Response Branch Director, the Salvage Group Supervisor is responsible for coordinating and directing all salvage activities related to the incident.

**FIRE SUPPRESSION GROUP SUPERVISOR**

Under the direction of the Emergency Response Branch Director, the Fire Suppression Group Supervisor is responsible for coordinating and directing all firefighting activities related to the incident.

**HAZARDOUS MATERIALS GROUP SUPERVISOR**

Under the direction of the Emergency Response Branch Director, the HAZMAT Group Supervisor is responsible for coordinating and directing all hazardous materials activities related to the incident.

**MEDICAL GROUP (EMS) SUPERVISOR**

Under the direction of the Emergency Response Branch Director, the Medical (EMS) Group Supervisor is responsible for coordinating and directing all emergency medical services related to the incident.

**LAW ENFORCEMENT GROUP SUPERVISOR**

Under the direction of the Emergency Response Branch Director, the Law Enforcement Group Supervisor is responsible for coordinating and directing all law enforcement activities, related to the incident, which may include, but not limited to isolating the incident, crowd control, traffic control, evacuations, beach closures and/or perimeter security.

**WILDLIFE BRANCH DIRECTOR**

The Wildlife Branch Director is responsible for minimizing wildlife losses during spill responses; coordinating early aerial and ground reconnaissance of the wildlife at the spill site and reporting results to the Situation Unit Leader; employing wildlife hazing measures as authorized in the Incident Action Plan; and recovering and rehabilitating impacted wildlife. A central wildlife processing center should be identified and maintained for: evidence tagging, transportation, veterinary services, treatment and rehabilitation storage and other support needs. The activities of private wildlife care groups, including those employed by the responsible party, will be overseen and coordinated by the Wildlife Branch Director.

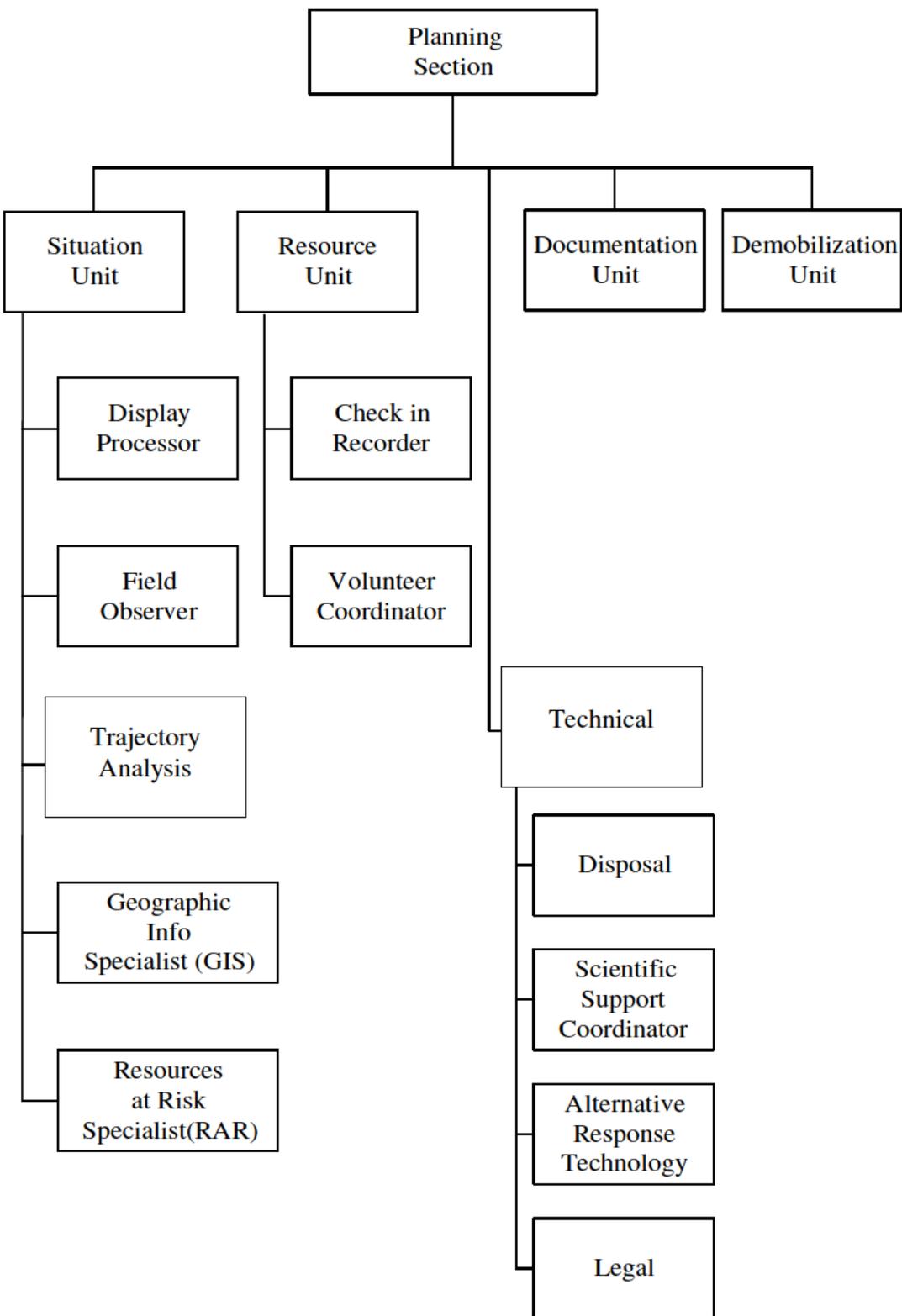
**WILDLIFE RECOVERY GROUP SUPERVISOR**

Under the direction of the Wildlife Branch Director, the Wildlife Recovery Group Supervisor is responsible for coordinating the search for collection and field tagging of dead and live impacted wildlife and transporting them to processing center(s). This group should coordinate with Planning (Situation Unit) in conducting aerial and group surveys of wildlife population in the vicinity of the spill. They should also deploy acoustic and visual wildlife hazing equipment as needed.

**WILDLIFE REHABILITATION CENTER**

Under the direction of the Wildlife Branch Director, the Wildlife Rehabilitation Center is responsible for receiving oiled wildlife at processing center, recording essential information, collecting necessary samples, and conducting triage, stabilization, treatment, transport and rehabilitation of oiled wildlife. The center is responsible for assuring appropriate transportation to appropriate treatment centers for oiled animals requiring extended care and treatment.

## PLANNING SECTION



**PLANNING SECTION CHIEF**

The Planning Section Chief, a member of the General Staff, is responsible for the collection, evaluation, dissemination and use of information about the development of the incident and status of resources. Information is needed to 1) understand the current situation, 2) predict probable course of incident events, and 3) prepare alternative strategies for the incident.

**SITUATION UNIT LEADER**

The Situation Unit Leader is responsible for the collection and evaluation of information about the current and possible future status of the spill and the spill response operations. This responsibility includes the compilation of information regarding the type and amount of oil spilled, the amount of oil recovered, the oil's current location and anticipated trajectory, and impacts on natural resources. This responsibility includes providing information to the GIS Specialist(s) for the creation of maps to depict the current and possible future situation and the preparation of reports for the Planning Section Chief.

**DISPLAY PROCESSOR**

The Display Processor is responsible for the display of incident status information obtained from Field Observers, resource status reports, aerial and other photographs and infrared data.

**FIELD OBSERVER**

The Field Observer is responsible to collect situation information from personal observations at the incident and provide this information to the Situation Unit Leader.

**TRAJECTORY ANALYSIS**

The Trajectory Analysis is responsible for providing to the Unified Command projections and estimates of the movement and behavior of the spill. The specialist will combine visual observations, remote sensing information, computer modeling as well as observed and predicted tidal, current and weather data to form these analyses. Additionally, the specialist is responsible for interfacing with local experts (weather service, academia, researchers, etc.) in formulating these analyses. Trajectory maps, overflight maps, tides and current data, and weather forecasts will be supplied by the specialist to the Situation Unit for dissemination throughout the Command Post.

**GEOGRAPHIC INFORMATION SYSTEM (GIS) SPECIALIST** The GIS Specialist is responsible for gathering and compiling updated spill information and providing various map products to the incident. The GIS team will work with the Situation Unit and the information management officer to ensure accurate and rapid dissemination of oil spill information to the ICS.

**RESOURCES AT RISK (RAR) TECHNICAL SPECIALIST**

The Resources at Risk Technical Specialist is responsible for the identification of resources thought to be at risk from exposure to the spilled oil through the analysis of known and anticipated oil movement and the location of natural, cultural, and economic resources. The Resources at Risk Technical Specialist considers the relative importance of the resources and the relative risk to develop a priority list for protection.

**RESOURCE UNIT LEADER**

The Resource Unit Leader (RESTAT) is responsible for maintaining the status of all resources (primary and support) at an incident. RESTAT achieves this through development and maintenance of a master list of all resources, including check-in, status, current location, etc. This unit is also responsible for preparing parts of the Incident Action Plan (ICS 203, 204 & 207) and compiling the entire plan in conjunction with other members of the ICS, (e.g., Situation Unit, Operations, Logistics) and determines the availability of resources.

**CHECK-IN RECORDER**

Check-in recorders are needed at each check-in location to ensure that all resources assigned to an incident are accounted for.

**VOLUNTEER COORDINATOR**

The Volunteer Coordinator is responsible for managing and overseeing all aspects of volunteer participation, including recruitment, induction and deployment. The Volunteer Coordinator is part of the Planning Section and reports to the Resources Unit Leader.

**DOCUMENTATION UNIT LEADER**

The Documentation Unit Leader is responsible for the maintenance of accurate, up-to-date incident files. Examples of incident documentation include: Incident Action Plan, incident reports, communication logs, injury claims, situation status reports, etc. Thorough documentation is critical to post-incident analysis. Some of these documents may originate in other sections. This unit shall ensure each section is maintaining and providing appropriate documents. Incident files will be stored for legal, analytical, and historical purposes. The Documentation Unit also provides duplication and copying services.

**DEMOBILIZATION UNIT LEADER**

The Demobilization Unit Leader is responsible for developing the Incident Demobilization Plan, and assisting Sections/Units in ensuring that an orderly, safe, and cost effective demobilization of personnel and equipment is accomplished from the incident.

**TECHNICAL**

Technical are advisors with special skills needed to support the incident. Technical may be assigned anywhere in the ICS organization. If necessary, Technical may be formed into a separate unit. The Planning Section will maintain a list of available specialists and will assign them where needed. The following are example position descriptions for Technical that might be utilized during an oil spill response.

**LEGAL SPECIALIST**

The Legal Specialist will act in an advisory capacity during an oil spill response.

**SCIENTIFIC SUPPORT COORDINATOR SPECIALIST**

The Scientific Support Coordinator (SSC), in accordance with the National Contingency Plan, will provide the federal On Scene Coordinator (OSC) scientific advice with regard to the best course of action during a spill response. The SSC will obtain consensus from the Federal Natural Resource Trustee Agencies and provide spill trajectory analysis data, information on the resources at risk, weather information, tidal and current information, etc. The SSC will be the point of contact for the Scientific Support Team from National Oceanic and Atmospheric Administration's (NOAA) Hazardous Material Response and Assessment Division.

**SAMPLING SPECIALIST**

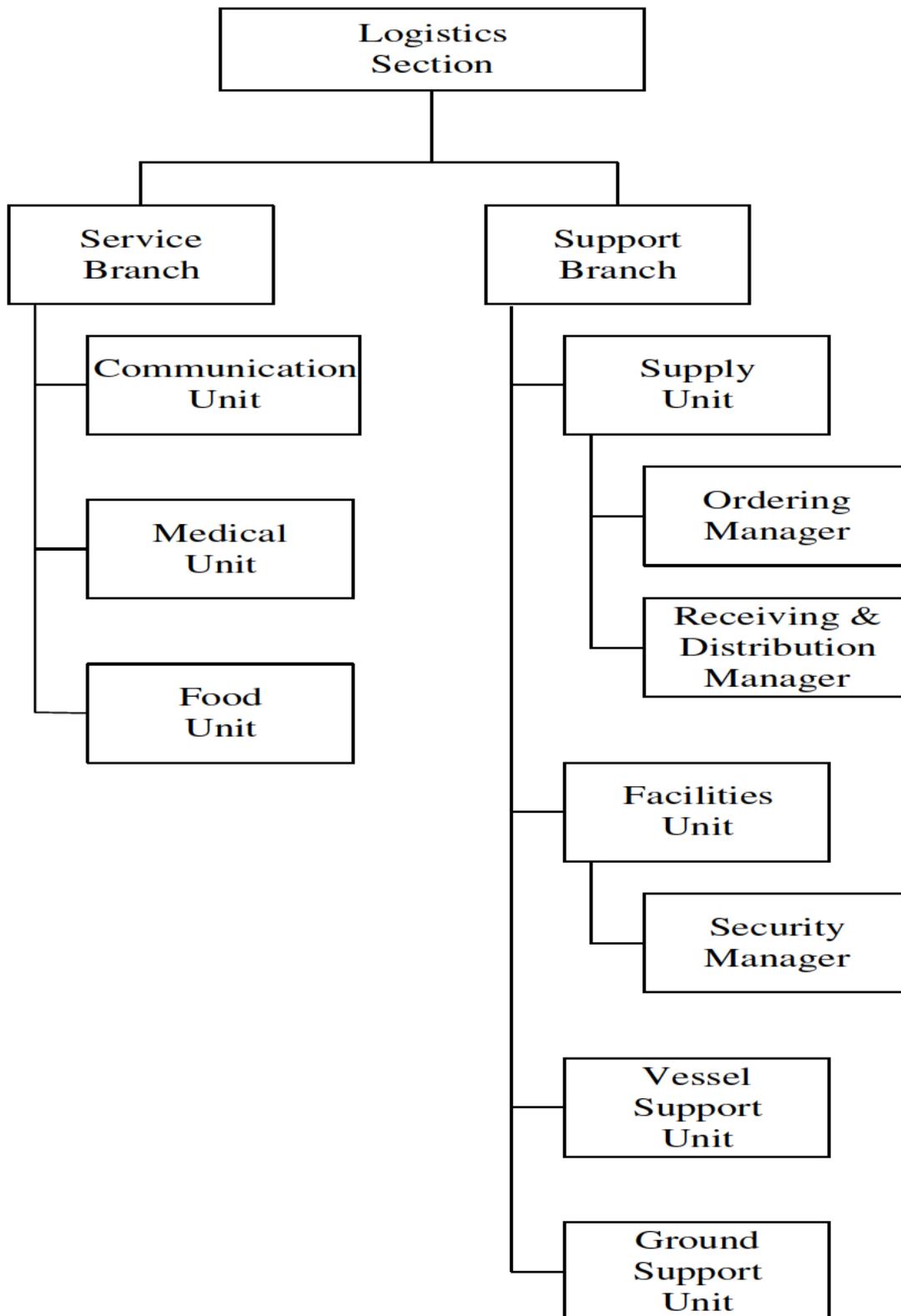
The Sampling Specialist is responsible for providing a sampling plan for the coordinated collection, documentation, storage, transportation and submittal to appropriate laboratories for analysis or storage.

**DISPOSAL (WASTE MANAGEMENT) SPECIALIST**

The Disposal (Waste Management) Specialist is responsible for providing the Planning Section Chief with a Disposal Plan that details the collection, sampling, monitoring, temporary storage, transportation, recycling, and disposal of all anticipated response wastes.

**ALTERNATIVE RESPONSE TECHNOLOGIES (ART) SPECIALIST**

The Alternative Response Technologies Specialist is responsible for evaluating the opportunities to use ART, including dispersant or other chemical countermeasures, in-situ burning, and bioremediation. The specialist will conduct the consultation and planning required to deploy a specific ART, and articulate the environmental tradeoffs of using or not using a specific ART.

**LOGISTICS SECTION**

**LOGISTICS SECTION CHIEF**

The Logistics Section Chief, a member of the General Staff, is responsible for providing facilities, services, and material in support of the incident. The Logistics Section Chief participates in development and implementation of the Incident Action Plan and activates and supervises Branches and Units within the Logistics Section.

**SERVICE BRANCH DIRECTOR**

The Service Branch Director, when activated, is under the supervision of the Logistics Section Chief, and is responsible for the management of all service activities at the incident. The Branch Director supervises the operations of the Communications, Medical, and Food Units.

**COMMUNICATIONS UNIT LEADER**

The Communications Unit Leader, under the direction of the Service Branch Director or Logistics Section Chief is responsible for developing plans for the effective use of incident communications equipment and facilities; installing and testing of communications equipment; supervision of the incident Communications Center; distribution of communications equipment to incident personnel; and the maintenance and repair of communications equipment.

**MEDICAL UNIT LEADER**

The Medical Unit Leader, under the direction of the Service Branch Director or Logistics Section Chief, is primarily responsible for the development of the Medical Emergency Plan, obtaining medical aid and transportation for injured and ill incident personnel, and preparation of reports and records. The Medical Unit may also assist Operations in supplying medical care and assistance to civilian casualties at the incident, but is not intended to provide medical services to the public.

**FOOD UNIT LEADER**

The Food Unit Leader, under the direction of the Service Branch Director or Logistics Section Chief, is responsible for determining feeding requirements at all incident facilities; menu planning; determining cooking facilities required; food preparation; serving; providing potable water; and general maintenance of the food service areas.

**SUPPORT BRANCH DIRECTOR**

The Support Branch Director, when activated, is under the direction of the Logistics Section Chief, and is responsible for development and implementation of logistics plans in support of the Incident Action Plan, including providing personnel, equipment, facilities, and supplies to support incident operations. The Support Branch Director supervises the operation of the Supply, Facilities, Ground Support and Vessel Support Units.

**SUPPLY UNIT LEADER**

The Supply Unit Leader is primarily responsible for ordering personnel, equipment and supplies; receiving, and storing all supplies for the incident; maintaining an inventory of supplies; and servicing non-expendable supplies and equipment.

**ORDERING MANAGER**

The Ordering Manager is responsible for placing all orders for supplies and equipment for the incident. The Ordering Manager reports to the Supply Unit Leader.

**RECEIVING AND DISTRIBUTION MANAGER**

The Receiving and Distribution Manager is responsible for receiving and distribution of all supplies and equipment (other than primary resources) and the service and repair of tools and equipment. The Receiving and Distribution Manager reports to the Supply Unit Leader.

**FACILITIES UNIT LEADER**

The Facilities Unit Leader is primarily responsible for the layout and activation of incident facilities (e.g. Base, Camp(s) and Incident Command Post). The Facilities Unit provides sleeping and sanitation facilities for incident personnel and manages base and camp operations. Each facility (base or camp) is assigned a manager who reports to the Facilities Unit Leader and is responsible for managing the operation of the facility. The basic functions or activities of the Base and Camp Manager are to provide security service and general maintenance. The Facility Unit Leader reports to the Support Branch Director.

**SECURITY MANAGER**

The Security Manager is responsible to provide safeguards needed to protect personnel and property from loss or damage.

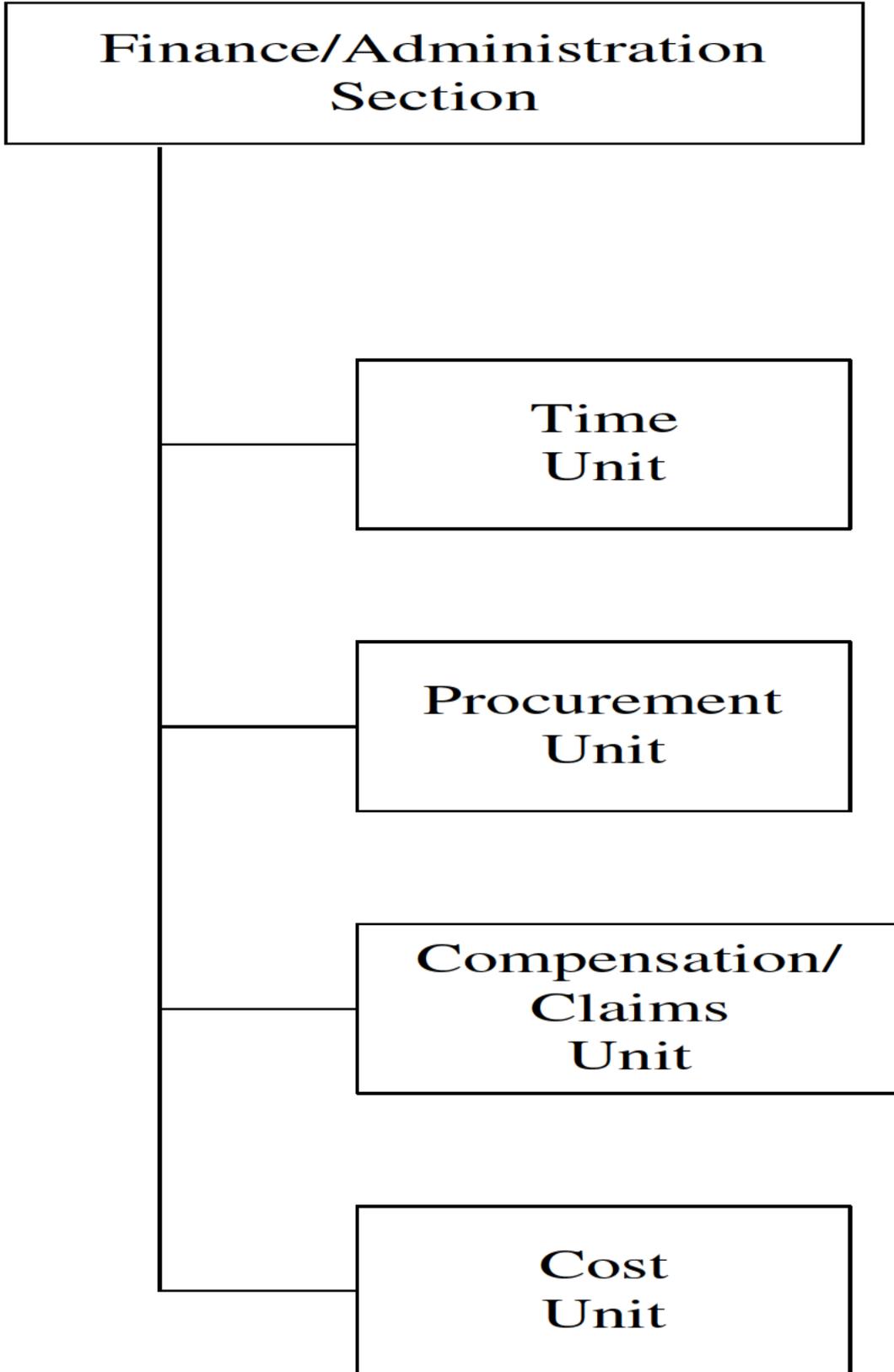
**GROUND SUPPORT UNIT LEADER**

The Ground Support Unit Leader is primarily responsible for 1) support out of service resources 2) coordination of transportation of personnel, supplies, food, and equipment, 3) fueling, service, maintenance and repair of vehicles and other ground support equipment, and 4) implementing the Traffic Plan for the incident.

**VESSEL SUPPORT UNIT LEADER**

The Vessel Support Unit Leader is responsible for implementing the Vessel Routing Plan for the incident and coordinating transportation on the water and between shore resources. Since most vessels will be supported by their own infrastructure, the Vessel Support Unit may be requested to arrange fueling, maintenance and repair of vessels on a case by case basis.

**FINANCE/ADMINISTRATION SECTION**



**FINANCE/ADMINISTRATION SECTION CHIEF**

The Finance/Administration Section Chief, a member of the General Staff, is responsible for all financial and cost analysis aspects of the incident and for supervising members of the Finance/Administration Section.

**TIME UNIT LEADER**

The Time Unit Leader is responsible for equipment and personnel time recording.

**EQUIPMENT TIME RECORDER**

Under Supervision of the Time Unit Leader, Equipment Time Recorder is responsible for overseeing the recording of time for all equipment assigned to an incident.

**PERSONNEL TIME RECORDER**

The Personnel Time Recorder reports to the Time Unit Leader and records personnel information.

**PROCUREMENT UNIT LEADER**

The Procurement Unit Leader is responsible for administering all financial matters pertaining to vendor contracts.

**COMPENSATION/CLAIMS UNIT LEADER**

The Compensation/Claims Unit Leader is responsible for the overall management and direction of all Compensation for Injury Specialist and Claims Specialists assigned to the incident.

**COST UNIT LEADER**

The Cost Unit Leader is responsible for collecting all cost data, performing cost effectiveness analyses, and providing cost estimates and cost saving recommendations for the incident.

## **ORGANIZATIONAL GUIDES**

### **MODULAR DEVELOPMENT**

A series of examples of Modular Development are included to illustrate one method of expanding the Incident Organization at an oil spill incident. The examples shown are not meant to be restrictive, nor imply these are the only ways to build an ICS organizational structure from an initial response to a multi-branch organization.

### **INITIAL RESPONSE**

Initial Response resources are managed by the Incident Commander who will handle all Command and General Staff responsibilities. A Unified Command is established.

### **REINFORCED RESPONSE**

The Unified Command has established a Protection Group and a Recovery Group to manage on water activities and a shoreline division to manage land based resources. A Safety Officer and Information Officer have been assigned.

### **MULTIDIVISION/GROUP ORGANIZATION**

The Unified Command has assigned all command staff positions and established a number of divisions and groups as well as an Operations Section Chief and Planning Section Chief. Some Logistic Units are established.

### **MULTI-BRANCH ORGANIZATION**

The Incident Commanders have established all Command and General Staff positions and have established four branches.

## GLOSSARY OF TERMS

This glossary contains definitions of terms frequently used in ICS documentation.

**AGENCY REPRESENTATIVE** - Individual assigned to an incident from an assisting or cooperating agency who has been delegated full authority to make decisions on all matters affecting their agency's participation at the incident. Agency Representatives report to the Liaison Officer.

**AIR OPERATIONS BRANCH DIRECTOR** - The person primarily responsible for preparing and implementing the air operations portion of the Incident Action Plan. Also responsible for providing logistical support to helicopters operating on the incident.

**ALLOCATED RESOURCES** - Resources dispatched to an incident.

**ALTERNATIVE RESPONSE TECHNOLOGIES (ART)** - Response methods or techniques other than mechanical containment or recovery. ART may include use of chemical dispersants, in-situ burning, bioremediation, or other alternatives. Application of ART must be authorized and directed by the OSC.

**ASSIGNED RESOURCES** - Resources checked-in and assigned work tasks on an incident.

**ASSIGNMENTS** - Tasks given to resources to perform within a given operational period, based upon tactical objectives in the Incident Action Plan.

**ASSISTANT** - Title for subordinates of the Command Staff positions. The title indicates a level of technical capability, qualifications, and responsibility subordinate to the primary positions. Assistants may also be used to supervise unit activities at camps.

**ASSISTING AGENCY** - An agency directly contributing tactical or service resources to another agency.

**AVAILABLE RESOURCES** - Incident-based resources which are immediately available for assignment.

**BASE** - That location at which the primary logistics functions are coordinated and administered. (Incident name or other designator will be added to the term "Base") The Incident Command Post may be collocated with the base. There is only one base per incident.

**BRANCH** - That organizational level having functional/geographic responsibility for major incident operations. The Branch level is organizationally between Section and Division/Group in the Operations Section, and between Section and Units in the Logistics Section.

**CACHE** - A pre-determined complement of tools, equipment and/or supplies stored in a designated location, and available for incident use.

**CAMP** - A geographical site, within the general incident area, separate from the base, equipped and staffed to provide sleeping areas, food, water, and sanitary services to incident personnel.

**CHECK-IN** - The process whereby resources first report to an incident. Check-in locations include: Incident Command Post (Resources Unit), Incident Base, Camps, Staging Areas, Helibases, Helispots, and Division Supervisors (for direct line assignments).

**CHIEF** - The ICS title for individuals responsible for command of functional sections: Operations, Planning, Logistics and Finance.

**CLEAR TEXT** - The use of plain English in radio communications transmissions. No Ten Codes, or agency specific codes are used when using Clear Text.

**COMMAND** - The act of directing, ordering and/or controlling resources by virtue of explicit legal, agency, or delegated authority. May also refer to the Incident Commander/Unified Command.

**COMMAND POST** - See Incident Command Post.

**COMMAND STAFF** - The Command Staff consists of the Information Officer, Safety Officer, and Liaison Officer, who report directly to the Incident Commander. They may have an assistant or assistants, as needed.

**COMMUNICATION UNIT** - A vehicle (trailer or mobile van) used to provide the major part of an incident Communication Center.

**COOPERATING AGENCY** - An agency supplying assistance other than direct tactical or support functions or resources to the incident control effort (e.g., Red Cross, telephone company, etc.).

**COST UNIT** - Functional unit within the Finance Section responsible for tracking costs, analyzing cost data, making cost estimates, and recommending cost-saving measures.

**DEPUTY** - A fully qualified individual who, in the absence of a superior, could be delegated the authority to manage a functional operation or perform a specific task. In some cases, a Deputy could act as relief for a superior and therefore must be fully qualified in the position. Deputies can be assigned to the Incident Commander, General Staff, and Branch Directors.

**DEMOBILIZATION UNIT** - Functional unit within the Planning Section responsible for assuring orderly, safe and efficient demobilization of incident resources.

**DIRECTOR** - The ICS title for individuals responsible for supervision of a Branch.

**DISPATCH** - The implementation of a command decision to move resources from one place to another.

**DISPATCH CENTER** - A facility from which resources are directly assigned to an incident.

**DIVISION** - That organization level having responsibility for operation within a defined geographic area or with functional responsibility. The Division level is organizationally between the Task Force/Team and the Branch. (See also "Group")

**DOCUMENTATION UNIT** - Functional unit within the Planning Section responsible for collecting, recording and safeguarding all documents relevant to the incident.

**EMERGENCY MEDICAL TECHNICIAN (EMT)** - A health-care specialist with particular skills and knowledge in pre-hospital emergency medicine.

**EMERGENCY OPERATIONS CENTER (EOC)** - A pre-designated facility established by an agency or jurisdiction to coordinate the overall agency or jurisdictional response and support to an emergency.

**FACILITIES UNIT** - Functional unit within the Support Branch of the Logistics Section that provides fixed facilities for the incident. These facilities may include the Incident Base, feeding areas, sleeping areas, sanitary facilities, etc.

**FIELD OPERATIONS GUIDE (FOG)** - A pocket-size manual of instructions on the application of the Incident Command System.

**FINANCE SECTION** - The Section responsible for all incident costs and financial considerations. Includes the Time Unit, Procurement Unit, Compensation/Claims Unit and Cost Unit.

**FOOD UNIT** - Functional unit within the Service Branch of the Logistics Section responsible for providing meals for incident personnel.

**FUNCTION** - In ICS, function refers to the five major activities in the ICS, i.e., Command, Operations, Planning, Logistics and Finance. The term function is also used when describing the activity involved, e.g., "the planning function."

**GENERAL STAFF** - The group of incident management personnel comprised of: Incident Commander, Operations Section Chief, Planning Section Chief, Logistics Section Chief, Finance Section Chief.

**GEOGRAPHIC INFORMATION SYSTEM (GIS)** - An electronic information system which provides a geo-referenced data base to support management decision making.

**GROUND SUPPORT UNIT** - Functional unit within the Support Branch of the Logistics Section responsible for fueling, maintaining and repairing vehicles, and the ground transportation of personnel and supplies.

**GROUP** - Groups are established to divide the incident into functional areas of operation. Groups are composed of resources assembled to perform a special function not necessarily within a single geographic division. (See Division.) Groups are located between Branches (when activated) and Resources in the Operations Section.

**HEALTH AND SAFETY PLAN (HASP)** - Site specific document required by State and Federal OSHA regulations and specified in the Area Contingency Plan. The HASP shall at minimum address, include, or contain the following elements: health and safety hazard analysis for each site task or operation, comprehensive operations workplan, personnel training requirements, PPE selection criteria, site specific occupational medical monitoring requirements, air monitoring plan, site control measures, confined space entry procedures (if needed), pre-entry briefings (tailgate meetings, initial and as needed), pre-operations commencement health and safety conference for all incident participants and quality assurance of HASP effectiveness.

**HELIBASE** - A location within the general incident area for parking, fueling, maintenance, and loading of helicopters.

**HELISPOT** - A location where a helicopter can take off and land. Some helispots may be used for temporary loading.

**INCIDENT ACTION PLAN (IAP)** - The Incident Action Plan, which is initially prepared at the first meeting, contains general control objectives reflecting the overall incident strategy, and specific action plans for the next operational period. When complete, the Incident Action Plans will have a number of attachments.

**INCIDENT AREA** - Legal geographical area of the incident to include affected area and traffic route to corresponding storage and disposal sites.

**INCIDENT BASE** - See BASE.

**INCIDENT COMMANDER (IC)** - The individual responsible for the management of all incident operations.

**INCIDENT COMMAND POST (ICP)** - That location at which the primary command functions are executed and usually collocated with incident base.

**INCIDENT COMMAND SYSTEM (ICS)** - A standardized on-scene emergency management concept specifically designed to allow its user(s) to adopt an integrated organizational structure equal to the complexity and demands of single or multiple incidents, without being hindered by jurisdictional boundaries.

**INCIDENT COMMUNICATION CENTER** - The location of the Communications Unit and the Message Center.

**INCIDENT OBJECTIVES** - Statements of guidance and direction necessary for the selection of appropriate strategies, and the tactical direction of resources. Incident objectives are based on realistic expectations of what can be accomplished when all allocated resources have been effectively deployed. Incident objectives must be achievable and measurable, yet flexible enough to allow for strategic and tactical alternatives.

**INCIDENT SITUATION DISPLAY** - The Situation Unit is responsible for maintaining a display of status boards which communicate critical incident information vital to establishing an effective command and control environment.

**INFORMATION OFFICER (IO)** - A member of the Command Staff responsible for interfacing with the public and media or with other agencies requiring information on the incident. There is only one Information Officer per incident. The Information Officer may have assistants.

**INITIAL ACTION** - The actions taken by resources which are the first to arrive at an incident.

**INITIAL RESPONSE** - Resources initially committed to an incident.

**JOINT INFORMATION CENTER (JIC)** - A facility established within or near Incident Command Post where the Information Officer and staff can coordinate and provide information on the incident to the public, media and other agencies. The JIC is normally staffed with representation from the OSC, State IC and RP.

**JURISDICTION** - The range or sphere of authority. Public agencies have jurisdiction at an incident related to their legal responsibilities and authority for incident mitigation. Jurisdictional authority at a incident can be political/geographical (e.g., city, county, state or federal boundary lines), or functional (e.g., police department, health department, etc.). (See Multi-Jurisdiction).

**JURISDICTIONAL AGENCY** - The agency having jurisdiction and responsibility for a specific geographical area, or a mandated function.

**LANDING ZONE** - See Helispot.

**LEADER** - The ICS title for an individual responsible for a Task Force/Strike Team, or functional Unit.

**LIAISON OFFICER (LO)** - A member of the Command Staff responsible for coordinating with representatives from cooperating and assisting agencies.

**LOGISTICS SECTION** - The Section responsible for providing facilities, services and materials for the incident.

**MANAGERS** - Individuals within ICS organizational units that are assigned specific managerial responsibilities (e.g., Staging Area Manager or Camp Manager).

**MEDICAL UNIT** - Functional unit within the Service Branch of the Logistics Section responsible for the development of the Medical Emergency Plan, and for providing emergency medical treatment for personnel.

**MESSAGE CENTER** - The message center is part of the Communications Center and collocated with. It receives, records, and routes information about resources reporting to the incident, resource status, and administration and tactical traffic.

**MULTI-AGENCY COORDINATION GROUP COORDINATOR** - Serves as facilitator to organize and accomplish goals of the MAC Group.

**MULTI-AGENCY COORDINATION GROUP (MAC)** - Cohesive group of all affected agencies established to aid in the overall response, facilitate briefings and share issues during a response.

**MULTI-AGENCY COORDINATION SYSTEM (MACS)** - The combination of facilities, equipment, personnel, procedures, and communications integrated into a common system with responsibility for coordination of assisting agency resources and support to agency emergency operations.

**MULTI-AGENCY INCIDENT** - An incident where one or more agencies assist a jurisdictional agency or agencies. May be single or unified command.

**MULTI-JURISDICTION INCIDENT** - An incident requiring action from multiple agencies that have a statutory responsibility for incident mitigation. In ICS, these incidents will be managed under Unified Command.

**NOAA WEATHER STATION** - A mobile weather data collection and forecasting facility (including personnel) provided by the National Oceanic and Atmospheric Administration which can be utilized within the incident area.

**NATURAL RESOURCE DAMAGE ASSESSMENT (NRDA)** - The process of identifying and quantifying the resource impacts and evaluating the value of impacted resources for the purpose of restoration.

**OFFICER** - The ICS title for the personnel responsible for the Command Staff positions of Safety, Liaison, and Information.

**ON-SCENE COORDINATOR (OSC)** - The predesignated federal On-Scene Coordinator operating under the authority of the National Contingency Plan (NCP).

**OPERATIONAL PERIOD** - The period of time scheduled for execution of a given set of operation actions as specified in the Incident Action Plan. Operational Periods can be various lengths, usually not over 24 hours.

**OPERATIONS SECTION** - Responsible for all operations directly applicable to the primary mission. 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. Includes the Recovery and Protection Branch, Emergency Response Branch, Air Operations Branch, and Wildlife Branch.

**OUT-OF-SERVICE RESOURCES** - Resources assigned to an incident but unable to respond for mechanical, rest, or personnel reasons.

**PLANNING MEETING** - A meeting, held as needed throughout the duration of an incident, to select specific strategies and tactics for incident control operations and for service and support planning.

**PLANNING SECTION** - Responsible for the collection, evaluation, and dissemination of tactical information related to the incident, and for the preparation and documentation of Action Plans. The section also maintains information on the current and forecasted situation, and on the status of resources assigned to the incident. Includes the Situation, Resource, Documentation, and Demobilization Units, as well as Technical Specialists.

**POLREP** - Pollution report.

**PROCUREMENT UNIT** - Functional unit within the Finance Section responsible for financial matters involving vendor contracts.

**QUALIFIED INDIVIDUAL (Q.I.)** - The person authorized by the responsible party to act on their behalf, authorize expenditures, and obligate organization's resources.

**RADIO CACHE** - A cache may consist of a number of portable radios, a base station and in some cases a repeater stored in a predetermined location for dispatch to incidents.

**RECORDERS** - Individuals within ICS organizational units who are responsible for recording information. Recorders may be found in Planning, Logistics, and Finance Units.

**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 planning and preparedness before an oil spill occurs and for providing advice to the OSC in the event of a major or substantial spill.

**REPORTING LOCATION** - Any one of six facilities/locations where incident assigned resources may check-in. The locations are: Incident Command Post-Resources Unit, Base, Camp, Staging Area, Helibase or Division Supervisor for direct line assignments. (Check-in at one location only)

**RESOURCES** - All personnel and major items of equipment available, or potentially available, for assignment to incident tasks on which status is maintained.

**RESOURCES UNIT** - Functional unit within the Planning Section responsible for recording the status of resources committed to the incident. The Unit also evaluates resources currently committed to the incident, the impact that additional responding resources will have on the incident, and anticipated resource needs.

**R.P.** - Responsible Party

**SAFETY OFFICER (SO)** - A member of the Command Staff responsible for monitoring and assessing safety hazards or unsafe situations, and for developing measures for ensuring personnel safety. The Safety Officer may have assistants.

**SECTION** - That organization level having functional responsibility for primary segments of incident operation such as: Operations, Planning, Logistics, Finance. The Section level is organizationally between Branch and Incident Commander.

**SERVICE BRANCH** - A Branch within the Logistics Section responsible for service activities at the incident. Includes the Communications, Medical and Food Units.

**SINGLE RESOURCE** - An individual, a piece of equipment and its personnel complement, or a crew or team of individuals with an identified work supervisor that can be used on an incident.

**SITE SAFETY PLAN** - Legal document required by OSHA before entry into site, prepared by Safety Officer.

**SITUATION UNIT** - Functional unit within the Planning Section responsible for the collection, organization and analysis of incident status information, and for analysis of the situation as it progresses. Reports to the Planning Section Chief.

**SPAN OF CONTROL** - The supervisory ratio of from three-to-seven individuals, with five-to-one being established as optimum.

**STAGING AREA** - That location where incident personnel and equipment are assigned awaiting tactical assignment.

**STATE I.C.** - State Incident Commander.

**STRATEGY** - The general plan or direction selected to accomplish incident objectives.

**SUPERVISOR** - The ICS title for individuals responsible for command of a Division or Group.

**SUPPLY UNIT** - Functional unit within the Support Branch of the Logistics Section responsible for ordering equipment and supplies required for incident operations.

**SUPPORT BRANCH** - A Branch within the Logistics Section responsible for providing personnel, equipment and supplies to support incident operations. Includes the Supply, Facilities and Transportation Units.

**SUPPORTING MATERIALS** - Refers to the several attachments that may be included with an Incident Action Plan ( e.g., communication plan, map, safety plan, traffic plan, and medical plan).

**TACTICAL DIRECTION** - Direction given by the Operations Section Chief which includes the tactics appropriate for the selected strategy, the selection and assignment of resources, tactics implementation, and performance monitoring for each operational period.

**TASK FORCE** - A group of resources with common communications and a leader assembled for a specific mission.

**TECHNICAL** - Personnel with special skills that can be used anywhere within the ICS organization.

**TEAM** - Specified combinations of the same kind and type of resources, with common communications and a leader.

**TEMPORARY FLIGHT RESTRICTIONS (TFR)**- Temporary airspace restrictions for non-emergency aircraft in the incident area. TFR's are established by the FAA to ensure aircraft safety and are normally limited to a five-nautical-mile radius and 2000 feet in altitude.

**TIME UNIT** - Functional unit within the Finance Section responsible for recording time for incident personnel and hired equipment.

**UNIFIED COMMAND (UC)** - In ICS, Unified Command is a unified team effort which allows all agencies with responsibility for the incident, either geographical or functional, to manage an incident by establishing a common set of incident objectives and strategies. This is accomplished without losing or abdicating agency authority, responsibility or accountability.

**UNIT** - That organizational element having functional responsibility for a specific incident planning, logistic, or finance activity.

**VESSEL SUPPORT UNIT** - Functional unit within the Support Branch of the Logistics Section responsible for implementing the Vessel Routing Plan and coordinating transportation on the water and between shore resources.

**VOLUNTEER** - Any individual accepted to perform services by the Lead Agency which has the authority to accept volunteer services. A volunteer is subject to the provisions of the authorizing statute.

## APPENDIX C

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### RESPONSE RESOURCES

<b>FACILITY RESPONSE EQUIPMENT</b>
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<b>Response Resources</b> .....	C-2
<b>Facility Fire Extinguishing Equipment</b> .....	C-3
<b>Facility Spill Response Equipment</b> .....	C-5
<b>Facility Communication Equipment</b> .....	C-6

<b>USCG CLASSIFIED OIL SPILL REMOVAL ORGANIZATIONS (OSROs)</b>
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<b>Minimum Equipment Requirements for OSRO Classifications</b> .....	C-7
<b>Garner Environmental Services, Inc.</b>	
Houston COTP Zone .....	C-9a, b, c . . .
<b>Clean Channel Association</b>	
Houston COTP Zone .....	C-10a, b, c . . .
<b>Anderson Pollution Control, Inc.</b> .....	C-11a, b, c . . .
Houston COTP Zone	
<b>Oil Mop, LLC</b> .....	C-12a, b, c . . .
Houston COTP Zone	

## **RESPONSE RESOURCES**

Responders for all emergency / upset events will be notified via Pasadena Refining Systems, Inc. (PRSI)'s emergency notification system in relation to the event.

Responders reporting to the emergency / upset conditions are active members of Volunteer Emergency Response Team (VERT).

**FACILITY FIRE EXTINGUISHING EQUIPMENT<sup>1</sup>**

Quantity	Type	Location	Inspection / Testing
1	1500 GPM Foam Pumper w/1000 Gal Foam	Fire Station	Annual 3 <sup>rd</sup> party NFPA inspection.
4,000'	5" Fire Hose	Engines 1 & 2, Fire Station	Annual 3 <sup>rd</sup> party pressure tested.
1,000'	6" Fire Hose	Engine 3	
3,000'	3" Fire Hose	Fire Station	
1,000'	1.75" Fire Hose	Fire Station	
1	3500 Watt Generator	Engine 2	Operate quarterly repair as needed.
1	500 Watt Extend-A-Lite	Engines 1 & 2	
10	270 Gal. Foam Totes with Foam Nozzles	Located throughout refinery	Samples pulled every 3 years.
40	SCBA	Located throughout refinery	Monthly/annually and hydro every 5 years.
40	SCBA	Supplied Light and Air Truck	Monthly/annually and hydro every 5 years.
1	Helicopter Flares for Landing	Engines 1 & 2	Annual
6	750 GPM Portable Wheeled Monitors	Located throughout the refinery	Monthly/annual after use.
1	Command Vehicle	Safety Dept.	Used daily and repaired, inspected as needed.
2	Quick Attack Trucks with 100 Gal. of Foam	In Plant	
30	Level "A" Encapsulated Suits	Fire House	Inspect prior to use per manufacture recommendations.
>450	Portable Fire Extinguishers	Located throughout refinery	Monthly/annual and hydro each 5 years.
3	Response Pick-Ups	Various Dept.	Used daily and repaired, inspect as needed.
3	Basic Life Support First Aid Kits	(1) Medical Department, (1) Safety Vehicle, (1) Security Vehicle	Monthly inspection or immediate replacement after use.
3	Automatic Defibrillators	(1) Medical Department, (1) Safety Vehicle, (1) Security Vehicle	Monthly inspection or immediate replacement after use.
1	3000 GPM Fire Truck with 1000 Gal. Foam	Fire Station	Annual 3 <sup>rd</sup> party NFPA
1	1000 GPM Fire Truck with 750 Gal Foam	Fire Station	Annual 3 <sup>rd</sup> party NFPA
1	4000 GPM Portable Fire Pump	Dock	Monthly or after each use

<sup>1</sup> All facility equipment is tested/inspected on a routine basis and maintained in good operational status.

**FACILITY FIRE EXTINGUISHING EQUIPMENT<sup>2</sup> (Cont'd)**

<b>Quantity</b>	<b>Type</b>	<b>Location</b>	<b>Inspection / Testing</b>
3	Kolda Pump Modules 1500 GPM	Storage	Not Yet in Service
3	Kolda Mobile Hose Reel Trailers 3000' – 6" Fire Hose Ea.	Storage	Annually after EA Use

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<sup>2</sup> All facility equipment is tested/inspected on a routine basis and maintained in good operational status.

**FACILITY SPILL RESPONSE EQUIPMENT<sup>1</sup>**

Quantity	Type	Size	Model / Year	Location	Inspection/Testing
1,500 ft.	Boom <sup>1</sup>	18" skirt	Jaton 2010	Dock	Floatation boom (1,500 ft.) is inspected and if needed repaired on an annual basis. Repairs will be made immediately if damage occurs during use.
1,000 ft.	Boom <sup>1</sup>	18" skirt	ACME 2012	Storage New	
1	Open Top Trailer		Top-Hat 2007	Dock	Boom Trailer is inspected and repaired on an annual basis. Repairs are made immediately if damage occurs prior to annual inspection.
20 Bales	Absorbent Pads	18" x 18"	Various	Trailer	Sorbent equipment is used daily and is replaced on an as needed basis to maintain sufficient stock.
20 Bales	Absorbent Boom	8'	Various	Trailer	
1/each	Aluminum flat bottom boat/trailer	18'	2012	PRSI Storage	Visual after use
1	Boat Motor	40 HP	Evinrude	PRSI Storage	PM per instructions
1	Custom Response Trailer	28'	Super Coach 2012	PRSI Storage	PM per instructions
1000'	Containment Boom/Trailer	18" skirt 16'	Acme Top Hat	PRSI Storage	PM per instructions
4	Radios		XPR6550	Response Trailer	PM per instructions
2	Marine Radios		VHF	Response Trailer	PM per instructions
2	Pneumatic Drum Skimmers / and Compressors	18" 35 gpm	Crucial	PRSI Storage	PM per instructions
1	Diesel Disc Skimmer	48" 90 gpm	Crucial ORD	PRSI Storage	PM per instructions
15	Life Jackets		MD3087 Auto inflate	PRSI Storage	PM per instructions
2	Diaphragm Pumps	3" 80 gpm	Yanmar L48V	PRSI Storage	PM per instructions

<sup>1</sup> All facility equipment is tested/inspected on a routine basis and maintained in good operational status.

**FACILITY COMMUNICATION EQUIPMENT<sup>1</sup>**

<b>Quantity</b>	<b>Type</b>	<b>Operating Frequency (mhz)</b>	<b>Location</b>	<b>Inspection/Testing</b>
150	XPR 6550	Mototubo Digital Radio System	Facility Wide	Used daily and repaired as needed.
120	Verizon Cell Phone	Cellular	Facility Personnel	
3	Cell Phone	Cellular	Security	
10	Various Beepers	N/A	Response Personnel	

**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.

<b>MINIMUM EQUIPMENT REQUIREMENTS FOR OSRO CLASSIFICATIONS</b>				
<b>Classification</b>	<b>Resource Quantity Guidelines <sup>2,3</sup></b>		<b>Maximum Facility Response Times</b>	<b>Maximum Vessel Response Times</b>
<b>Rivers/Canals <sup>1</sup></b>				
<b>MM</b>	Protective Boom:	4,000*ft	High Volume Ports: 6 hours Other Ports: 12 hours	High Volume Ports: 12 hours Other Ports: 24 hours
<b>W 1</b>	EDRC: TSC:	1,200 bbls 2,400 bbls	High Volume Ports: 12 hours Other Ports: 24 hours	High Volume Ports: 12 hours Other Ports: 24 hours
<b>W 2</b>	Protective Boom:	25,000*ft	High Volume Ports: 30 hours Other Ports: 36 hours	High Volume Ports: 36 hours Other Ports: 48 hours
<b>W 3</b>	EDRC: TSC:	3,750 bbls 7,500 bbls	High Volume Ports: 54 hours Other Ports: 60 hours	High Volume Ports: 60 hours Other Ports: 72 hours
<b>Great Lakes</b>				
<b>MM</b>	Protective Boom:	6,000*ft	All Ports: 6 hours	All Ports: 12 hours
<b>W 1</b>	EDRC: TSC:	1,250 bbls 2,500 bbls	High Volume Ports: 12 hours Other Ports: 24 hours	High Volume Ports: 12 hours Other Ports: 24 hours
<b>W 2</b>	Protective Boom:	30,000*ft	All Ports: 36 hours	All Ports: 42 hours
<b>W 3</b>	EDRC: TSC:	12,500 bbls 25,000 bbls	All Ports: 60 hours	All Ports: 66 hours

**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.

<b>MINIMUM EQUIPMENT REQUIREMENTS FOR OSRO CLASSIFICATIONS</b>				
<b>Classification</b>	<b>Resource Quantity Guidelines <sup>2,3</sup></b>		<b>Maximum Facility Response Times</b>	<b>Maximum Vessel Response Times</b>
<b>Inland <sup>1</sup></b>				
<b>MM</b>	Protective Boom:	6,000* ft		
	EDRC: TSC:	1,200 bbls 2,400 bbls	High Volume Ports: 6 hours Other Ports: 12 hours	High Volume Ports: 12 hours Other Ports: 24 hours
<b>W<sup>1</sup></b>	Protective Boom:	30,000* ft		
	EDRC: TSC:	12,500 bbls 25,000 bbls	High Volume Ports: 12 hours Other Ports: 24 hours	High Volume Ports: 12 hours Other Ports: 24 hours
<b>W<sup>2</sup></b>	Protective Boom:	30,000* ft		
	EDRC: TSC:	25,000 bbls 50,000 bbls	High Volume Ports: 30 hours Other Ports: 36 hours	High Volume Ports: 36 hours Other Ports: 48 hours
<b>W<sup>3</sup></b>	Protective Boom:	30,000* ft		
	EDRC: TSC:	50,000 bbls 100,000 bbls	High Volume Ports: 54 hours Other Ports: 60 hours	High Volume Ports: 60 hours Other Ports: 72 hours
<b>Nearshore</b>				
<b>MM</b>	Protective Boom:	8,000* ft		High Volume Ports: 12 hours Other Locations: 24 hours (for open ocean, plus travel time from shore)
	EDRC: TSC:	1,200 bbls 2,400 bbls	High Volume Ports: 6 hours Other Locations: 12 hours	
<b>W<sup>1</sup></b>	Protective Boom:	30,000* ft		
	EDRC: TSC:	12,500 bbls 25,000 bbls	High Volume Ports: 12 hours Other Locations: 24 hours	High Volume Ports: 12 hours Other Locations: 24 hours
<b>W<sup>2</sup></b>	Protective Boom:	30,000* ft		
	EDRC: TSC:	25,000 bbls 50,000 bbls	High Volume Ports: 30 hours Other Locations: 36 hours	High Volume Ports: 36 hours Other Locations: 48 hours
<b>W<sup>3</sup></b>	Protective Boom:	30,000* ft		
	EDRC: TSC:	50,000 bbls 100,000 bbls	High Volume Ports: 54 hours Other Locations: 60 hours (for open ocean, plus travel time from shore)	High Volume Ports: 60 hours Other Locations: 72 hours (for open ocean, plus travel time from shore)
<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, INC.**

## **Houston COTP Zone**



**GARNER ENVIRONMENTAL SERVICES, INC.**

**CORPORATE OFFICE: 1717 W. 13TH STREET, DEER PARK, TX 77536 • 281-930-1200 • 800-424-1716**

March 10, 2010

Pasadena Refining System, Inc.  
 Attn: Alisa White  
 111 Red Bluff Road  
 Pasadena, Texas 77506

EMERGENCY  
 RESPONSE

Subject: National Preparedness for Response Exercise Program (PREP) OPA-90 Compliance

DISASTER  
 RESPONSE

Dear Ms. White,

INDUSTRIAL  
 SERVICES

Garner Environmental Services, Inc. (GES) has complied with the Oil Pollution Act of 1990 (OPA-90) and 33 Code of Federal Regulations (CFR) part 154.1055(f) and 33 C.F.R. 154.1045 as applicable with regards to response time, equipment, deployment, inspection, maintenance, drills/exercises, and notifications over the past twelve months. Our response personnel have received OSHA Hazwoper training, are in compliance with 29 C.F.R. 1910.120, and have received all the necessary training to effectively respond to an oil material release as defined in 33 C.F.R. 154.105.

WASTE  
 MANAGEMENT

REMEDIAION:

Garner Environmental Services, Inc. retains personnel records for three years and certifies that our files are current and in compliance with OPA-90 OSRO PREP Guidelines, and 29 C.F.R. 1910.120. Garner Environmental Services, Inc. has received official classification as an approved OSRO from the U.S. Coast Guard National Strike Force Coordination Center which is attached to this letter.

HEALTH & SAFETY  
 TRAINING

Please remember that it is the facility's responsibility to insure that it is in compliance with 33 C.F.R. 154.1055.

EQUIPMENT SALES

If you have any questions or require further information please do not hesitate to contact Garner Environmental Services, Inc at (281) 930-1200.

Sincerely,

Tim Ware  
 Vice President - Business Development

**Branch Offices**

Deer Park, TX (Operation & Training) 281-930-1200	•	Pt. Arthur, TX (Operations) 409-983-5646	•	Port Arthur, TX (Training) 409-984-9836	•	LaMarque, TX (Operations) 409-935-0308
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**GARNER ENVIRONMENTAL SERVICES, INC.**

**CORPORATE OFFICE: 1717 W. 13TH STREET, DEER PARK, TX 77536 • 281-930-1200 • 800-424-1716**

March 10, 2010

Pasadena Refining System, Inc.  
 Alisa White  
 111 Red Bluff Road  
 Pasadena, Texas 77506  
 Ph: 713.920.4176  
 Fax: 713.920.4741

EMERGENCY  
 RESPONSE

Re: Letter of Intent to Respond

DISASTER  
 RESPONSE

Ms. White:

INDUSTRIAL  
 SERVICES

Thank you for your recent inquiry concerning Garner Environmental Services, Inc. emergency response capabilities. Per your request, Garner Environmental Services is pleased to offer *Pasadena Refining System, Inc.* our response services to respond in the event of an accidental release on an as needed, first come first served basis, from our Deer Park, Texas facility, as a first responder for the facility(ies) listed in Attachment I. 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 I for Response Tier and Time Levels.

WASTE  
 MANAGEMENT

Should a response effort be required, please contact the 24-hour Emergency Response Telephone number listed on Attachment I.

REMEDIATION

HEALTH & SAFETY  
 TRAINING

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.

EQUIPMENT SALES

Sincerely,

Mike E. Ataway Jr.  
 Vice President

MA/mp

Enclosure

**Branch Offices**

Deer Park, TX (Operation & Training) 281-930-1200	•	Pt. Arthur, TX (Operations) 409-983-5545	•	Port Arthur, TX (Training) 409-984-9836	•	LaMarque, TX (Operations) 409-935-0308
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**GARNER ENVIRONMENTAL SERVICES, INC.**

**CORPORATE OFFICE: 1717 W. 13TH STREET, DEER PARK, TX 77536 • 281-930-1200 • 800-424-1716**

March 10, 2010

Pasadena Refining System, Inc.  
 Alisa White  
 111 Red Bluff Road  
 Pasadena, Texas 77506  
 Ph: 713.920.4176  
 Fax: 713.920.4741

Re: Request for Information

Ms. White:

Pursuant to your request, please find enclosed herewith one copy of the following document(s):

- IRS Form W-9
- Letter of Intent to Respond
- PREP Report
- Response Rate Schedule with Addendum, Rev. 01/09
- Response Equipment List, Rev. 01/09
- Master Certificate of Insurance
- US Coast Guard OSRO Classification Listing
- Texas General Land Office DCO Certificate
- Texas Sales Tax Resale Certificate
- Other

Thank you for allowing us to be of service to you. If you have any questions or require additional information, please do not hesitate to contact me at 281.930.1200.

Sincerely,

Maria Parras  
 Assistant to the General Counsel

/mp

Enclosures

**Branch Offices**

Deer Park, TX (Operation & Training) 281-930-1200	•	Pt. Arthur, TX (Operations) 409-983-5646	•	Port Arthur, TX (Training) 409-984-9836	•	LaMarque, TX (Operations) 409-935-0308
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EMERGENCY  
RESPONSE

DISASTER  
RESPONSE

INDUSTRIAL  
SERVICES

WASTE  
MANAGEMENT

REMEDIATION

HEALTH & SAFETY  
TRAINING

EQUIPMENT SALES



1717 West 13<sup>th</sup> Street, Deer Park, Texas 77536 • Phone: (281) 930-1200 • FAX: (281) 478-0296

Attachment 1

Tier Response Level and Response Time

**Garner Response Facility**

**Contact / Telephone Nr.**

**Geographic Area**

**Mileage**

**Tier Level**

**Response Time**

Deer Park, Texas

Blaine Nix / (281) 930-1200 or (800) 424-1716

Response Location:

111 Red Bluff Road  
Pasadena, Texas 77506

7

1

50 Minutes

# Alphabetical OSRO Classifications by Company

		Facilities				Vessels			
		MM	W1	W2	W3	MM	W1	W2	W3
<b>0027 Garner Environmental Services</b>									
<b>COTP: CORPUS CHRISTI</b>									
<input checked="" type="checkbox"/>	<b>High Volume Port</b>	River/Canal	<input checked="" type="checkbox"/>						
		Inland	<input checked="" type="checkbox"/>						
		Open Ocean	<input type="checkbox"/>						
		Offshore	<input type="checkbox"/>						
		Nearshore	<input type="checkbox"/>						
		Great Lakes	<input type="checkbox"/>						
<b>COTP: HOUSTON-GALVESTON</b>									
<input checked="" type="checkbox"/>	<b>High Volume Port</b>	River/Canal	<input checked="" type="checkbox"/>						
		Inland	<input checked="" type="checkbox"/>						
		Open Ocean	<input type="checkbox"/>						
		Offshore	<input type="checkbox"/>						
		Nearshore	<input type="checkbox"/>						
		Great Lakes	<input type="checkbox"/>						
<b>COTP: MOBILE</b>									
<input type="checkbox"/>	<b>High Volume Port</b>	River/Canal	<input checked="" type="checkbox"/>						
		Inland	<input checked="" type="checkbox"/>						
		Open Ocean	<input type="checkbox"/>						
		Offshore	<input type="checkbox"/>						
		Nearshore	<input type="checkbox"/>						
		Great Lakes	<input type="checkbox"/>						
<b>COTP: MOBILE(PANAMA CITY, FL)</b>									
<input type="checkbox"/>	<b>High Volume Port</b>	River/Canal	<input checked="" type="checkbox"/>						
		Inland	<input checked="" type="checkbox"/>						
		Open Ocean	<input type="checkbox"/>						
		Offshore	<input type="checkbox"/>						
		Nearshore	<input type="checkbox"/>						
		Great Lakes	<input type="checkbox"/>						
<b>COTP: MORGAN CITY</b>									
<input type="checkbox"/>	<b>High Volume Port</b>	River/Canal	<input checked="" type="checkbox"/>						
		Inland	<input checked="" type="checkbox"/>						
		Open Ocean	<input type="checkbox"/>						
		Offshore	<input type="checkbox"/>						
		Nearshore	<input type="checkbox"/>						
		Great Lakes	<input type="checkbox"/>						
<b>COTP: NEW ORLEANS</b>									
<input checked="" type="checkbox"/>	<b>High Volume Port</b>	River/Canal	<input checked="" type="checkbox"/>						
		Inland	<input checked="" type="checkbox"/>						
		Open Ocean	<input type="checkbox"/>						
		Offshore	<input type="checkbox"/>						
		Nearshore	<input type="checkbox"/>						
		Great Lakes	<input type="checkbox"/>						
<b>COTP: PORT ARTHUR</b>									
<input checked="" type="checkbox"/>	<b>High Volume Port</b>	River/Canal	<input checked="" type="checkbox"/>						
		Inland	<input checked="" type="checkbox"/>						
		Open Ocean	<input type="checkbox"/>						
		Offshore	<input type="checkbox"/>						
		Nearshore	<input type="checkbox"/>						
		Great Lakes	<input type="checkbox"/>						

## *Alphabetical OSRO Classifications by Company*

<i>COTP: ST. PETERSBURG</i>		<i>Facilities</i>				<i>Vessels</i>			
<input type="checkbox"/> <i>High Volume Port</i>	<i>River/Canal</i> <i>Inland</i> <i>Open Ocean</i> <i>Offshore</i> <i>Nearshore</i> <i>Great Lakes</i>	<i>MM</i>	<i>W1</i>	<i>W2</i>	<i>W3</i>	<i>MM</i>	<i>W1</i>	<i>W2</i>	<i>W3</i>
		<input checked="" type="checkbox"/>							
		<input checked="" type="checkbox"/>							
		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
		<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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  
(281) 930-1200  
(800) 424-1716**

**RESPONSE RATE SCHEDULE  
DOMESTIC**

**JANUARY 2009**

<b>Corporate</b>	<b>Response Rate Schedule Domestic</b>	<b>Schedule</b>
<b>Operations</b>		<b>Rev. January 2009</b>

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Corporate	Response Rate Schedule Domestic	Schedule
Operations		Rev. January 2009

## SPILL PERSONNEL PHONE LIST

DEER PARK – Office / Phone: (281) 930-1200 / (800) 424-1716 Fax: (281) 478-0296

**Spill Response**

John Pavlicek  
Randy Watkins  
Clyde McKissack

**Haz-Mat Incidents**

Clyde McKissack

**Dispatcher**

Bruce Dumesnil

**Safety**

Scotty Bourgeois

MOBILE

(b) (6)

PORT ARTHUR – Office / Phone: (409) 983-5646 / (800) 983-7634 Fax: (409) 983-5851

MOBILE

Elbert Sirmons  
Curtis Chatelain

(b) (6)

LA MARQUE/GALVESTON – Office / Phone: (409) 935-0308 / (800) 935-0308 Fax: (409) 935-0678

MOBILE

Kim McWhirter  
Curtis Galloway

(b) (6)

<b>Corporate</b>	<b>Response Rate Schedule Domestic</b>	<b>Schedule</b>
<b>Operations</b>		<b>Rev. January 2009</b>

### Automotive Equipment

**Automotive Equipment Hourly Rates** charges are portal to portal. A four (4) hour minimum time will be charged on all call-outs. Equipment / auto / truck charges do not include fuel, which will be invoiced separately. A mileage charge of \$0.50 per mile after the first 50 miles will be added for all Motorized Equipment, including automobiles and pick-up trucks, in addition to the applicable fuel surcharge(s). Fuel surcharges will be applied based on the Hourly/Daily Equipment/Vehicle rate on all Motorized Equipment pursuant to index on cost per gallon as reported by the Department of Energy EIA Retail On-Highway Gasoline and Diesel Prices. Fuel surcharge(s) will be invoiced as a separate line item. The fuel surcharge percentage is adjusted every Monday of each week based upon the weekly U.S. National Average. See page 3 for example [shown up to \$4.00] of how surcharges are calculated based on fuel price range, i.e., increase in fuel price range by .05% results in corresponding incremental increase in surcharge.

### Equipment Decontamination / Washout

Time and Material charges are portal to portal and will continue through decontamination and/or washout of any and all equipment used on the job.

### Haz-Mat Rates

Haz-Mat rates will be charged when the material being dealt with has a hazard rating of two or greater on the NFPA 704 labeling system or hazardous material identifying system, or if a job requires the use of respiratory protection.

### Insurance

The rates in this RATE SCHEDULE include insurance coverage for Worker's Compensation, General Liability, Pollution and Automobile Liability. A Certificate of Insurance will be forwarded upon request. These rates do not include work performed under the U.S. Longshoremen's and Harbor Workers Act (33 USC ss 901-950). For work performed under this statute, an additional 69% surcharge per \$100.00 of wages will be assessed on labor **only**.

### Personnel

Experienced consulting, supervisory, technical instructor and equipment operating personnel are available for complete emergency spill response and spill cleanup operations and vacuum service, 24 hours a day, 7 days a week. Normal hours of operation are from 0730 (7:30 a.m.) through 1600 (4:00 p.m.) daily, Monday through Friday.

All labor charges will be in accordance with Garner Environmental Services, Inc. service receipts. Charges for personnel are portal-to-portal. Garner Environmental Services, Inc. will invoice for personnel and the time required to mobilize, service, repair, and restock all vehicles and equipment used in the performance of the services for customer. Overtime for personnel will be charged at time and a half between 1600 (4:00 pm) through 0730 (7:30 am) Monday through Thursday; weekends from 1600 (4:00 p.m.) Friday through 0730 (7:30 am) Monday. **DOUBLE TIME RATES** will be charged for all Garner recognized Holidays. **4-Hour Minimum Service Charge On All Labor Call-Outs.**

In the event Garner Environmental Services, Inc. responds to a request from a governmental agency and/or third party and/or Customer and/or on behalf of Customer for record gathering and/or litigation support services, including but not limited to testifying at any proceeding, deposition, hearing or trial, and whether during the performance of services or any time after, Customer hereby agrees to and will pay to GESI, in accordance with the payment terms herein, the charges for the personnel provided and/or requested and/or required in the amount corresponding to the personnel designation in this rate sheet and will further reimburse GESI for reasonable expenses incurred as a result including for transportation, parking and/or lodging, if necessary.

### Replacement of Damaged or Contaminated Equipment

If, during performance of a service and/or services for a customer, equipment and/or material sustain damage which renders the equipment and/or material beyond repair or renders decontamination impossible, said equipment and/or material will be subject to a replacement charge at Garner Environmental Services, Inc.'s cost plus 15% unless said damage was sustained as a result of misuse by Garner Environmental Services, Inc. personnel.

### Roll-Off Boxes

Roll-Off Box delivery and pickup charges vary according to the distance from the site location. The cost for roll-off box liners is \$50.00 each. Box Liners are not mandatory, but if the Roll-Off Box requires cleaning at the end of the rental period, the customer will incur the cleaning charges.

### Stand-By Rates

Stand-By Rates will be equal to the daily rates in this schedule unless otherwise agreed to in writing on a case-by-case basis. Full rates will apply for personnel and per diem.

### Subcontract Services / Third-Party Services

When Garner Environmental Services, Inc.'s equipment is available, Garner Environmental Services, Inc. will use and bill Customer for said equipment at rates published in the rate schedule. For any item that is identified on Garner Environmental Services, Inc.'s rate sheet and which Garner acquires through or from a third party vendor or supplier, Customer will pay to Garner Environmental Services, Inc. the higher of Garner Environmental Services, Inc.'s rate or Garner Environmental Services, Inc.'s cost plus a 20% handling charge.

A 20% handling charge will apply and be invoiced for all shipping and transportation of equipment, materials and goods regardless of whether such equipment, materials and goods appear on Garner Environmental Services, Inc.'s rate schedule. In addition, for all items not listed on Garner Environmental Services, Inc.'s rate schedule, including but not limited to personnel, equipment, materials and goods, laboratory services, testing services, damage waivers and/or other services, said items will be billed at Garner Environmental Services, Inc.'s cost plus a 20% handling charge.

Cost, as used herein, is defined as the amount invoiced to Garner Environmental Services, Inc. by a third-party supplier of material and/or goods and/or material and/or labor and/or equipment and/or services.

*All rates listed in this schedule are subject to change without notice.*

<b>Corporate</b>	<b>Response Rate Schedule Domestic</b>	<b>Schedule</b>
<b>Operations</b>		<b>Rev. January 2009</b>

#### Taxes

All domestic federal, state and municipal taxes, except income taxes and ad-valorem taxes, now and hereinafter imposed with respect to services rendered, to rental equipment, to the processing, manufacture, repair, and to the delivery and transportation of equipment and supplies will be added to and become part of the total price payable by the Customer. If a Customer claims an exemption from payment of Texas Sales and Use Tax, the Customer will be required to render an Exemption Certificate or a Resale Certificate to Garner Environmental Services, Inc. for said exemption to apply to the services rendered. If for any reason the services rendered result in the assessment of foreign income taxes, excise taxes, or other fees alleged as owing to a foreign state or government, the Customer will pay directly the amount of any assessment or fee. In the event Company pays any such foreign tax or fee directly, Customer will promptly reimburse Company for same.

#### Terms

The term of payment for all invoices is *Net Payment Due Immediately Upon Receipt of invoice in United States Dollars (US \$)*. The balance of any invoice not timely paid will accrue a finance charge computed at the periodic rate of one and one-half percent (1.5%) per month (18% per annum) beginning on the first day of the first month following any delinquency. Customer is obligated to make payment to Garner Environmental Services, Inc. at its principal office at 1717 West 13th Street, Deer Park, TX 77536 in Harris County, Texas.

#### Place of Performance

The procurement of Garner Environmental Services, Inc.'s services may not be in the same county as the work site area. Customer is obligated to make payment to Garner Environmental Services, Inc. in Harris County, Texas for services provided. Because this agreement has been procured in Harris County, Texas and is being managed and administered from Garner Environmental Services, Inc.'s central office in Harris County, Texas, this agreement is being performed in Harris County, Texas. The validity, interpretation and performance of the services and payment and the contents herein are to be interpreted and enforced pursuant to the laws of the State of Texas and any suit in connection herewith will be filed in Harris County, Texas.

#### Travel, Lodging and Per Diem

For all employees who do not reside in the local commuting area for the work site, Garner Environmental Services, Inc. will be reimbursed for costs incurred for employee travel to and from the work site on the basis of Garner Environmental Services, Inc.'s incurred costs plus 20% for all commercial transportation. A minimum Per Diem charge of **\$150.00** per day for each employee who does not reside in the local commuting area of the work site will be due for each day that such employee is present in the locale of the work site.

*All rates listed in this schedule are subject to change without notice.*

<b>Corporate</b>	<b>Response Rate Schedule Domestic</b>	<b>Schedule</b>
<b>Operations</b>		<b>Rev. January 2009</b>

**Fuel Surcharge Table**

<b>Fuel Price Range</b>		<b>Fuel Surcharge %</b>
1.65	1.70	5.50
1.70	1.75	6.00
1.75	1.80	6.50
1.80	1.85	7.00
1.85	1.90	7.50
1.90	1.95	8.00
1.95	2.00	8.50
2.00	2.05	9.00
2.05	2.10	9.50
2.10	2.15	10.00
2.15	2.20	10.50
2.20	2.25	11.00
2.25	2.30	11.50
2.30	2.35	12.00
2.35	2.40	12.50
2.40	2.45	13.00
2.45	2.50	13.50
2.50	2.55	14.00
2.55	2.60	14.50
2.60	2.65	15.00
2.65	2.70	15.50
2.70	2.75	16.00
2.75	2.80	16.50
2.80	2.85	17.00
2.85	2.90	17.50
2.90	2.95	18.00
2.95	3.00	18.50
3.00	3.05	19.00
3.05	3.10	19.50
3.10	3.15	20.00
3.15	3.20	20.50
3.20	3.25	21.00
3.25	3.30	21.50
3.30	3.35	22.00
3.35	3.40	22.50
3.40	3.45	23.00
3.45	3.50	23.50
3.50	3.55	24.00
3.55	3.60	24.50
3.60	3.65	25.00
3.65	3.70	25.50
3.70	3.75	26.00
3.75	3.80	26.50
3.80	3.85	27.00
3.85	3.90	27.50
3.90	3.95	28.00
3.95	4.00	28.50

*All rates listed in this schedule are subject to change without notice.*

<b>Corporate</b>	<b>Response Rate Schedule Domestic</b>	<b>Schedule</b>
<b>Operations</b>		<b>Rev. January 2009</b>

**PERSONNEL**

		<b>Hourly</b>	
<b>Spill</b>		<b>Regular</b>	<b>Overtime</b>
PERS-1001	Project/Operations Manager .....	136.00	204.00
PERS-1002	Health & Safety Manager .....	108.50	162.75
PERS-1003	Site Manager/Superintendent .....	76.00	114.00
PERS-1004	Site Safety Officer .....	60.00	90.00
PERS-1006	EMT / Paramedics .....	56.00	84.00
PERS-1020	Project Accountant .....	70.00	105.00
PERS-1019	Disposal Coordinator .....	40.00	60.00
PERS-1013	Resource Coordinator .....	46.00	69.00
PERS-1008	Industrial Hygiene Supervisor .....	100.00	135.00
PERS-1009	Industrial Hygiene Technician .....	49.00	73.50
PERS-1017	Field Clerk .....	33.00	49.50
PERS-1005	Supervisor .....	60.00	90.00
PERS-1007	Foreman .....	46.00	69.00
PERS-1016	Technician .....	36.00	54.00
PERS-1014	Operator, Heavy Equipment .....	44.00	66.00
PERS-1015	Operator, Response Equipment .....	38.00	57.00
PERS-1010	Mechanic .....	44.00	66.00
<b>Haz-Mat</b>			
PERS-1004-HM	Site Safety Officer .....	81.00	121.50
PERS-1005-HM	Supervisor, Haz-Mat .....	81.00	121.50
PERS-1007-HM	Foreman, Haz-Mat .....	60.00	90.00
PERS-1016-HM	Technician, Haz-Mat .....	49.00	73.50
PERS-1014-HM	Operator, Heavy Equipment, Haz-Mat .....	60.00	90.00
PERS-1015-HM	Operator, Response Equipment, Haz-Mat .....	54.50	81.75
PERS-1016-TS	Technician, Sampling .....	48.00	72.00
<b>Rescue</b>			
PERS-1011	Rescue Supervisor .....	65.00	97.50
PERS-1012	Rescue Technician .....	55.00	82.50

**EQUIPMENT****Automotive Equipment**

		<b>Hourly Rate</b>
AUTO-1001	Super Sucker, 80 bbl Capacity (See Note) .....	125.00
AUTO-1001-H	Super Sucker, 80 bbl Capacity (See Note)(Haz-Mat) .....	150.00
AUTO-1002	Cyclone Unit .....	50.00
AUTO-1003	Vacuum Truck, 70bbl Capacity, Stainless Steel Unit (GES owned) .....	95.00
AUTO-1003-H	Vacuum Truck, 70bbl Capacity, Stainless Steel Unit (GES owned)(Haz-Mat) .....	120.00
AUTO-1003-R	Vacuum Truck, 70 bbl Capacity, Stainless Steel Unit (See Note)(3 <sup>rd</sup> party rental)CostPlus20%	
AUTO-1004	Vacuum Truck, 70 bbl Capacity (See Note) (GES Owned) .....	80.00
AUTO-1004-H	Vacuum Truck, 70 bbl Capacity, (See Note)(GES Owned)(Haz-Mat) .....	115.00
AUTO-1004-R	Vacuum Truck, 70 bbl Capacity (3rd Party Rental) .....	CostPlus20%
AUTO-1005	Vacuum Truck, 130 bbl Capacity (See Note) .....	CostPlus20%
AUTO-1006	Vacuum Truck, Liquid Ring (See Note)(GES Owned) .....	159.00
AUTO-1006-H	Vacuum Truck, Liquid Ring (See Note)(GES Owned)(Haz-Mat) .....	184.00
AUTO-1007-R	Roll-Off Truck (See Note) (3 <sup>rd</sup> Party Rental) .....	CostPlus20%
AUTO-1008	Meyers Unit, Truck Mounted (See Note) .....	60.00/hr
AUTO-1008-H	Meyers Unit, Truck Mounted (See Note)(Haz-Mat) .....	85.00/hr
AUTO-1027	Safety-Vac .....	60.00/hr
AUTO-1010	ATV, 4-Wheel .....	350.00/day
AUTO-1011	ATV Utility Trailer .....	75.00/day
AUTO-1012	Automobile .....	75.00/day
AUTO-1013	Backhoe (plus mobilization & demobilization) (GES owned) .....	425.00/day
AUTO-1013-R	Backhoe (plus mobilization & demobilization) ((3rd Party Rental) .....	CostPlus20%
AUTO-1017	Meyers Unit, Trailer Mounted .....	350.00/day

*All rates listed in this schedule are subject to change without notice.*

<b>Corporate</b>	<b>Response Rate Schedule Domestic</b>	<b>Schedule</b>
<b>Operations</b>		<b>Rev. January 2009</b>

**Automotive Equipment - Continued**

		<b>Hourly Rate</b>
AUTO-1018	Pick-Up Truck, 1 ton or smaller .....	125.00/day
AUTO-1020	Pick-Up Truck, 1 ton, w/liftgate .....	140.00/day
AUTO-1023	Pick-Up Truck, 1 ton, 4x4 .....	220.00/day
AUTO-1024	Skid-Steer Loader (See Note)(GES Owned) .....	350.00/day
AUTO-1040	Trailer HazMat Response 36' .....	500.00/day
AUTO-1028	Tractor/Trailer, Haz-Mat Response Unit, 32' .....	750.00/day
AUTO-1025	Trailer, Boom, 20 foot .....	75.00/day
AUTO-1026	Trailer, Equipment Hauler, Gooseneck, 24 foot.....	75.00/day
AUTO-1029	Trailer, Haz-Mat Response, 24' .....	350.00/day
AUTO-1033	Trailer, Haz-Mat Transfer.....	500.00/day
AUTO-1035	Trailer, Rescue/Emergency Response .....	200.00/day
AUTO-1030	Trailer, Response, Gooseneck, 32' Oil Response.....	300.00/day
AUTO-1031	Trailer, Transfer, Ship to Shore .....	125.00/day
AUTO-1032	Trailer, Utility.....	75.00/day
AUTO-1036	Trailer, Box 48'.....	100.00/day
AUTO-1037	Trailer, Box 40'.....	100.00/day
COMM-1006	MCC #1 Mobile Command & Control Trailer + Fuel.....	1,700.00/day
COMM-1010	Command Trailer, 48' .....	1,800.00/day
AUTO-1024-R	Skid-Steer Loader, (3rd Party Rental, Mobilization & Demobilization) .....	CostPlus20%
AUTO-1042-R	Track Hoe (See Note) (3 <sup>rd</sup> Party Rental Mobilization & Demobilization).....	CostPlus20%
AUTO-1038	Mileage (after the first 50 miles (except automobiles & pick-up trucks).....	0.50 per mile
AUTO-1039	Mileage (after the first 50 miles for automobiles & pickup trucks) .....	0.35 per mile
<b>NOTE -</b>	<b>(Operator Included)</b>	

**Marine Equipment**

		<b>Daily Rate</b>
MAR-1001	Airboat .....	CostPlus20%
MAR-1003	Fast Response Boat, 30', w/twin 200hp engines, radar, GPS, 20 bbl store cap .	800.00
MAR-1004	Flat Boat, w/o motor.....	115.00
MAR-1005	Flat Boat, 14' to 16' w/motor .....	225.00
MAR-1010	Flat Boat (Dock) 12' .....	75.00
MAR-1006	Piroque .....	30.00
MAR-1007	Fast Response Boat, 24' .....	450.00
MAR-1011	Fast Response Boat, 28' .....	500.00
MAR-1012	Barge Boat, 28', w/twin 115hp engines, radar, GPS.....	700.00

**Containment Boom**

		<b>Daily Rate</b>
CBM-1004	Containment Boom, 18" .....	1.40 ft.
CBM-1006	Containment Boom, 12" .....	1.00 ft.
CBM-1007	Containment Boom, 42" .....	2.50 ft
CBM-1005	Mini-Boom.....	.75 ft.
CBMA-18	Boom Anchor, 18 lb. ....	41.00
CBMA-22	Boom Anchor, 22 lb. ....	54.00
CBMA-40	Boom Anchor, 40 lb. ....	135.00
CBMA-75	Boom Anchor, 65 lb. ....	252.00
CBMA-100	Boom Anchor, 85 lb. ....	349.00
CBMA-1012	Boom Lights .....	20.00
CBMA-1013	Anchor buoys/markers.....	20.00
CBMA-1014	Large Boom Magnets.....	50.00
CBMA-1015	Small Boom Magnets.....	25.00

**Skimmers**

		<b>Daily Rate</b>
SKIM-1015	Drum Skimmer 140 gpm Double 36" Drum .....	800.00
SKIM-1002-70	Drum Skimmer, 70 gpm 36" Drum.....	600.00
SKIM-NO-1003-20	Drum Skimmer, 20 gpm 24" Drum.....	450.00

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**Skimmers - Continued**

		<b>Daily Rate</b>
SKIM-1005	Skimmer, Acme Mdl 39-TG4, Gasoline Powered .....	200.00
SKIM-1006	Skimmer, Acme Mdl 39-T, Vacuum / or Douglas Engineering Skim Pak .....	150.00
SKIM-1008	Skimmer, Marco, "Harbor 28" .....	5,000.00
SKIM-1009	Skimmer, Marco, "Sidewinder 14" .....	4,200.00
SKIM-1010	Oleophilic Pad Replacement, Marco Skimmer .....	Cost Plus 20%
SKIM-1012	RF Weir Skimmer .....	225.00
SKIM-1013	VSP Screw Pump Skimmer .....	1,800.00
SKIM-1014	Desmi Mini Max .....	250.00

**Sorbent Material**

		<b>Unit Rate</b>
GES-BMC	BMC Absorb-N-Dry Absorbent .....	8.00
GES-B510	Boom, Sorbent, 5' x 10', 4 boom bale .....	102.05
GES-B510SN	Boom, Sorbent, Anti-Shed, Sock Net, 5' x 10' .....	100.00
GES-B810	Boom, Sorbent, 8' x 10', 4 boom bale .....	180.50
GES-B810SN	Boom, Sorbent, Anti-Shed, Sock Net, 8' x 10' .....	155.00
GES-UB510	Boom, Sorbent, Universal, 5' x 10', 4 boom bale .....	134.05
GES-UB810	Boom, Sorbent, Universal, 8' x 10', 4 boom bale .....	180.00
GES-GS-25	Cell-U-Sorb, 20 lb bag .....	31.00
GES-EX-SORB	Peat Moss Sorbent, 2 cf x 20 lb bag .....	39.25
GES-GS-22	Floor Gator, Granular, 50 lb bag .....	26.95
GES-IM0077	Imbiber Bead Packet, 36 per case .....	231.65
GES-IM1421	Imbiber Bead Pillow, 3 per case .....	217.20
GES-IM2142	Imbiber Bead Blanket, 2 per case .....	235.30
GES-IMBSW2142	Imbiber Bead Blanket/Sand Blend, 2 per case .....	235.30
GES-IR300	Industrial Rug, Sorbent, 36" x 300' .....	278.30
GES-GATOR030	Oil Gator, 30 lb bag .....	45.05
GES-OSGP30	Oil Sponge GP, General Purpose, 30 lb bag .....	32.00
GES-P100	Pad, Sorbent, 17" x 19" x 3/8", 100 pad bale .....	72.00
GES-P200	Pad, Sorbent, 17" x 19" x 3/16", 200 pad bale .....	76.00
GES-Q100-P	Pad, Sorbent, Perforated, 17" x 19" x 3/8" .....	62.50
GES-Q70	Pad, Sorbent, Blue, 17" x 19" x 3/16" .....	79.50
GES-UQ100	Pad, Sorbent, Universal, Gray, 17" x 19" x 3/8", 100 pad bale .....	104.60
GES-HAZPIL10	Pillow, Haz-Mat, Universal, 3' x 18" x 24", 10 pillow bale .....	120.65
GES-HAZPIL17	Pillow, Haz-Mat, Universal, 3' x 11" x 17", 17 pillow bale .....	134.05
GES-PIL10	Pillow, Sorbent, 14" x 25", 10 pillow bale .....	101.90
GES-R144	Roll, Sorbent, 38" x 144' x 3/8", 1 roll bale .....	144.30
GES-OS15	Snare, Viscous Oil, 30 count .....	60.00
GES-OSB50	Snare Boom, Viscous Oil, 50' .....	73.75
GES-OSB100	Snare Boom, Viscous Oil, 100' .....	186.50
GES-OD40	Sorbent, All-Purpose, Oil-Dry .....	12.90
GES-SPHAGSORB2	Sphag Sorb, 2 cf x 24 lb bag .....	42.25
GES-SW100	Sweep, Sorbent, 17" x 100', 1 sweep bale .....	110.60
GES-2950	Zorbent, Absorbent Material .....	62.50
GES-OILHAWG	Oil Hawg .....	30.00/Per Bag
GES-PROSORB	Pro Sorb .....	12.00/Per Bag

**Pumps and Hoses**

		<b>Daily Rate</b>
PUMP-1000	DC Pump, on Dolly .....	100.00
PUMP-1001	Pump, 1" Poly Diaphragm/Stainless .....	100.00
PUMP-1004	Pump, 2" .....	90.00
PUMP-1007	Pump, 2" Acme Mdl 39-G4 Floating Wash Pump .....	150.00
PUMP-1002	Pump, 2" Blackmere Vane, (Hydraulic) .....	200.00
PUMP-1003	Pump, 2" Diaphragm .....	90.00
PUMP-1006	Pump, 2" Stainless Steel Diaphragm .....	250.00

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### Pumps and Hoses - Continued

		Daily Rate
PUMP-1010	Pump, 3" Diaphragm .....	100.00
PUMP-1009	Pump, 3" Diaphragm, Diesel.....	100.00
PUMP-1012	Vacuum Unit, Dual Venturi head .....	75.00
PUMP-1011	Rebuild Kit, Diaphragm Pump .....	500.00 Each
PUMP-1013	Pump, 3" Diaphragm, Stainless .....	150.00
PUMP-1014	Pump, Hand Plastic .....	25.00 Each
PUMP-1008	Pump, Wash (with suction & discharge hose & nozzle) .....	90.00
MSE-1038	Hose, Chemical Resistant, 3" x 20' .....	20.00
MSE-1037	Hose, Chemical Resistant, 2" x 20' .....	20.00
MSE-1051	Hose, Chemical Resistant, 1" x 10' .....	20.00
MSE-1039	Hose, Chemical Resistant, Hard Gum Rubber, 6" x 25' .....	28.00
MSE-1040	Hose, Fire, 50' section .....	50.00
MSE-1041	Hose, Metal, Flex, 6" x 25' .....	25.00
MSE-1042	Hose, Solid Metal, Joint Pipe, 6" x 12' .....	22.00
MSE-1043	Hose, Suction/Discharge, 2" x 25' .....	8.00
MSE-1044	Hose, Suction/Discharge, 3" x 20' .....	8.00
MSE-1047	Hose, ADS 6" .....	1.75 Foot
MSE-1052	Hose, Air 1" x 50' .....	40.00
MSE-1053	Hose, Air ¾" x 50' .....	40.00
MSE-1054	Hose, Industrial/water .....	40.00

### Specialty Equipment

		Daily Rate
MSE-1062	SP-30, 3"/6" Submersible Pump with Crane and Jetter Head .....	120.00/hr.
MSE-1063	Hose, 6" x 50' .....	24.00/day
MSE-1064	Hose, 6" x 20' .....	12.00/day
MSE-1065	Hose, 3" x 50' .....	24.00/day
MSE-1066	Hose, 3" x 20' .....	12.00/day
MSE-1067	Rotomite 180P Dredge .....	1,800.00/day

### Communications Equipment

		Daily Rate
COMM-1001	Cellular Telephone (Each) .....	25.00
COMM-1002	Computer, Laptop/Desktop w/Printer.....	125.00
COMM-1003	Fax Machine .....	25.00
COMM-1004	GPS, Hand Held .....	50.00
COMM-1005	ICOM Aircraft Radio, Hand Held.....	Cost Plus 20%
(NOTE: Any items not returned to the Command Unit upon completion of work will be charged back to the customer at cost plus 20%.)		
COMM-1007	Radio Portable .....	Cost Plus 20%
COMM-1008	VHF Marine Radio, Hand Held .....	Cost Plus 20%
COMM-1009	VHF Mobile Radio Marine Radio w/8' Antenna.....	Cost Plus 20%

### Haz-Mat Equipment

		Daily Rate
MSE-1005	Betz Emergency Off-Loading Valve.....	500.00
HMS-1003	Chlorine Emergency Kit "A" .....	500.00
HMS-1004	Chlorine Emergency Kit "B" .....	750.00
HMS-1005	Chlorine Emergency Kit "C" .....	1,000.00
MSE-1010	Compressor, Corken, 2" .....	1,500.00
HME-1005	Vacuum Cleaner, Stainless Steel, Mercury, HEPA .....	250.00
HMS-1001	Cylinder Refill, Nitrogen, Each .....	50.00
MSE-1018	Decontamination Kit (Pool, Brush, Bucket, Soap), Each .....	50.00
MSE-1060	Dome Lid Clamps .....	100.00

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### Miscellaneous Equipment

		<b>Daily Rate</b>
MSE-1004	Back-Pack Blower.....	30.00
MSE-1006	Camera, Digital.....	50.00
MSE-1068	Formal Job Report with photos (max. 27 exposures).....	150.00
MSE-1006-1	Photo-Processing, Each Frame.....	2.50
MSE-1007	Camera, Video, Event Recording.....	250.00
MSE-1009	Chain Saw.....	75.00
MSE-1049	Compressor, Air, 11.8 cfm, 90 psi output + fuel (GES Owned).....	185.00
MSE-1002	Air Compressor, 375 cfm, + fuel.....	Cost Plus 20%
MSE-1003	Air Compressor, 185 cfm, + fuel.....	Cost Plus 20%
MSE-1011	Compressor, Hydraulic, 2".....	200.00
MSE-1048	Drum Crusher.....	250.00
MSE-1013	Drum Dolly.....	25.00
MSE-1015	Drum, Grabber Forklift.....	100.00
MSE-1016	Drum Pump, Poly.....	25.00
MSE-1017	Drum Sling.....	25.00
MSE-1050	Eye Wash Station.....	25.00
MSE-1055	Lights, Explosion Proof.....	Cost Plus 20%
MSE-1020	Generator, 4 kw.....	100.00
MSE-1046	Hand Tool (Pitch Fork, Rake, Shovel, Squeegee, etc).....	17.00
MSE-1023	Power Pack, Hydraulic, 50 hp or less.....	500.00
MSE-1026	Saw, Air Powered.....	75.00
MSE-1027	Saw, Portable.....	75.00
MSE-1028	Scare Cannon plus Fuel.....	60.00
MSE-1029	Sewer Plug.....	100.00
MSE-1030	Sprayer, Pump, Hand-Held.....	30.00
MSE-1001	Stainless Steel Stinger, 2".....	50.00
MSE-1031	Steam Cleaner (3,000 psi or less).....	Cost Plus 20%
MSE-1032	Vacuum Cleaner, Wet/Dry.....	50.00
MSE-1033	Vapor Lights, High Intensity.....	65.00
MSE-1034	Weed Eater, Commercial.....	120.00
MSE-1035	Wheelbarrow.....	25.00
MSE-1056	Ladder (straight, Rope, Folding).....	25.00
MSE-1057	Ladder (Extension).....	35.00
MSE-1058	Chemical, Tape Roll.....	35.00
MSE-1061	Pallet Jack.....	50.00
MSE-1024	Pressure Washer (See Note) (GES owned).....	250.00/day
MSE-1024-R	Pressure Washer (See Note) (3 <sup>rd</sup> Party Rental).....	Cost Plus 20%

### Monitoring Equipment

		<b>Daily Rate</b>
MTE-1014	3M 3500 Passive VOC Monitoring Badges.....	Cost Plus 20%
MTE-1017	Passive Badges, Other.....	Cost Plus 20%
MTE-1021	25mm Particulate Sampling Cassette.....	Cost Plus 20%
MTE-1022	37mm Three Piece HEPA Particulate Sampling Cassette.....	Cost Plus 20%
MTE-1001	4-Gas Meters.....	95.00
MTE-1002	5-Gas Meters.....	125.00
MTE-1004	Anemometer / Mass Air Sensor.....	Cost Plus 20%
MTE-1005	Audio Dosimeter.....	Cost Plus 20%
MTE-1006	Black Light, Mercury Detection.....	40.00
MTE-1007	Crowcon Monitor, 5 gas.....	150.00
MTE-1008	Drager CMS Unit.....	300.00
MTE-1038	Drager CMS Chips.....	Cost Plus 20%
MTE-1015	Colorimetric Tube Hand Pump.....	30.00
MTE-1025	Drager PID Chips, Test Specific.....	Cost Plus 20%

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**Monitoring Equipment - Continued**

		<b>Daily Rate</b>
MTE-1016	Colorimetric Tubes.....	Cost Plus 20%
MTE-1041	Benzene Tubes.....	6.00 Each
MTE-1034	FID Detector, Handheld.....	200.00
MTE-1037	FID Detector Hydrogen Refill.....	100.00
MTE-1009	Infrared Thermometer.....	50.00
MTE-1020	Intrinsically Safe Thermometer (laser).....	15.00
MTE-1003	Jerome Mercury Vapor Analyzer.....	175.00
MTE-1011	ph Meter.....	30.00
MTE-1039	Ph Strips Box.....	25.00
MTE-1012	Photoionization Detector (PID), MiniRae.....	75.00
MTE-1036	Photoionization Detector, Ultra (PID), Ultra MiniRae.....	100.00
MTE-1010	Radiation Monitor.....	75.00
MTE-1013	Wibget – Portable Heat Stress Monitor.....	Cost Plus 20%
MTE-1023	Chemsticks.....	15.00
PPE-1035	Smart Strips.....	35.00
MTE-1024	Coconut Charcoal VOC Sampling Tubes.....	5.00
MTE-1030	Single Calibration Gas – One (1) Calibration.....	20.00
MTE-1031	Quad Gas Calibration Gas – One (1) Calibration.....	25.00
MTE-1032	Tedlar Bag w/Stainless Fittings – 1 Liter.....	26.00
MTE-1033	Tedlar Bag w/Stainless Fittings – 5 Liter.....	40.00
MTE-1028	Glassware, Additional.....	Cost Plus 20%
MTE-1040	Hamby Soil Sampling Test.....	35.00/ea.
MTE-1042	HCL Monitor.....	150.00

**Rescue Equipment**

		<b>Daily Rate</b>
MSE-1012	Confined Space Rescue Kit.....	125.00
MSE-1045	Coppus Blower.....	50.00
MSE-1059	Air Horn 6".....	25.00
PPE-1020	Harness, Safety, w/lanyard.....	35.00
PPE-1030	Safety Lifeline.....	25.00
PPE-1036	Retrieval, System Tripod.....	95.00
PPE-1037	Replacement of Equipment.....	Cost Plus 20%

**Personal Protective Equipment**

		<b>Daily Rate</b>
PPE-1005	Bunker Gear (Pants, Coat, Gloves, Helmet, Boots).....	250.00
PPE-1006	Chest Waders.....	50.00
PPE-1007	Cool Vest.....	50.00
PPE-1008	Coveralls, Poly-Coated Tyvek Hood and Boots, Each.....	16.00
PPE-1009	Coveralls, Saranex, Each.....	18.00
PPE-1010	Coveralls, Tyvek, Each.....	10.00
PPE-1021	Level A, Responder, Each.....	1,150.00
PPE-1022	Level B, Fully-Encapsulated (CPF 4) Each.....	225.00
PPE-1024	(CPF 3), Each.....	105.00
PPE-1026	(CPF 2), Each.....	65.00
PPE-1027	(CPF 1), Each.....	50.00
PPE-1034	Level D, PPE, Each.....	45.00
PPE-1033	Slicker Suit, Rain, Each.....	25.00
PPE-1038	Suit, Acid Each.....	47.50

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**Boots**

		<b>Unit Rate</b>
PPE-1001	Boot, Tingley, Pair.....	130.00
PPE-1002	Boot, Chemical, NFPA Approved, Pair.....	90.00
PPE-1003	Boot, Rubber, Steel-toe, Pair.....	45.00
PPE-1004	Booties, Latex, Pair.....	7.00

**Gloves**

		<b>Unit Rate</b>
PPE-1011	Glove, Latex, Sample, Pair.....	1.00
PPE-1012	Glove, Leather, Pair.....	5.95
PPE-1013	Glove, Neoprene, Pair.....	5.95
PPE-1029	Glove, Nitrile, Inner, Pair.....	1.00
PPE-1015	Glove, Nitrile, Outer, Pair.....	3.75
PPE-1017	Glove, "Black Knight", (PVC) Pair.....	3.25
PPE-1018	Glove, "Silver Shield", Pair.....	8.00
PPE-1019	Glove, Liner, Cotton, Pair.....	1.00
PPE-1039	Glove, Butyl.....	25.00
PPE-1040	Glove, Viton.....	75.00
PPE-1041	Glove, Natural Rubber.....	3.00

**Respiratory Protection**

		<b>Unit Rate</b>
HME-1001	Air Regulator.....	50.00/day
HME-1002	Breathing Air Cylinder.....	10.00/day
HME-1011	Breathing Air Hose, 50' Section.....	12.00/day
HME-1003	Escape Mask.....	50.00/day
HME-1004	Escape Pack.....	125.00/day
HME-1007	Full-Face Respirator (includes first Cartridge set).....	50.00/day
HME-1008	Half-Face Respirator (Organic Mask, Disposable), Each.....	25.00
HME-1009	Self-Contained Breathing Apparatus (SCBA).....	125.00/day
HME-1010	Half-Face Respirator w/o cartridges, Each.....	12.50
HME-1009-RF	Self-Contained Breathing Apparatus (SCBA) Refill.....	25.00
PPE-1028	Respirator Cartridge, HEPA, Each.....	7.50
PPE-1031	Respirator Cartridge, HEPA/OV/AG, Pair.....	24.00
PPE-1032	Respirator Cartridge, Mercury Vapor, Pair.....	30.00
PPE-1042	Cart, Air w/two Air Cylinder.....	75.00/day
PPE-1043	Breathing Air Cylinder Refill.....	Cost Plus 20%
AUTO-1015	Breathing Air Trailer.....	Cost Plus 20%

**Sampling and Testing Equipment and Supplies**

		<b>Unit Rate</b>
ST-1003	Drum Thief Sampling Tubes.....	16.00
ST-1004	Haz-Cat Sampling Kit, per test.....	35.00
ST-1017	Hydrocarbon Test Kit.....	47.65
ST-1007	Mercury Test Kit.....	225.00
ST-1008	PCB Wipe Test Kit.....	30.00
ST-1009	Personnel Sampling Pump.....	50.00
ST-1010	Pipettes, Glass.....	2.00
ST-1011	pH Paper (Roll or Box).....	20.00
ST-1013	Sample Bomb.....	120.00
ST-1014	Sample Jars.....	5.00
ST-1015	Sample Storage.....	15.00
ST-1016	Soil Sampling Kit.....	35.00
ST-1018	Shippers, Sample Jar (plus postage).....	50.00
ST-1006	Lab Analysis, Accredited Third Party.....	Cost Plus 20%
ST-1019	Waste Disposal – Profile Charge.....	150.00

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**Storage**

		<b>Daily Rate</b>
STR-1009	Tote, Poly, 300 gl.....	25.00
STR-1010	Tote, Poly, 300 gl Replacement Each .....	350.00
STR-1002	Frac Tank Mobilization, Decontamination and Demobilization .....	Cost Plus 20%
STR-1001	Frac Tank.....	Cost Plus 20%
MSS-1008	Box Liner, Roll-Off Box .....	50.00
MSS-1012	Drum Liner, Plastic Bag, 55 gl x 6 ml, Each .....	2.00
MSS-1011	Drum Liner, Plastic Bag, 55 gl x 6 ml, 50 per roll.....	90.00
GES-LP5	Drum, Poly, 5 gl, w/lid .....	16.10
GES-LP20SL	Drum, Poly, O/H 20 gl w/screw-on lid .....	62.50
GES-PDOH30	Drum, Poly, 30 gl, w/lid .....	55.00
GES-PDOH25	Drum, Poly, O/H, Nestable, 25 gl.....	58.30
GES-PDOH55	Drum, Poly, O/H, w/fittings, 55 gl.....	70.00
GES-PDOHN30	Drum, Poly, O/H, Nestable, w/fittings, 30 gl.....	65.00
GES-PDOHN55	Drum, Poly, O/H, Nestable, w/fittings, 55 gl.....	70.00
GES-PDTH55	Drum, Poly, T/H, w/bungs, 55 gl .....	75.00
GES-OP95	Drum, Poly, Overpack, 95 gl.....	200.00
GES-OP95M	Drum, Poly, Overpack, 95 gl, Metric.....	327.50
GES-OP110	Drum, Poly, Overpack, 110 gl.....	350.00
GES-CTSD55	Drum, Steel, T/H, 55 gl .....	65.00
GES-OTSD55	Drum, Steel, O/H, 55 gl.....	65.00
GES-SOP85	Drum, Steel, Overpack, 85 gl.....	175.00
GES-SOP110	Drum, Steel, Overpack, 110 gl.....	670.30
GES-DRUMLABELS	Drum Labels .....	1.00/Each

**Chemicals**

		<b>Unit Rate</b>
GES-ACETIC-5	Acetic Acid, Glacial, 5 gl pail.....	87.35
GES-ACETIC-GL-55	Acetic Acid, Glacial, 55 gl. Drum .....	528.75
GES-ACETIC-56PCT-55	Acetic Acid, Industrial Grade, 56% pure, 55 gl drum .....	450.00
GES-ACIDIC-5	Acidic Acid, 5 gl .....	82.50
GES-BA50	Boric Acid, 5%, 50 lb bag.....	96.55
GES-BCC#1-250	Petro-Clean, Spill Control Liquid, 250 gl tote.....	9,375.00
GES-BCC#1-300	Petro-Clean, Spill Control Liquid, 300 gl tote.....	11,250.00
GES-BCC#1-5	Petro-Clean, Spill Control Liquid, 5 gl pail .....	200.65
GES-BCC1-55	Petro-Clean, Spill Control Liquid, 55 gl drum.....	2,062.50
GES-BRAT-A+	A+ Microbes, 1 lb .....	57.50
GES-BRAT-B	B Microbes, 1 lb .....	57.50
GES-BRAT-Z	Z Microbes, 1 lb .....	57.50
GES-CAUSOD55DRY	Caustic Soda, Pearls, 50 lb bag .....	50.15
GES-CITRIC50B	Citric Acid, 50%, Grade B, 575 lb drum .....	1,048.40
GES-DGR1	Degreaser/Solvent, 1 gl container .....	46.35
GES-DRYBSTR	Dry Booster, 1 lb .....	57.50
GES-PES-51-55	D-Limonene (Orange Terpenes) 55 gal drum.....	2,062.50
GES-MAGOXI-50	Magnesium Oxide (50 lb bag).....	45.00
GES-MBELSC250	Micro-Blaze, Emergency Liquid Spill Control, 250 gl tote.....	10,758.50
GES-MBELSC5	Micro-Blaze, Emergency Liquid Spill Control, 5 gl bucket .....	132.50
GES-MBOL5	Micro-Blaze Out, Firefighting Agent, 5 gl pail .....	215.15
GES-PES-51-5	Organic Bio-Cleanser, Oil Release Agent, 5 gal bucket .....	325.00
GES-PES-51	Organic Bio-Cleanser, Oil Release Agent, 55 gal drum .....	3,372.50
GES-TEGRASOLVEH-55	Tegra, Solve H, 55 gl drum.....	1,760.00
GES-SA50D	Soda Ash, Dense, 50 lb bag .....	22.80
GES-SB50	Sodium Bicarbonate, 50 lb bag.....	36.20
GES-SODHCH	Sodium Hypochlorite, Liquid, 1 gl .....	2.10

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	<b>Unit Rate</b>
GES-AMM	Ammonia..... 2.50 gal
GES-BLEACH	Bleach..... 2.50 gal
GES-ECOSORB	Ecosorb (Mercapthan Neutralization) ..... 80.00 gal
GES-SODCARB	Sodium Carbonate (Fly Ash) ..... Cost Plus 20%
GES-CALCARB	Calcium Carbonate ..... Cost Plus 20%
GES-QUAT128	Quat 128..... 15.00 gal
GES-REAGENT	Reagent, Miscellaneous ..... Cost Plus 20%

**Miscellaneous Material**

	<b>Unit Rate</b>
MSM-1001	Diesel Fuel..... Current Price
MSM-1002	Gasoline..... Current Price
MSM-1003	A Fuel Surcharge of 17% of the hourly/ Daily Equipment /Vehicle rate will be charged on all Motorized Equipment.
MSS-1002	Barricade Tape, Roll each ..... 23.10
MSS-1001	Duct Tape, 2" x 60 yd each..... 9.10
MSS-1009	Epoxy Stick, Sealant each ..... 12.00
GES-010.1732	Excelsior, Baled, #732 Spur Cut, 75# Avg. each..... 26.20
GES-010.2732.23	Excelsior, Pony Bale, #732 23 LG 55# Avg. each ..... 21.00
MSS-1010	Stress Relief Supplies..... 10.00
MSS-1003	Rags/Wipes, Colored, 50 lb box each ..... 52.50
GES-CR25	Rope, Cotton, 1/4" x 100' each ..... 25.00
MSS-1006	Rope, Polypro, 1/2" x 600' each ..... 75.00
MSS-1007	Rope, Polypro, 1/4" x 600' each ..... 40.00
GES-PC1	Pollution Can, 20 gl, each..... 20.10
MSS-1005	Visquine Sheeting, 20' x 100' x 6 ml each ..... 110.00
MSS-1014	Fence Post..... Cost Plus 20%
MSS-1015	Air Tools..... 50.00 Day
MSS-1016	Carbon Filters plus Carbon..... Cost Plus 20%
MSS-1017	Sand Filters plus Sand..... Cost Plus 20%
MSS-1018	Tofteegorg Spray Head ..... 250.00
MSS-1019	Portable Heaters, Each..... 15.00
MSS-1020	Port a Cool Fan, Each ..... 35.00
MSS-1021	Tank Inhibitor Injector ..... 250.00
MSS-1022	Break Area (tent, bench, chairs, ice chest) Day ..... 125.00
MSS-1023	Face Shield with Bracket ..... 35.00
MSS-1024	Barricade Fence ..... Cost Plus 20%
MSS-1025	Grounding Kit..... 50.00

*All rates listed in this schedule are subject to change without notice.*



**GARNER ENVIRONMENTAL SERVICES, INC.**

**CORPORATE OFFICE: 1717 W. 13TH STREET, DEER PARK, TX 77536 • 281-930-1200 • 800-424-1716**

## Response Rate Schedule of January 2009

### Addendum 1

EMERGENCY RESPONSE	GES-PES-51-1	1 Gallon Container	\$49.00 / GAL
	GES- PES-51-55	55 Gallon Drum	\$2,700.00 / DRUM
DISASTER RESPONSE			
INDUSTRIAL SERVICES			
WASTE MANAGEMENT			
REMEDIATION			
HEALTH & SAFETY TRAINING			
EQUIPMENT SALES			

Otis L. Chambers  
Executive Vice-President

*All rates listed in this schedule are subject to change without notice.*

#### Branch Offices

Deer Park, TX (Operation & Training) 281-930-1200	•	Pt. Arthur, TX (Operations) 409-983-5646	•	Port Arthur, TX (Training) 409-984-9836	•	LaMarque, TX (Operations) 409-935-0308
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**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. January 2009</b>

BOOM TYPE CODE		END CONNECTOR CODE	
F	Fence	ASTM	ASTM Std (D962-86)
FR	Fire	BOLT	Bolt Connector
PI	Inflatable (Press)	HP	Hinge & Pin
SI	Inflatable (Self)	Z	Quick-Connect Z
MR	Marsh (Upper air chamber with lower water chamber)	RC	Raised Channel
		SNAV	Slide (US Navy)
		SLOT	Slotted Tube
R	Round	US1	Universal Slide Type 1
SB	Weir Boom	US2	Universal Slide Type 2
OT	Other	OT	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	24,900	12	6	Z	6.0	Deer Park	Garner
Acme Products Co.	SUPER-MINI	R	350	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	Port Arthur	Garner
Acme Products Co.	OK CORRAL	R	10,000	12	6	Z	6.0	Port Arthur	Garner

<b>Corporate Operations</b>	<b>Response Equipment Listing</b>	<b>Equipment Listing Rev. January 2009</b>
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COMMUNICATIONS TYPE CODES			
<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
Nextel	325IS	CP	20			Unlimited		X	La Marque	Garner
Nextel	325IS	CP	20			Unlimited		X	La Marque	Garner

<b>Corporate Operations</b>	<b>Response Equipment Listing</b>	<b>Equipment Listing Rev. January 2009</b>
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<b>RESPONSE VEHICLES</b>						
Name of Manufacturer	Response Vehicle	Number of Units	Wide Load Permit Needed		Storage Location	Owner
			Yes	No		
Wabash	48' Box Vans, Hard Boom Trailers	2		X	Deer Park	Garner
Fruehauf	48' Box Van, Sorbent Boom Trailer	1		X	Deer Park	Garner
Ford/Chevy	Pick-up Truck, 1 ton	20		X	Deer Park	Garner
Sooner	Emergency Response Trailer, 32'	3		X	Deer Park	Garner
Modern Mfg.	Boom Trailer, 20' Gooseneck	4		X	Deer Park	Garner
Containment Sys. & Gooseneck	Emergency Haz-Mat Response Trailers 32' & 24'	2		X	Deer Park	Garner
Pace American	36' Haz Mat Response Trailer	1		X	Deer Park	Garner
Gooseneck	20' Response Trailer (Industrial Response)	1		X	Deer Park	Garner
Ford/Chevy	Pick-up Truck, 1 ton (2 Deer Park & 4 Port Arthur)	6		X	Deer Park / Port Arthur	Garner
Ford/Chevy	Pick-up Truck, 1 ton	14		X	La Marque	Garner
Garner	Roll-Off Box, 20 yd;	0		X	La Marque	Garner
Sooner	Emergency Response Trailer, 32'	1		X	La Marque	Garner
Modern Mfg.	Boom Trailer, 20' Gooseneck	3		X	La Marque	Garner
Iron Horse	Boom Trailer, 20 Gooseneck	2		X	La Marque	Garner
Modern Mfg.	Spill Trailer, 16' Lo-Boy	4		X	La Marque	Garner
Modern Mfg.	Spill Trailer, 20'	2		X	La Marque	Garner
Ford	Pick-up Truck, 1 ton	7		X	Port Arthur	Garner
Sooner	Emergency Response Trailer, 32"	1		X	Port Arthur	Garner
Modern Mfg.	Trailer, Spill Response, 16' Lo-Boy	1		X	Port Arthur	Garner
Modern Mfg.	Boom Trailer, Gooseneck, 20'	3		X	Port Arthur	Garner
Gemini Cargo	Trailer, Haz-Mat, 19'	1		X	Port Arthur	Garner
Modern Mfg.	Spill Trailer, 20' Lo-Boy	2		X	Port Arthur	Garner
Modern Mfg.	21' Oil Spill Response Trailer (Boat/ Boom/ Sorbent)	1		X	Port Arthur	Garner
Modern Mfg.	Boom Trailer, Gooseneck, 20'	2		X	Port Arthur	Garner
	8' Utility Trailers	1		X	Port Arthur	Garner
Sooner	Spill Trailer 32' Response	1		X	Port Arthur	Garner

<b>Corporate Operations</b>	<b>Response Equipment Listing</b>	<b>Equipment Listing Rev. January 2009</b>
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### BOOM EQUIPMENT

Name of Manufacturer	Model Number	Equipment Type	Quantity	Storage Location	Owner
Norfloat	A2	Buoy, Anchor Marker, Inflatable, 18" dia.	13	Deer Park	Garner
Polycord	600x1/4	Rope, Polypropylene, 1/4" x 600'	3	Deer Park	Garner
Polycord	600x1/2	Rope, Polypropylene, 1/2" x 600'	5	Deer Park	Garner
Polycord	600x3/8	Rope, Polypropylene, 3/8" x 600'	1	Deer Park	Garner
U.S. Anchor Mfg., Inc.	22#	Anchor, Galvanized Steel, 22 lb., Danforth Style	0	Deer Park	Garner
U.S. Anchor Mfg., Inc.	40#	Anchor, Galvanized Steel, 40 lb., Danforth Style	0	Deer Park	Garner
U.S. Anchor Mfg., Inc.	75#	Anchor, Galvanized Steel, 75 lb., Danforth Style	4	Deer Park	Garner
U.S. Anchor Mfg. Inc.	100#	Anchor, Galvanized Steel, 100 Lb. Danforth Style	13	Deer Park	Garner
Norfloat	A2	Buoy, Anchor Marker, Inflatable, 18" dia.	20	Deer Park	Garner
Polycord	600 x1/4	Rope Polypropylene, 1/4" x 600'	3	Deer Park	Garner
Polycord	600 x 1/2	Rope Polypropylene, 1/2 " x 600'	1	Deer Park	Garner
U.S. Anchor Mfg., Inc.	22 #	Anchor, Galvanized Steel, 18 lb., Danforth Style	0	Deer Park	Garner
U.S. Anchor Mfg., Inc.	40 #	Anchor, Galvanized Steel, 22 lb., Danforth Style	0	Deer Park	Garner
U.S. Anchor Mfg. Inc.	100 #	Anchor, Galvanized Steel, 100 #, Danforth Style	13	Deer Park	Garner
Norfloat	A2	Buoy, Anchor Marker, Inflatable, 18" dia.	2	La Marque	Garner
Polycord	600 x1/4	Rope Polypropylene, 1/4" x 600'	5	La Marque	Garner
Polycord	600 x 1/2	Rope Polypropylene, 1/2 " x 600'	5	La Marque	Garner
U.S. Anchor Mfg., Inc.	22#	Anchor, Galvanized Steel, 22 lb., Danforth Style	8	La Marque	Garner
U.S. Anchor Mfg., Inc.	40#	Anchor, Galvanized Steel, 40 lb., Danforth Style	5	La Marque	Garner
Norfloat	A2	Buoy, Anchor Marker, Inflatable, 18" dia.	8	Port Arthur	Garner
Polycord	600 x 1/4	Rope Polypropylene 1/4 " x 600 '	5	Port Arthur	Garner
Polycord	600 x 1/2	Rope Polypropylene 1/2 " x 600'	5	Port Arthur	Garner
U.S. Anchor Mfg., Inc.	22 #	Anchor, Galvanized Steel, 22 lb., Danforth Style	12	Port Arthur	Garner
U.S. Anchor Mfg., Inc.	75#	Anchor, Galvanized Steel, 75 lb., Danforth Style	6	Port Arthur	Garner

<b>Corporate Operations</b>	<b>Response Equipment Listing</b>	<b>Equipment Listing</b>
		<b>Rev. January 2009</b>

<b>AIR MONITORING EQUIPMENT</b>				
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
	Mercury Vapor Analyzer	1	Deer Park	Garner
	Radiation Monitor	1	Deer Park	Garner
	Solar Radiation Monitor	1	Deer Park	Garner
	Weather Station	2	Deer Park	Garner
	Infrared Thermometer	1	Deer Park	Garner
	GPS Units	2	Deer Park	Garner
Aim	4-Gas Monitor	2	Deer Park	Garner
Draeger	Accuro Pump	2	Deer Park	Garner
Draeger	CMS Meter	1	Deer Park	Garner
Rae	Mini-Rae 2000 Portable VOC Meter	2	Deer Park	Garner
Quest	Single Gas Personal Meter	1	Deer Park	Garner
MSA	Escort Particulate Air Monitor	1	Deer Park	Garner
Sper Scientific	PH Meter	1	Deer Park	Garner
Dexsil	PetroFlag Hydrocarbon Test Kit	1	Deer Park	Garner
Chlorine	AC/ Kit	1	Deer Park	Garner
Rae	Mini Rae	4	La Marque	Garner
BW	Micro 5	4	La Marque	Garner
Rae	Ultra	4	La Marque	Garner
BW	4 Gas	1	La Marque	Garner

Corporate Operations		Response Equipment Listing		Equipment Listing	
				Rev. January 2009	
		Specialty Equipment			
Name of Manufacturer		Number of Units	Storage Location	Owner	
Scott	Self Contained Breathing Apparatus(SCBA) with 12 extra bottles / Scott	12	Deer Park	Garner	
Dreager	Self Contained Breathing Apparatus (SCBA) with 12 extra bottles / Dreager	0	Deer Park	Garner	
	Bezt Valve / Off Loading Valve	2	Deer Park	Garner	
	Chorine Emergency Kit A	1	Deer Park	Garner	
	Chorine Emergency Kit B	1	Deer Park	Garner	
	Chorine Emergency Kit C	1	Deer Park	Garner	
	Vacuum Cleaner / Stainless Steel, Mercury, HEPA	3	Deer Park	Garner	
	Cameras / Digital	10	Deer Park	Garner	
	Confine Space Rescue Kits	2	Deer Park	Garner	
	Coppus Blowers	2	Deer Park	Garner	
	Air Compressors 11.8 cfm 90 psi	6	Deer Park	Garner	
	Drum Crushers / Diesel Power	1	Deer Park	Garner	
	Drum Crabber	5	Deer Park	Garner	
	Generators	0	Deer Park	Garner	
	Decontamination Pools 20' x 100'	2	Deer Park	Garner	
	Fan, Ventilation 48'	3	Deer Park	Garner	
	Artic Cat, Four Wheeler	1	Deer Park	Garner	
	Light Stands	5	Deer Park	Garner	
	Air Compressors ( Portable )	5	La Marque	Garner	
	HEPA Vacuums	0	La Marque	Garner	
	Cameras / Digital	2	La Marque	Garner	
	Artic Cat, Four Wheeler	2	La Marque	Garner	
	Generators	4	La Marque	Garner	
	Scare Guns	3	Port Arthur	Garner	
	Self Contain Breathing Apparatus (SCBA)	10	Port Arthur	Garner	
	Cameras / Digital	1	Port Arthur	Garner	

Corporate Operations	Response Equipment Listing	Equipment Listing Rev. January 2009		
	<b>Specialty Equipment / Continued</b>			
	Chlorine Emergency Kit "C"	1	Deer Park	Garner
	Midland Kit	1	Deer Park	Garner
	Railcar Haz Hammock	1	Deer Park	Garner
	Mercury Vacuum	3	Deer Park	Garner
	Carbon Filter Systems	1	Deer Park	Garner
	Sand Filter Systems	2	Deer Park	Garner
	Wet & Dry Vacuum with HEPA Filter	1	Deer Park	Garner
	100 Watt Explosion Proof Light Sets	2	Deer Park	Garner
	Decon Pools 4' x4' x14' 5"	2	Deer Park	Garner
	Spill Guard 6' x 4' x8"	1	Deer Park	Garner
	Drum Dolly	4	Deer Park	Garner
	3/4 " Core Sampler	1	Deer Park	Garner
	Soil Sampler ( boring) Kit	1	Deer Park	Garner
	Self Contained Breathing Apparatus ( SCBA )	9	Deer Park	Garner
	Generators ( Portable )	0	Deer Park	Garner
	Weed Eaters	2	Deer Park	Garner
	Air Compressors ( Portable )	6	Deer Park	Garner
	Light Stand ( Portable )	0	Deer Park	Garner
	Coppus Blower	1	Deer Park	Garner
	Chain Saw	1	Deer Park	Garner
	Tank Truck Emergency Transfer Valve	1	Deer Park	Garner
	Air Horn, 6"	1	Deer Park	Garner
	Fan Ventilation, 48"	1	Deer Park	Garner
	Fan Ventilation, 16" Port A Cool with water Mister	1	Deer Park	Garner
	Digital Cameras	4	Deer Park	Garner
	Coppus Blowers	1	Port Arthur	Garner
	Air Compressors	3	Port Arthur	Garner
	Scare Guns	4	Port Arthur	Garner
	Pressure Washers	0	Port Arthur	Garner
	Weed Eaters	1	Port Arthur	Garner
	Artic Cat , Four Wheeler	1	Port Arthur	Garner

<b>Corporate Operations</b>	<b>Response Equipment Listing</b>	<b>Equipment Listing Rev. January 2009</b>
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<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

<b>PUMP EQUIPMENT</b>								
Name of Manufacturer	Model Number	Pump Type Code	Drive Type Code	Suction/ Discharge Size (inches)	Mfg. Pump Rate (gpm)	Quantity	Storage Location	Owner
Aro/Ingersoll Rand	KO176-44	P	P	1.0	120	2	Deer Park	Garner
Honda	WXT-20	G	I	2.0	180	4	Deer Park	Garner
Yanmar	LD-40/2	D	I	2.0	180	2	Deer Park	Garner
Honda	WXT-30	G	I	3.0	275	1	Deer Park	Garner
Wilden	Model M	P	P	3.0	240	5	Deer Park	Garner
Versa-Matic		OT	P	2.0	140	1	Deer Park	Garner
Versa-Matic		OT	P	1.5	140	1	Deer Park	Garner
Honda	EPT2	G	I	3.0	275	1	Deer Park	Garner
Wisconsin/Multi Quip		D	I	3.0	185	1	Deer Park	Garner
Yamada	POLY	P	P	3.0	200	1	Deer Park	Garner
Various		D	I	2.0	200	5	Deer Park	Garner
Various		G	I	2.0	190	2	Deer Park	Garner
Versamatic	STAINLESS	P	P	2.0	140	2	Deer Park	Garner
Honda	WXT-20	G	I	2.0	180	1	La Marque	Garner
Yanmar	LD-40/2	D	I	2.0	180	5	La Marque	Garner
Wilden	Model M	OT	P	3.0	240	0	La Marque	Garner
Acme Products Co., Inc.	FS-150A	G	I	1.5	275	1	Port Arthur	Garner
Honda	WXT-20	G	I	2.0	180	6	Port Arthur	Garner
Yanmar	LD-40/3	D	I	2.0	200	2	Port Arthur	Garner

<b>Corporate Operations</b>	<b>Response Equipment Listing</b>	<b>Equipment Listing Rev. January 2009</b>
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RESPONSE BOAT TYPE CODES		TRANSPORTATION METHOD CODES	
<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										
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'	7	NT	Deer Park	Garner
Custom Flat	20	LFB	40	2	20' / 6'	2'	1	NT	Deer Park	Garner
Custom Build	30	BAY	300	3	30' / 8'	2'	1	NT	Deer Park	Garner
Alumaweld	24	JB	40	2	24' / 6'	1.6	0	NT	Deer Park	Garner
Silver Ships	30'	BAY	400	3	30' / 8'	2	1	NT	Deer Park	Garner
Duracraft	21'	LFB	40	3	21' / 6'	1'	1	NT	Deer Park	Garner
Pirogue	12'	OT	0	1	12' / 2"	3"	2	NT	Deer Park	Garner
Various	12'	JB	25	1	12' / 3"	1'	2	NT	Deer Park	Garner
Scully	18'	BAY	230	2	28' / 8'	8"	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
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

<b>Corporate Operations</b>	<b>Response Equipment Listing</b>	<b>Equipment Listing Rev. January 2009</b>
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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
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
Crucial Inc.	1D18P-23	OT	2	25	2.0	.5	Deer Park	Garner
Crucial Inc.	1D18P-36	OT	5	36	2.0	.5	Deer Park	Garner
Marco	Sidewinder 14	OB	1	70	3.0	.5	Deer Park	Garner
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
Douglas Engineering	4200SH Skim-Pak	FS	2	5 - 68	2.0	.5	Deer Park	Garner
Marco	Sidewinder 14	OB	1	70	3.0	.5	Deer Park	Garner
Marco	Harbor 28	OB	1	70	2.0	.5	Deer Park	Garner
Elastec	Mini Max, 20"	OT	1	20	2.0	1.	Deer Park	Garner
Acme Products Co., Inc.	FS400ASK-39T	W	1	275	3.0	1.0	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-36	OT	3	25	2.0	.5	Port Arthur	Garner
Elastec	Double Drum	OT	1	60	2.0	.5	Port Arthur	Garner

<b>Corporate</b>	<b>Response Equipment Listing</b>	<b>Equipment Listing</b>
<b>Operations</b>		<b>Rev. January 2009</b>

PU	Portable Vacuum Pump	D	Diesel
SS	Units	E	Electric
VT	Super Sucker	G	Gasoline
OT	Vacuum Truck	H	Hydraulic
	Other	P	Pneumatic
		OT	Other

<b>VACUUM SYSTEM EQUIPMENT</b>										
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	2	80	3000	3200	La Marque	Garner
Ford	Meyers	OT	D		2	80	3000	500	La Marque	Garner
Super Products & Guzzler	5027	SS	D	27.0	1	450	3000	500	La Marque	Garner
Press Vac International		VT	D	27.0	6	80	3000	200	La Marque	Garner

<b>Corporate Operations</b>	<b>Response Equipment Listing</b>	<b>Equipment Listing Rev. January 2009</b>
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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		

<b>SORBENTS</b>										
Name of Manufacturer	Model Number	Sor bent 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	120		X		X	Deer Park	Garner
Complete Environmental Products	GES-P200	PAD	S	0		X		X	Deer Park	Garner
Complete Environmental Products	GES-EP100	PAD	S	160		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	120		X		X	Deer Park	Garner
Complete Environmental Products	GES-B810	B	S	114		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	40		X		X	Deer Park	Garner
Complete Environmental Products	GES-PART25	PT	S	10		X		X	Deer Park	Garner
Crucial, Inc.	OS-15	OT	S	10		X		X	La Marque	Garner
Complete Environmental Products	GES-P100	PAD	S	100		X		X	La Marque	Garner
Complete Environmental Products	GES-B510	B	S	20		X		X	La Marque	Garner
Complete Environmental Products	GES-B810	B	S	20		X		X	La Marque	Garner
Complete Environmental Products	GES-R144	ST	S	10		X		X	La Marque	Garner
Complete Environmental Products	GES-SW100	SW	S	30		X		X	La Marque	Garner
Complete Environmental Products	GES-PART25	P	S	40		X		X	La Marque	Garner

<b>Corporate Operations</b>	<b>Response Equipment Listing</b>	<b>Equipment Listing Rev. January 2009</b>
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<b>SORBENTS</b>										
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-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	Deer Park	Garner
Complete Environmental Products	GES-P100	PAD	S	325		X		X	Deer Park	Garner
Complete Environmental Products	GES-P200	PAD	S	200		X		X	Deer Park	Garner
Complete Environmental Products	GES-EP100	PAD	S	500		X		X	Deer Park	Garner
Complete Environmental Products	GES-B510	B	S	120		X		X	Deer Park	Garner
Complete Environmental Products	GES-B810	B	S	114		X		X	Deer Park	Garner
Complete Environmental Products	GES-R144	ST	S	50		X		X	Deer Park	Garner
Complete Environmental Products	GES-SW100	SW	S	40		X		X	Deer Park	Garner



# CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY)

4/27/2009

<b>PRODUCER</b> John L. Wortham & Son, L.P. 2727 Allen Parkway Houston, TX 77019  713-526-3366 www.worthaminsurance.com	<b>THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW.</b>												
<b>INSURED</b> Garner Environmental Services, Inc. Attn: Mrs Bobbie K. Risner 1717 W. 13th. Street Deer Park TX 77536	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 80%;">INSURERS AFFORDING COVERAGE</th> <th style="width: 20%;">NAIC #</th> </tr> <tr> <td>INSURER A: Zurich American Insurance Company</td> <td></td> </tr> <tr> <td>INSURER B: American Zurich Insurance Company</td> <td></td> </tr> <tr> <td>INSURER C: Steadfast Insurance Company</td> <td></td> </tr> <tr> <td>INSURER D:</td> <td></td> </tr> <tr> <td>INSURER E:</td> <td></td> </tr> </table>	INSURERS AFFORDING COVERAGE	NAIC #	INSURER A: Zurich American Insurance Company		INSURER B: American Zurich Insurance Company		INSURER C: Steadfast Insurance Company		INSURER D:		INSURER E:	
INSURERS AFFORDING COVERAGE	NAIC #												
INSURER A: Zurich American Insurance Company													
INSURER B: American Zurich Insurance Company													
INSURER C: Steadfast Insurance Company													
INSURER D:													
INSURER E:													

## COVERAGES

THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. AGGREGATE LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR ADD'L LTR	TYPE OF INSURANCE	POLICY NUMBER	POLICY EFFECTIVE DATE (MM/DD/YYYY)	POLICY EXPIRATION DATE (MM/DD/YYYY)	LIMITS	
A	<b>GENERAL LIABILITY</b>	GLO289312711	4/21/2009	4/21/2010	EACH OCCURRENCE	\$ 1,000,000
	<input checked="" type="checkbox"/> COMMERCIAL GENERAL LIABILITY				DAMAGE TO RENTED PREMISES (Ea occurrence)	\$ 100,000
	<input type="checkbox"/> CLAIMS MADE <input checked="" type="checkbox"/> OCCUR				MED EXP (Any one person)	\$ 5,000
					PERSONAL & ADV INJURY	\$ 1,000,000
					GENERAL AGGREGATE	\$ 2,000,000
					PRODUCTS - COMP/OP AGG	\$ 2,000,000
					GEN'L AGGREGATE LIMIT APPLIES PER: <input checked="" type="checkbox"/> POLICY <input type="checkbox"/> PRO-JECT <input type="checkbox"/> LOC	
B	<b>AUTOMOBILE LIABILITY</b>	BAP289312611	4/21/2009	4/21/2010	COMBINED SINGLE LIMIT (Ea accident)	\$ 1,000,000
	<input checked="" type="checkbox"/> ANY AUTO				BODILY INJURY (Per person)	\$
	<input type="checkbox"/> ALL OWNED AUTOS				BODILY INJURY (Per accident)	\$
	<input type="checkbox"/> SCHEDULED AUTOS				PROPERTY DAMAGE (Per accident)	\$
	<input checked="" type="checkbox"/> HIRED AUTOS					
	<input checked="" type="checkbox"/> NON-OWNED AUTOS					
	<b>GARAGE LIABILITY</b>				AUTO ONLY - EA ACCIDENT	\$
	<input type="checkbox"/> ANY AUTO				OTHER THAN EA ACC	\$
					AUTO ONLY: AGG	\$
C	<b>EXCESS / UMBRELLA LIABILITY</b>	SEO289312911	4/21/2009	4/21/2010	EACH OCCURRENCE	\$ 1,000,000
	<input checked="" type="checkbox"/> OCCUR <input type="checkbox"/> CLAIMS MADE				AGGREGATE	\$ 1,000,000
	<input type="checkbox"/> DEDUCTIBLE					\$
	<input checked="" type="checkbox"/> RETENTION \$10,000					\$
A	<b>WORKERS COMPENSATION AND EMPLOYERS' LIABILITY</b>	WC289312811	4/21/2009	4/21/2010	<input checked="" type="checkbox"/> WC STATU-TORY LIMITS <input type="checkbox"/> OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH)				E.I. EACH ACCIDENT	\$ 1,000,000
	If yes, describe under SPECIAL PROVISIONS below				E.I. DISEASE - EA EMPLOYEE	\$ 1,000,000
					E.I. DISEASE - POLICY LIMIT	\$ 1,000,000
C	<b>OTHER</b> Contractors Pollution Liability - Claims Made RetroActive Date 4/21/93	PEC289322411	4/21/2009	4/21/2010	\$1,000,000 Each Claim \$1,000,000 Total Loss	

### DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES / EXCLUSIONS ADDED BY ENDORSEMENT / SPECIAL PROVISIONS

Automobile Physical Damage Applies On Specific Vehicles \$1000 Deductible Comprehensive & Collision. Blanket Additional Insured Is Applicable Under All Policies Except Workers Compensation And Contractors Pollution When Required By Written Contract. Blanket Additional Insured Under Section B Applies To Policy PEC289322410 Contractors Pollution When Required By Written Contract. Blanket Waiver Of Subrogation Is Applicable Under All Policies When Required By Written Contract.

### CERTIFICATE HOLDER

\*\*\*master\*\*\*

### CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, THE ISSUING INSURER WILL ENDEAVOR TO MAIL 30 DAYS WRITTEN NOTICE TO THE CERTIFICATE HOLDER NAMED TO THE LEFT, BUT FAILURE TO DO SO SHALL IMPOSE NO OBLIGATION OR LIABILITY OF ANY KIND UPON THE INSURER, ITS AGENTS OR REPRESENTATIVES.

AUTHORIZED REPRESENTATIVE

John L. Wortham &amp; Son, L.P.

ACORD 25 (2009/01)

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**IMPORTANT**

If the certificate holder is an **ADDITIONAL INSURED**, the policy(ies) must be endorsed. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

If **SUBROGATION IS WAIVED**, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

**DISCLAIMER**

The Certificate of Insurance on the reverse side of this form does not constitute a contract between the issuing Insurer(s), authorized representative or producer, and the certificate holder, nor does it affirmatively or negatively amend, extend, or alter the coverage afforded by the policies listed thereon.

**CANCELLATION NOTICE**

The **CANCELLATION NOTICE** on the **CERTIFICATE OF INSURANCE** is amended to include the following wording: The Insurance Companies may cancel the described policy(ies) by mailing or delivering ten (10) days written notice of cancellation to the Named Insured for: (1) Non Payment of premium of (2) any other circumstance permitted by state law or policy conditions.

**ADDITIONAL INSURED DISCLAIMER**

Coverage for Additional Insureds can vary significantly from policy to policy and thus Additional Insured status does not guarantee protection for all losses. Coverage is subject to actual policy terms and conditions.

# Alphabetical OSRO Classifications by Company

Facilities

Vessels

**0027 Garner Environmental Services**

COTP: CORPUS CHRISTI		MM	W1	W2	W3	MM	W1	W2	W3
<input checked="" type="checkbox"/>	High Volume Port	River/Canal	<input checked="" type="checkbox"/>						
		Inland	<input checked="" type="checkbox"/>						
		Open Ocean	<input type="checkbox"/>						
		Offshore	<input type="checkbox"/>						
		Nearshore	<input type="checkbox"/>						
		Great Lakes	<input type="checkbox"/>						
COTP: HOUSTON-GALVESTON		MM	W1	W2	W3	MM	W1	W2	W3
<input checked="" type="checkbox"/>	High Volume Port	River/Canal	<input checked="" type="checkbox"/>						
		Inland	<input checked="" type="checkbox"/>						
		Open Ocean	<input type="checkbox"/>						
		Offshore	<input type="checkbox"/>						
		Nearshore	<input type="checkbox"/>						
		Great Lakes	<input type="checkbox"/>						
COTP: MOBILE		MM	W1	W2	W3	MM	W1	W2	W3
<input type="checkbox"/>	High Volume Port	River/Canal	<input checked="" type="checkbox"/>						
		Inland	<input checked="" type="checkbox"/>						
		Open Ocean	<input type="checkbox"/>						
		Offshore	<input type="checkbox"/>						
		Nearshore	<input type="checkbox"/>						
		Great Lakes	<input type="checkbox"/>						
COTP: MOBILE(PANAMA CITY, FL)		MM	W1	W2	W3	MM	W1	W2	W3
<input type="checkbox"/>	High Volume Port	River/Canal	<input checked="" type="checkbox"/>						
		Inland	<input checked="" type="checkbox"/>						
		Open Ocean	<input type="checkbox"/>						
		Offshore	<input type="checkbox"/>						
		Nearshore	<input type="checkbox"/>						
		Great Lakes	<input type="checkbox"/>						
COTP: MORGAN CITY		MM	W1	W2	W3	MM	W1	W2	W3
<input type="checkbox"/>	High Volume Port	River/Canal	<input checked="" type="checkbox"/>						
		Inland	<input checked="" type="checkbox"/>						
		Open Ocean	<input type="checkbox"/>						
		Offshore	<input type="checkbox"/>						
		Nearshore	<input type="checkbox"/>						
		Great Lakes	<input type="checkbox"/>						
COTP: NEW ORLEANS		MM	W1	W2	W3	MM	W1	W2	W3
<input checked="" type="checkbox"/>	High Volume Port	River/Canal	<input checked="" type="checkbox"/>						
		Inland	<input checked="" type="checkbox"/>						
		Open Ocean	<input type="checkbox"/>						
		Offshore	<input type="checkbox"/>						
		Nearshore	<input type="checkbox"/>						
		Great Lakes	<input type="checkbox"/>						
COTP: PORT ARTHUR		MM	W1	W2	W3	MM	W1	W2	W3
<input checked="" type="checkbox"/>	High Volume Port	River/Canal	<input checked="" type="checkbox"/>						
		Inland	<input checked="" type="checkbox"/>						
		Open Ocean	<input type="checkbox"/>						
		Offshore	<input type="checkbox"/>						
		Nearshore	<input type="checkbox"/>						
		Great Lakes	<input type="checkbox"/>						

# Alphabetical OSRO Classifications by Company

<b>COTP: ST. PETERSBURG</b>		<b>Facilities</b>				<b>Vessels</b>			
<input type="checkbox"/> <b>High Volume Port</b>		<b>MM</b>	<b>W1</b>	<b>W2</b>	<b>W3</b>	<b>MM</b>	<b>W1</b>	<b>W2</b>	<b>W3</b>
	<b>River/Canal</b>	<input checked="" type="checkbox"/>							
	<b>Inland</b>	<input checked="" type="checkbox"/>	<input 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>Open Ocean</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<b>Offshore</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<b>Nearshore</b>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<b>Great Lakes</b>	<input type="checkbox"/>							

Date: October 1, 2009

DCO # 509

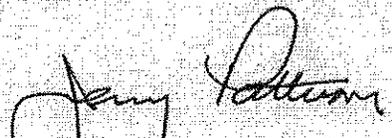


# Discharge Cleanup Organization Certificate

## 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

# **CLEAN CHANNEL ASSOCIATION**

## **Houston COTP Zone**

**From:** Karen Storm [mailto:karen@cleanchannel.org]  
**Sent:** Monday, March 08, 2010 8:34 AM  
**To:** White, Alisa  
**Subject:** RE: Need CCA information

CCA maintains the highest OSRO classification: MM/W1-W3, River/Canal/Inland, for Facilities and Vessels in both Houston and Port Arthur COTP zones. CCA is also certified as a Discharge Cleanup Organization by GLO.

I am sending you under separate email your Services Agreement.

If you need anything else, let me know.

Regards,  
Karen Storm



**CLEAN CHANNEL ASSOCIATION**

3110 Pasadena Freeway  
Pasadena, TX 77503  
713-534-6195  
713-534-6197 (fax)  
(b) (6) (cell)

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## SERVICES AGREEMENT

THIS SERVICES AGREEMENT ("Agreement") is made as of the 15th day of April, 1992 by and between the undersigned Member (the "Member") and Clean Channel Association, Inc., a Texas nonprofit, non-stock Corporation (the "Corporation" or "CCA"), (collectively referred to as "the parties")

### RECITALS

- A. The Corporation or its Members own, maintain and operate certain Vessels and Equipment for the purpose of the Cleanup of Liquid Spills in the Coverage area;
- B. The Member is a Member of the Corporation (individually a "Member" and sometimes collectively referred to as the "Members") and as a Member of the Corporation is entitled and obligated to enter into this agreement;
- C. The Member desires to contract with the Corporation to provide standby availability of, and the actual provision of, Cleanup for Liquid Spills on the terms and conditions set forth in the Bylaws and herein;
- D. CCA has established a level of "Membership Equipment" for each class of Members that defines what each Member will be required to commit in the event of a CCA Response.

### AGREEMENTS

In consideration of the mutual promises and covenants set forth in this agreement, the parties hereto hereby agree as follows:

### ARTICLE I

#### Definitions

As used in this agreement, the following terms shall have the following respective meanings. Any term not otherwise capitalized and defined herein shall have the meaning assigned to it by the Bylaws of the Corporation, as such Bylaws may be amended from time to time.

"Bylaws" shall mean the Bylaws of the Corporation as in effect from time to time.

"Cleanup" shall mean containment of a Liquid Spill on open water plus skimming recovery services attendant to containment.

"Contingency Plan" shall mean the Members' emergency response plan, discharge prevention and response plan, spill prevention counter measure and control plan and other similar documents or, when required, the Contingency Plan approved by any Federal or State agency.

"Direct Costs" shall mean the rental rates for the Equipment adopted by the Corporation from time to time and all identifiable direct operating expenditures involved in any particular Liquid Spill Cleanup activity, including but not limited to, costs for Equipment not owned by the Corporation, materials and personnel used, additional insurance premiums and repairs and maintenance required as a result of the Cleanup activity. The cost of the Equipment (i.e., Vessels and Equipment owned or leased on a regular basis by the Corporation) shall be included in Indirect Costs and shall not be included in Direct Costs.

"Equipment" shall mean the Vessels (including their crews) and equipment owned, leased or otherwise used for the purpose of a Cleanup.

"Indirect Costs" shall mean all indirect expenditures incurred by the Corporation including, but not limited to, office overhead and an allowance for amortization or cost recovery of equipment owned by the Corporation.

"Percentage Interest" shall mean a percentage which is equal to the Member's Membership Interest in the Corporation (i.e., the pro rata percentage voting rights, service fee and capital contribution or dues obligation and ownership interest of the Member in the Corporation) as determined pursuant to the Bylaws. The Percentage Interest shall remain the same as and change consistent with the Member's Membership Interest as it may be adjusted from time to time pursuant to the Bylaws.

## ARTICLE II

### Term

2.1 Term. The term of this agreement shall begin on the effective date hereof provided CCA has signed this agreement and has adopted a response plan and end on \_\_\_\_\_, 19\_\_\_\_, thereafter, the term shall be renewed automatically, without notice, for successive one-year terms beginning on each January 1 and ending on each December 31, unless earlier terminated pursuant to Sections 2.2 and 2.3.

**2.2 Termination Upon Termination of Membership.** This agreement shall terminate, without notice, automatically and concurrently upon the effective date the Member ceases to be a Member of the Corporation as provided in the Bylaws of CCA (the "termination date"). Within thirty (30) days of the termination date, the Member shall pay to the Corporation its Percentage Interest of all unpaid Direct Costs and Indirect Costs due for all periods prior to the termination date and the Corporation shall reimburse the Member its Percentage Interest of all prepaid Direct Costs and Indirect Costs with respect to periods subsequent to the termination date. The Member shall remain liable for its Percentage Interest of later discovered additional Direct Costs and Indirect Costs relating to periods prior to the termination date.

**2.3 Termination Upon Dissolution of the Corporation.** This agreement shall terminate without notice, automatically and concurrently upon dissolution of the Corporation.

### ARTICLE III

#### Services

**3.1 General.** The Corporation shall provide the services to the Member within the Coverage area. The services include, but are not limited to, Equipment, supplies and personnel available for Cleanup of Liquid Spills. The services shall also be available on a standby basis for a significant risk of a Liquid Spill and shall include actual Cleanup of a Liquid Spill by a Member. The decision on whether to respond to a Liquid Spill shall in all instances be made by CCA. If CCA determines that the Liquid Spill can be safely Cleaned up with the Equipment and/or personnel available to CCA and without danger to the safety or health of Response personnel or undue danger to the Equipment, then CCA will respond to the Liquid Spill, if requested to do so. By signing this agreement, the Member agrees to abide by the final decision of CCA on whether to respond to a Liquid Spill and further agrees to waive any and all claims, causes of action or rights it may have against CCA, its Members and/or the Administrative Director or his designee for any act or failure to act in such capacity as Administrative Director. If the Liquid Spill originates within the Coverage area but a Response is required outside the Coverage area, CCA may respond outside the Coverage Area as reasonably required and subject to meeting requirements of applicable law.

**3.2. Notification.** In the event of an actual Liquid Spill or significant risk of a Liquid Spill by the Member or for which it is or may be legally responsible under the Oil Pollution Act of 1990, the Texas Oil Spill Prevention and Response Act of 1991 or any other federal or state law originating within the Coverage area and if the Member desires services with respect to such Liquid Spill then the Member shall promptly notify the Corporation of the actual Liquid Spill or the significant risk of a Liquid Spill. The notification shall include the

location and nature and size of the Liquid Spill, if known. The initial notification may be oral but it shall be confirmed in writing as soon as practicable.

3.3 Member's Responsibility. The Member understands and agrees that during a CCA Response, the Member requesting the Response will maintain sole responsibility for the operation, management and supervision of the Cleanup of the Liquid Spill. Neither CCA nor its Members (except the Member requesting the CCA Response) will assume any responsibility, supervision of or liability for the Cleanup operations.

The Member further understands and agrees that in the event of a CCA Response, any Member providing Equipment and personnel, (with the exception of the Member requesting the CCA Response) transfers complete control and possession of its Equipment and personnel over to CCA. CCA will respond to the Liquid Spill as directed by the Member requesting the CCA Response and/or the Federal or State On-Scene Coordinator. The Member understands and agrees that if it requests a CCA Response, it will maintain sole responsibility for the operation, management, and supervision of the Cleanup of the Liquid Spill. In all circumstances during the time such Equipment and supplies are so utilized, complete possession and control thereof shall be maintained by the Corporation. The Member shall return the Equipment and supplies and materials in a condition which is as good as when called into service by the Member, subject to ordinary wear and tear, or at the discretion of the Corporation, the Member may pay CCA the amount of money required to comply with such requirement.

3.4 Priority. It is mutually agreed and acknowledged that the Corporation will respond to requests for services in the order requested. If the Corporation has responded to a prior Liquid Spill, except to the extent a Federal or State On-Scene Coordinator has expressly requested otherwise, the Corporation shall not be obligated to respond to the request of the Member for services until the prior CCA Response is terminated by CCA.

3.5 Contingency Plans. The Member may identify the Corporation in any Contingency Plans as being available to provide Oil spill assistance to the Member in accordance with the Bylaws and this agreement. The Corporation shall supply the Member with information regarding the Cleanup capability of the Corporation as the Member may reasonably request from time to time, for use by the Member in the preparation of its Contingency Plans; but the Corporation shall not participate in the development or approval of such Contingency Plans. Within 60 days of signing this agreement, the Member agrees to submit a Contingency Plan to CCA. The Member further agrees to submit to CCA any updated Contingency Plan which the Member subsequently submits to any state or federal agency. The submission of the Contingency Plan to CCA shall not obligate the Corporation in any manner.

3.6 Duration of CCA Response. CCA Response will be limited to a period not to exceed forty-eight (48) hours beginning with the request for CCA Response unless CCA has been otherwise required by the State or Federal On-Scene Coordinator.

3.7 Evidence of Financial Security. Upon execution of this agreement, the Member shall submit to CCA evidence of compliance with the financial security requirements of the Federal Water Pollution Control Act or, when applicable, the Oil Pollution Act of 1990 or the Texas Oil Spill Prevention and Response Act of 1991, whichever is greater.

## ARTICLE IV

### Fees and Charges

4.1 Indirect Costs. The Member shall pay to the Corporation its Percentage Interest of Indirect Costs as provided in the Bylaws. Indirect Costs shall be billed on a quarterly basis and paid within forty-five (45) days of each billing.

4.2 Direct Costs. The Member shall pay Direct Costs resulting from its request for a CCA Response.

## ARTICLE V

### Membership Equipment

5.1 Classifications. Each Member of CCA will fall in only one specific classification which defines the Membership Equipment each Member will be required to commit to CCA.

If a Member qualifies for more than one classification, the Member shall be designated in only one classification. That classification will be the one requiring the most Membership Equipment and personnel. The membership classifications and membership requirements are listed below:

#### Class 1 - PETROLEUM REFINERIES Membership Equipment:

Boom: 3 times the length of the largest Vessels calling at the Facility. Minimum size is 18", however, 24" is the preferred size. The boom will be equipped with universal ASTM end connectors.

- Boats: 1 boat with 4 people per boat (2 onboard and 2 ashore). The boat should be a workboat (john-boat or better) and have sufficient power to deploy boom.
- Skimmer: 1 skimmer with these minimum capacities:  
 operational within 2 hours  
 capable of recovering a 10,000 U.S. gallon spill  
 skimming rate of 1,000 gallon/hr. ideal conditions skimming recovery efficiency of 80%.

**Class 2 - BULK STORAGE TERMINALS AND DOCK OPERATORS**  
**Membership Equipment:**

Same as Class 1

**Class 3 - BARGE AND SHIP OPERATORS**  
**Membership Equipment:**

**A. Barge Owners:**

Commitment to provide one barge/tow unit during the period of CCA Response.

**B. Ship Operators:**

- Boom: 3 times the length of the largest Vessel. Minimum size is 18", however, 24" is the preferred size. The boom will be equipped with universal ASTM end connectors.
- Boats: 1 boat with 4 people per boat (2 onboard and 2 ashore). The boat should be a workboat (john-boat) or better) and have sufficient power to deploy boom.
- Skimmer: 1 skimmer with these minimum capacities: operational within 2 hours capable of recovering a 10,000 U.S. gallon spill skimming rate of 1,000 gallon/hr. ideal conditions skimming recovery efficiency of 80%.

**Class 4 - PIPELINE OPERATORS**  
**Membership Equipment:**

Boom: 500 feet with the same specifications as Class 1

Boats: 1 boat with 2 people with the same specifications as Class 1  
 Skimmer: Same as Class 1

CLASS 5 - TUG BOAT OPERATORS

Membership Equipment:

Commitment to provide a tug during the period of CCA Response.

Class - 6 CHEMICAL PLANTS AND COMMERCIAL HANDLERS OF HAZARDOUS MATERIALS

Membership Equipment:

Boom: One time the length of the largest Vessels calling at its Facility.

Class - 7 PRODUCTION OPERATORS

Membership Equipment:

Boom: 500 feet with the same specifications as Class 1  
 Boats: 1 boat with 2 people with the same specifications as Class 1.  
 Skimmer: None

5.2 Equipment Availability. In return for the services hereunder provided by the Corporation, the Member agrees to provide the Membership Equipment for its classification to the Corporation for use in CCA Response by the Corporation. Upon execution of this agreement or as soon as practicable thereafter, the Member will provide the Corporation with a listing of the Equipment it will provide, which listing shall be attached as Exhibit A to this agreement. Exhibit A may be changed from time to time upon forty-eight (48) hours written notice by the Member to CCA. The Member warrants that it will maintain all Equipment to be provided in a seaworthy condition at all times, but makes NO OTHER WARRANTIES OR REPRESENTATIONS, IMPLIED OR OTHERWISE, INCLUDING FITNESS FOR A PARTICULAR USE, regarding the Equipment. The Corporation will control the use of the Equipment when a CCA Response occurs. The Member requesting CCA Response understands and agrees that in the event a CCA Response occurs, any Member providing Equipment (with the exception of the Member requesting CCA Response) transfers complete control and possession of its Equipment over to CCA. CCA will respond to the Liquid Spill as directed by the Member requesting the CCA Response and/or the Federal or State On-Scene Coordinator. The Member hereby understands and agrees that the Member requesting the CCA Response will maintain sole responsibility for the operation, management, and supervision of the Cleanup of the Liquid Spill. Following a CCA Response, the

Corporation shall return the Equipment and personnel to the Member, or if the Corporation has received reimbursement for the Equipment pursuant to Section 3.3, the Corporation shall pay the Member the amount of the reimbursement.

5.3 Personnel. In addition to its obligation under Section 5.2, the Member agrees to provide personnel identified in the Membership Equipment requirements for its classification to the Corporation for a CCA Response which meet the minimum requirements established by CCA. Upon execution of this agreement or as soon as practicable thereafter, the Member will provide the Corporation with a listing of the personnel, which listing shall be attached as Exhibit B to this agreement. Exhibit B will contain primary and substitute personnel and may be changed from time to time by verbal notice from the Member, followed by a written notice as soon as practicable. The Corporation will control and direct the activities of the personnel during the CCA Response. If CCA receives reimbursement for personnel costs as a result of a CCA Response, CCA shall reimburse the Member the amount of the reimbursement. The Member requesting CCA Response understands and agrees that in the event a CCA Response occurs, any Member providing personnel, (with the exception of the Member requesting CCA Response) transfers complete control of its personnel and the right to direct their activities over to CCA. CCA will respond to the Liquid Spill as directed by the Member requesting the CCA Response and/or the Federal or State On-Scene Coordinator. The Member hereby understands and agrees that the Member requesting CCA personnel will maintain sole responsibility for the operation, management, and supervision of the Cleanup of the Liquid Spill.

5.4 Corporation Responsibility. The Corporation will be responsible for determining that the Equipment supplied by the Member meets the Membership Equipment requirements and that the Equipment is appropriate for the purposes to which the Corporation desires to use the Equipment. Further, the Corporation will be responsible for determining that the personnel supplied by the Member has met certain minimum requirements established by CCA to engage in the activities of the Corporation. The Corporation will have the right to inspect the Equipment and the records and documents associated therewith, upon reasonable notice and at reasonable times.

If the Corporation determines that the Equipment does not meet the Membership Equipment requirements or is not seaworthy and the Member does not make modifications to meet such requirements, then the Corporation may terminate this agreement and the Member's membership. The Corporation represents and warrants that it will use the Equipment only in Liquid Spill Response activities or unless required by a Federal or State On-Scene Coordinator.

5.5 Additional Equipment/Personnel Training. The Corporation from time to time may request the Member to modify Membership Equipment or to provide additional training. The Member may make any such modification or provide additional training at its own expense. If the Member refuses to make such modification or to provide training,

the Corporation may either pay the costs for the modification or the training or terminate this agreement and the membership of the Member.

## ARTICLE VI

### Independent Cleanup Operations

Nothing in this agreement shall require or be construed as requiring the Member to request the services or request the use of the Equipment or supplies of the Corporation in connection with Liquid Spill Cleanup activities and the Member may, if it so desires, purchase or contract for its own Cleanup Equipment and materials, or engage any other person to assist it with the Cleanup of Liquid Spills. In addition, the Member may employ its own Equipment and materials in conjunction with those provided by the Corporation.

## ARTICLE VII

### Indemnification

7.1 Member Indemnification. The Member shall defend, indemnify and hold harmless the Corporation and its Members and the agents, directors, officers and employees thereof (the "indemnified parties") against all claims, liability and costs incurred, including, but not limited to, attorneys' fees, expenses, penalties, fines and actual and/or punitive damages which the indemnified parties suffer, sustain or become liable for by reason of any accidents, damages or injuries, either to the person or property of the indemnified parties or to the person and/or property of any third party, including, but not limited to, federal, state and/or local governmental agencies thereof, in any matter arising out of or connected with (i) a CCA Response requested by the Member and (ii) any act or omission of the Member, its agents, directors, officers and employees where such liability is asserted against the indemnified party by reason of its being a Member of or otherwise associated with the Corporation. The foregoing defense, indemnity and hold harmless provisions by the Member shall be applicable to the indemnified parties regardless of whether such accident, damages or injuries are the result of the fault or negligence, or unseaworthiness of any Vessels, of an indemnified party. The Member further agrees that the parties to whom this defense, indemnification and hold harmless provision extends shall have the right, but not the obligation, to tender the defense to the Member of any and all lawsuits arising out of or in any way connected with matters which are the subject of this defense, indemnity and hold harmless provision, but that failure to tender any such lawsuit for defense shall in no way release or relieve the Member of its obligations hereunder. The Member also covenants and agrees that the defense, indemnity and hold harmless provision granted hereunder shall not be limited, restricted

or in any way affected by the amount of insurance carried by the indemnifying Member. It is the intent of the parties to this agreement that all indemnity obligations and/or liabilities assumed under the terms of this agreement be without regard to the cause or causes thereof (including pre-existing conditions), the unseaworthiness of any Vessels, strict liability or the negligence of any party or parties, whether such negligence be sole, joint or concurrent, active or passive. **FURTHER, THE MEMBER UNDERSTANDS THAT THE INDEMNITY SHALL BE APPLICABLE WHERE THE INJURY OR DAMAGE IS CAUSED BY THE SOLE NEGLIGENCE OF CCA, ITS MEMBERS, AGENTS, DIRECTORS, OFFICERS, OR EMPLOYEES.**

7.2 Non-Member Subscriber Indemnification. The Corporation shall obtain indemnification for itself and its Members similar to the indemnification set forth in Section 7.1 from any Non-Member Subscriber in connection with a CCA Response. It is the intent of the parties to this agreement that all indemnity obligations and/or liabilities assumed under the terms of this agreement be without regard to the cause or causes thereof (including pre-existing conditions), the unseaworthiness of any Vessels, strict liability or the negligence of any party or parties, whether such negligence be sole, joint or concurrent, active or passive.

7.3 Survivability. All indemnities made by the Member under this agreement shall survive the termination date.

## ARTICLE VIII

### Insurance

The Corporation shall secure such insurance as the Board of Directors deems appropriate. All policies shall name the Members as an additional insured. All policies shall be endorsed to waive the right of subrogation against the Members, and shall be endorsed to be primary as against comparable insurance carried by the Members. The cost of all insurance secured by the Corporation shall be deemed a normal cost of performing operations and shall be chargeable to the Member as in Direct Costs in accordance with its Percentage Interest under Article IV of this agreement.

## ARTICLE IX

### Compliance with Laws and Regulations

The Corporation shall comply with all applicable laws, regulations, decrees, codes, ordinances, resolutions and other acts of any governmental authority, including without

limitation, all federal, state or other governmental laws and regulations pertaining to equal opportunity, non-segregated facilities, listing of job openings for veterans. The Corporation further agrees not to discriminate against any employee because of race, creed, sex or national origin, and the Corporation hereby indemnifies and agrees to defend and hold the Member harmless from and against any and all loss, damage, injury, liability and claims including reasonable attorney fees and costs thereof resulting from the Corporation's failure to do so.

## ARTICLE X

### Miscellaneous

10.1 Bylaws. The Member acknowledges and agrees to be bound by and subject to the provisions of the Bylaws of the Corporation to the same extent as if such provisions of the Bylaws were incorporated into this agreement. In the event of a conflict between the Bylaws and this agreement, the Bylaws shall prevail.

10.2 Representative(s) of the Member. The representative(s) of the Member, appointed from time to time pursuant to the Bylaws, shall represent the Member in its communications and transactions with the Corporation under this agreement. The Corporation and the other Members of the Corporation shall be entitled to rely upon the power and authority of the representative(s) to represent and bind the Member in all matters pertaining to this agreement.

10.3 Amendments. This agreement may not be amended, modified, supplemented or otherwise altered except pursuant to an approval of 2/3 of the Membership Interest entitled to vote in accordance with the Bylaws.

10.4 Governing Law. This agreement shall be governed by and construed in accordance with the maritime law of the United States, to the extent applicable, and otherwise in accordance with laws of the State of Texas, excluding the conflicts of law provisions of such state.

10.5 Attorneys Fees. In the event that any permissible legal action hereunder is instituted between the parties arising out of this agreement, the prevailing party therein shall be entitled to recover a reasonable allowance for attorneys fees and court expenses, to be fixed and determined by the court in which such action is filed.

10.6 Notices. Except for initial oral notices relating to requests for services in connection with Liquid Spills, any notice provided for by this agreement and any other notice, demand or communication which any party may wish to send to another shall be in writing and either delivered to such party in person, sent via a nationally recognized

express mail service, sent via facsimile transmission with receipt confirmed or sent by first-class U.S. mail, postage prepaid, return receipt requested, and addressed to the party at such party's address as set forth below or, if to the Corporation:

Clean Channel Association, Inc.  
 55 Waugh Drive  
 Suite 905  
 Houston, Texas 77007  
 Attn: President

or to such other address as any party shall specify by written notices so given. Any notice, demand or other communication shall be deemed given and effective as of the date of delivery in person or by facsimile, the day after the date of deposit with a nationally-recognized express mail service, or upon receipt as set forth on the return receipt if sent through the U.S. mail. The inability to deliver because of changed address of which no notice was given, or the rejection or other refusal to accept any notice, demand or other communication, shall be deemed to be the receipt of the notice, demand or other communication as of the date of such inability to deliver or the rejection or refusal to accept.

10.7 Severability. If any provision of this agreement or portion thereof should be declared invalid for any reason, the invalid provision or portion thereof shall be deemed omitted and the remaining terms shall nevertheless be carried into effect.

10.8 Waiver. The waiver of a breach of any term or condition of this agreement shall not be deemed to constitute the waiver of any other breach of the same or any other term or condition hereof.

10.9 Number and Gender. Whenever required by the context, the singular number shall include the plural, and the masculine or neuter gender shall include all genders.

10.10 Entire Agreement. This agreement and the Bylaws contain the entire understanding between the parties and supersede any prior written or oral agreements between them respecting the subject matter contained herein.

10.11 Assignment; Binding Effect. The Member may not assign its rights and obligations under this agreement except in conjunction with the assignment of its Membership Interest in the Corporation as provided in the Bylaws. Subject to and without affecting the prohibitions herein with respect to assignment, this agreement shall be binding on the parties and their respective successors and assigns.

10.12 Counterparts. This agreement may be executed in any number of counterparts, each of which when so executed shall be deemed to be an original, and such counterparts together shall constitute and be one and the same instrument.

IN WITNESS WHEREOF, the parties have executed this agreement as of the date first above written.

CLEAN CHANNEL ASSOCIATION, INC.

By: Edward K. Roe  
President

Name of the Member:

CROWN CENTRAL PETROLEUM CORPORATION

By: R. M. Trembly  
Name: R. M. Trembly  
Title: Vice President Refining  
Address: P.O. Box 1759, Houston, Tx.  
77251-1759

# **ANDERSON POLLUTION CONTROL, INC.**

## **Houston COTP Zone**



**Letter of Intent**

**March 5, 2010**

**Pasadena Refining Systems Inc.  
111 Red Bluff Road  
Pasadena, Texas 77506**

**To whom it concerns:**

**This letter is to inform all parties that Anderson Pollution Control Inc. will respond to any type of emergency call out on behalf of Pasadena Refining Systems Inc. located @ 111 Red Bluff Road in Pasadena, Texas.**

**Anderson Pollution Control Inc**

A handwritten signature in black ink, appearing to read "Tommy Anderson", is written over the printed name.

**Tommy Anderson  
President**

## **Contact List**

<b>24 hour emergency call number</b>	<b>281-479-5300</b>
<b>Alternate</b>	<b>936-441-2225</b>
<b>Operations Manager: Reggie Grimes</b>	<b>936-522-8820</b>
<b>Tommy Anderson</b>	<b>281-744-6249</b>

U.S. Department of  
Homeland Security

United States  
Coast Guard



Commander  
National Strike Force Coordination Ctr.

1461 North Road Street  
Elizabeth City, NC 27909  
Staff Symbol:  
Phone: 252-331-6000  
FAX: 252-331-6012

16465

Anderson Pollution Control, Inc.  
Attn: Tommy Anderson  
1011-A West Lewis  
Conroe, Texas 77301-2219

OCT 11 2006

Dear Mr. Anderson,

Your application for classification as an Oil Spill Removal Organization (OSRO) has been reviewed and processed as outlined in the Coast Guard OSRO Classification Guidelines dated 27 April 2001. You are assigned OSRO classification number 0159; please use this number in all future correspondence to this office. You have received the following classifications:

Captain of the Port (COTP) Zone	Environment	Facility	Vessel
Houston-Galveston - HVP	River/Canal/Inland	MMPD	MMPD
Port Authur - HVP	River/Canal/Inland	MMPD	MMPD

A CD containing your classification information is enclosed as enclosure (1). On the CD, you will find a summary of your classifications by environment and COTP zone and a summary of the resource totals for boom, Temporary Storage Capacity (TSC), and Effective Daily Recovery Capacity (EDRC) used to determine these classifications. Our files will be updated to reflect your current status; please inform your clients of the same. Your classifications will also be listed on the OSRO Classification Matrix available on the Internet at:

<http://www.uscg.mil/hq/nsfweb/nsfcc/ops/OSRO/links/osroinfoonclassifiedosro.html>

The Coast Guard is transitioning to a Sector organization which consolidates field operational and marine safety functions; enclosure (2) is a consolidated table that explains the changes affected by this transition.

If you have any questions or would like more information regarding your classifications, please contact any of the Response Resource Assessment Branch or the Response Resource Inventory Branch staff. Our contact information can be found in Enclosure (3).

Thank you for your participation in the OSRO program; your efforts to strengthen our national response capabilities are greatly appreciated.

Sincerely,



R.T. GORE  
Chief, Response Resource Assessment Branch  
U.S. Coast Guard  
By direction

3 Enclosures

- Copy: Commandant, U. S. Coast Guard (G-RPP-2) w/o enclosure (1)  
Commandant, U. S. Coast Guard (G-PCV-3) w/o enclosure (1)  
Commander, Eighth Coast Guard District (dr) w/o enclosure (1)  
Commander, Coast Guard Sector Houston-Galveston w/o enclosure (1)  
Commander, Coast Guard MSU Port Authur w/o enclosure (1)  
EPA Region 6 w/o enclosure (1)  
Pipeline and Hazardous Materials Safety Administration (PHMSA)

## MASTER SERVICE AGREEMENT

THIS AGREEMENT is made and entered into this \_\_\_\_\_ day of \_\_\_\_\_ 2008, by and between \_\_\_\_\_ a corporation duly incorporated in the State of Texas, and with a place of business located at \_\_\_\_\_, Texas \_\_\_\_\_, (hereinafter "COMPANY"), and ANDERSON POLLUTION CONTROL INC, a Texas corporation, whose principal office and mailing address is 1011 A. West Lewis Street, Conroe, Texas 77301 (hereinafter "CONTRACTOR"). COMPANY and CONTRACTOR shall collectively be referred to herein as the "Parties". WHEREAS, CONTRACTOR is engaged in the business of providing emergency environmental and/or disaster and/or logistical response services to any COMPANY facility as identified by COMPANY as requiring the immediate services of CONTRACTOR; 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 and its affiliates at all locations. "Affiliates" shall mean any corporation, partnership, joint venture, division or other legal entity, directly or indirectly, through one or more intermediaries, controlling, controlled by, or under common control with Company, whether foreign or domestic. "COMPANY" as referred to herein shall include COMPANY'S affiliates. NOW THEREFORE, in consideration of these premises and the mutual covenants contained herein, the Parties agree as follows:

### ARTICLE 1. SCOPE OF SERVICE

CONTRACTOR shall use its best *efforts*, on an as needed as available basis, subject to circumstances then existing, to provide to COMPANY, upon COMPANY'S request, emergency same-day environmental and/or disaster and/or logistical response services that may include but are not limited to containment, removal, neutralization, decontamination, recovery, cleanup, repackaging, transportation, confined space rescue, remediation and, in certain instances, disposal services relating to hazardous and/or nonhazardous materials and/or substances and/or wastes. "Waste" or "wastes" as used herein shall include hazardous materials and non-hazardous materials or substances. As used herein, the "services", the "Work" or the "subject of the Work" shall mean and/or include any substance and/or material and/or waste, whether hazardous or not, of whatever nature, to be removed or handled by CONTRACTOR as part of the services or Work for COMPANY and/or existing on COMPANY'S premises, property or the Worksite prior to or at the time of request for Work and/or at the time of performance of Work by CONTRACTOR.

- 1.1. CONTRACTOR operates a (24) hour-per-day, (7) seven-days-per-week emergency response service telephone line at 281-479-5300 or 281-744-6249. 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" and/or "Worksite"), the hazardous and/or non-hazardous materials involved and other relevant facts relating to the situation in order that CONTRACTOR may use due diligence to mobilize the necessary personnel and equipment subject to the conditions of availability and necessity.
- 1.2. The Parties recognize that, at the commencement of the Work in accordance with this Agreement, the scope thereof may not be well defined. The Parties agree that, at the commencement of the Work and at frequent intervals, their respective representatives shall consult with each other to review and define the scope of the work to be performed 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:
  - a. The Parties hereby acknowledge that, on occasion, COMPANY personnel may authorize services and/or Work to be performed by CONTRACTOR based on a verbal order, which may or may not be confirmed with a written purchase order, service order or work authorization. The Parties hereby agree that on those occasions it is the Parties' intent that CONTRACTOR respond based upon such verbal order and that COMPANY be bound by the terms and conditions of this Agreement, which shall apply in all respects to the services or Work performed by CONTRACTOR.
  - b. To the extent practicable, 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.
  - c. If the Parties later agree to modify materially the scope of the Work or the strategies or approaches thereto, they shall, within (7) seven calendar days of such modification, sign a written amendment to the purchase order issued.

- 1.3. 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.
- 1.4. The following exhibits, regardless of whether they are physically attached hereto, are part of this Agreement and are hereby incorporated herein in the form that is current at the time Work is actually performed: A. CONTRACTOR'S current Domestic Response Rate Schedule; B. Insurance Requirements

## **ARTICLE 2. RESPONSIBILITIES OF CONTRACTOR**

- 2.1. 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 and/or as requested for the performance and completion of the Work. 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 subject to conditions of availability and necessity.
- 2.2. 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 and, while on COMPANY premises, shall abide by all of COMPANY'S rules that are provided by COMPANY and further shall erect and properly maintain, as required by the conditions and progress of the Work, necessary safeguards for the protection of its employees and shall require all subcontractors hired or supervised by it to implement such safeguards and to comply in the same manner.
- 2.3. If requested by COMPANY, CONTRACTOR will endeavor to assist COMPANY in obtaining the proper and necessary permits for the Work, subject to on-site conditions and/or applicable rules and regulations; however, CONTRACTOR shall in no way be obligated to satisfy any local, state or federal regulatory reporting requirements that may apply. All required environmental clean-up permits shall be issued in COMPANY'S name.

## **ARTICLE 3. RESPONSIBILITIES OF COMPANY**

- 3.1. COMPANY shall furnish to CONTRACTOR information on the Worksite 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.
- 3.2. COMPANY shall ensure that it is in possession of CONTRACTOR'S currently applicable Response Rate Schedule in effect at the time COMPANY requests CONTRACTOR'S services.
- 3.3. Whether or not COMPANY owns or operates the Worksite, COMPANY shall, prior to commencement of the Work, arrange for, provide for and ensure lawful access to and egress from the Worksite by CONTRACTOR, its employees and subcontractors and their vehicles and equipment.
- 3.4. COMPANY shall furnish to CONTRACTOR copies of Material Safety Data Sheets (MSDSs) for all hazardous and/or non-hazardous materials that are to be cleaned up at the Worksite.

## **ARTICLE 4. COMPENSATION**

- 4.1. Compensation which shall be payable by COMPANY to CONTRACTOR shall cover and include all overhead, superintendents, labor, use of equipment furnished, and all other cost and expense incurred by CONTRACTOR in the performance of said Work whether or not specifically enumerated in CONTRACTOR'S then current rate schedule(s). COMPANY shall compensate CONTRACTOR for the Work performed for COMPANY pursuant to this Agreement on a time and materials basis as follows:

a. For work performed domestically, in accordance with CONTRACTOR'S then current Response Rate Schedule at the time the Work is performed (Exhibit "A"):

- 4.2. It is expressly acknowledged and agreed upon by and between the Parties that the rates, terms and conditions set forth within CONTRACTOR'S applicable response rate schedule, in their current form at the time Work is actually performed, are incorporated herein for all purposes as if fully copied at length, are part and parcel of this Agreement, and may not be modified except in writing signed by both parties.
- 4.3. CONTRACTOR shall submit periodic invoices to COMPANY for the Work performed pursuant to the verbal request and/or purchase order issued in accordance with Article 1 herein setting forth the total amounts due in accordance with the applicable, then current Response Rate Schedule at the time Work is performed for labor, materials, equipment, subcontract services and other services utilized or incurred in performance of the Work, less such previous payments as have been received for such Work.
- 4.4. COMPANY agrees to pay all amounts due under this Agreement immediately upon receipt of invoice in United States Dollars (US \$). The balance of any invoice not timely paid will accrue a finance charge computed at the periodic rate of one and one-half percent (1.5% per month 18% per annum) beginning on the first day of the first month following any delinquency. In addition to the accrued finance charges on invoices not timely paid, COMPANY agrees to pay fifteen percent (15%) of the unpaid principle balance due as a handling fee for collection efforts as well as all attorneys' fees and costs incurred by CONTRACTOR if COMPANY'S account is referred to any attorney for collection or suit.
- 4.5. All services provided to date by CONTRACTOR to COMPANY and/or its Affiliates are subject to the terms of this Agreement and are to be ratified in accordance with this Agreement. COMPANY agrees to make timely payment without regard to whether COMPANY or COMPANY'S Affiliates 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.
- 4.6. Should COMPANY request by telephone or in writing CONTRACTOR'S services and, acting on this request, CONTRACTOR mobilizes its equipment and personnel yet COMPANY subsequently terminates this request before services are performed, then COMPANY is obligated to, shall be responsible for, and shall pay for those equipment and personnel charges on a portal-to-portal basis in accordance with CONTRACTOR'S applicable then current Response Rate Schedule at that time.
- 4.7. All payments shall be made by COMPANY to Anderson Pollution Control Inc. at 1011 A West Lewis Street, Conroe, Texas 77301-2219.
- 4.8. CONTRACTOR reserves the right to require a retainer in an amount to be determined during the initial response, or at any time subsequent to commencement of operations and, in its discretion, may suspend operations until such retainer has been provided.

#### 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 be in all respects an independent contractor relationship and not an employer/employee or principal/agent relationship.

## ARTICLE 6. FORCE MAJEURE

If due to Force Majeure either Party hereto is rendered unable, in whole or in part, to carry out its obligations under this Agreement, save and except for COMPANY'S obligation to make timely payments for services or Work performed, upon such Party giving written notice including full particulars of such Force Majeure 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

- 7.1. 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 to the extent of any sole negligent act or willful misconduct of CONTRACTOR or its Subcontractors pursuant to the Work. CONTRACTOR shall defend claims asserted against COMPANY 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.
- 7.2. REGARDLESS OF CAUSE, COMPANY SHALL INDEMNIFY, HOLD HARMLESS AND DEFEND CONTRACTOR, ITS OFFICERS, DIRECTORS, EMPLOYEES, AGENTS AND REPRESENTATIVES FROM AND AGAINST ANY ASSERTED CLAIM OF TRESPASS THAT ARISES DIRECTLY OR INDIRECTLY AS A RESULT OF THE SERVICES PROVIDED FOR COMPANY BY CONTRACTOR COMPANY GUARANTEES CONTRACTOR LAWFUL INGRESS TO AND EGRESS FROM THE WORKSITE. 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, third-party claims, judgments, penalties, and expenses or liabilities of every kind and character, whether sounding in contract, tort or otherwise (including attorneys fees, investigation expenses, judgments, court costs and settlement costs) arising in any manner, directly or indirectly, out of the services provided by CONTRACTOR for COMPANY including but not limited to: any breach by COMPANY of this Agreement; any act, omission or willful misconduct of COMPANY in connection with COMPANY'S ownership of or activities on the Worksite or the presence of COMPANY employees and/or equipment at the Worksite or COMPANY'S participation in the services or Work performed by CONTRACTOR pursuant to this Agreement; the generation by COMPANY of the subject matter of the Work and/or the existence at the Worksite of the subject matter of the Work; the discharge, dispersal, release or escape of smoke, vapors, soot, fumes, acids, alkalis, chemicals, liquids or gases, waste materials or other irritants, contaminants or pollutants into or upon land, the atmosphere or watercourse or body of water that is or are the subject matter of the Work; COMPANY'S strict liability; and violations by the COMPANY of the Resource Conservation and Recovery Act, as amended, the Comprehensive Environmental Response, Compensation and Liability Act, as amended, the Toxic Substances Control Act, as amended, and other environmental laws, rules and regulations relating to the existence, generation and/or current or future ownership of hazardous and/or non-hazardous substances and wastes which are the subject matter of the services or Work by CONTRACTOR for COMPANY. COMPANY shall defend claims asserted against CONTRACTOR hereunder and shall bear all attorneys fees, 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.

- 7.3. Both COMPANY and CONTRACTOR each agree to carry insurance in sufficient amounts and types to satisfy their respective indemnity obligations to one another as set forth above. COMPANY and CONTRACTOR hereby agree to exchange Certificates of Insurance upon request.

#### ARTICLE 8. TITLE

- 8.1. COMPANY agrees that title to waste materials resulting from the cleanup and or services provided in connection with the subject of the Work will not be transferred to CONTRACTOR
- 8.2. COMPANY understands that COMPANY may arrange for another entity to provide transportation and/or disposal services. In the event COMPANY requests and authorizes CONTRACTOR to assist with transportation and/or disposal of waste, COMPANY acknowledges and agrees that COMPANY is the responsible party for the generation and existence of all hazardous and/or nonhazardous material and/or waste.
- 8.3. In the event that COMPANY requests CONTRACTOR'S assistance in meeting COMPANY'S obligations as set forth herein, CONTRACTOR as requested by COMPANY may (i) collect samples and perform analytical testing to assist COMPANY in the characterization of waste for the purpose of COMPANY'S manifest; (ii) identify a number of potential transporters and disposal facilities from which COMPANY may select in accomplishing the transportation and disposal of collected waste; and (iii) draft the technical provisions of contracts or purchase orders and prepare manifests implementing COMPANY'S selection of a transporter and/or disposal facility for review and execution solely by COMPANY.
- 8.4. Notwithstanding CONTRACTOR'S assistance which may be rendered to COMPANY as set forth above, COMPANY acknowledges and agrees that COMPANY shall be solely responsible for the storage handling, transportation, treatment, processing, and disposal of any wastes, pollutants, or contaminants that are the subject of this Agreement and for full compliance with provisions of the Resource Conservation and Recovery Act, as amended, the Comprehensive Environmental Response, Compensation and Liability Act, as amended, the Toxic Substances Control Act, as amended and all other applicable federal, state, or local laws, statutes, or regulations governing the treatment, transportation, storage, or disposal of waste material.
- 8.5. COMPANY and CONTRACTOR agree that CONTRACTOR is not and shall not be considered (i) the owner of material, substances, or wastes noted in the Scope of Work; (ii) the operator of a waste management facility; (iii) the generator, storey, or disposes of hazardous or solid waste; and (iv) to have arranged for the transportation, disposal of any wastes, pollutants, or contaminants by virtue of the performance of this Contract or anything contained herein, as those terms are used in the Resource Conservation and Recovery Act, as amended; the Comprehensive Environmental Response, Compensation and Liability Act, as amended; the Toxic Substances Control Act, as amended, or any other federal or state statute or regulation governing the treatment, transportation, storage, or disposal of materials or wastes.

#### ARTICLE 9. TERM OF AGREEMENT

The initial term of this Agreement shall be (12) twelve months after the date of execution by all parties. Thereafter, this Agreement shall be renewed for successive (1) one year terms unless either Party hereto provides written notice to the other Party at least (30) thirty 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 (10) ten calendar days after written notice. "Cause" if asserted by CONTRACTOR means a failure of COMPANY to make payment of an invoice timely or actions or demands of COMPANY that impair CONTRACTOR'S professional obligations. "Cause" if asserted by COMPANY means a failure of the CONTRACTOR to perform timely services or any other material breach of this Agreement. COMPANY shall pay CONTRACTOR any unpaid expenses or fees incurred prior to notification of termination

in accordance with Article 4. All rights and obligations of the parties arising pursuant to this agreement prior to termination shall remain enforceable.

**ARTICLE 10. MISCELLANEOUS PROVISIONS**

- 10.1. 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. The use of pronouns shall not affect the substance herein.
- 10.2. The covenants and agreements contained herein 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.
- 10.3. 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.
- 10.4. All parties acknowledge that the parties are entering into this agreement in Montgomery County, Texas and that, because this agreement has been procured in Montgomery County, Texas and is being managed and administered from CONTRACTOR'S central office in Montgomery County, Texas, this agreement is being performed in Montgomery County, Texas. All parties agree that the validity, interpretation and performance of this Agreement and the contents herein are to be interpreted and enforced pursuant to the laws of the State of Texas without regard to its conflicts of law rules or principles and that any suit in connection herewith shall be filed in Montgomery County, Texas.
- 10.5. 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.
- 10.6. 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.
- 10.7. 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.

ANDERSON POLLUTION CONTROL INC.

\_\_\_\_\_  
Signature

By: \_\_\_\_\_  
TOMMY ANDERSON

\_\_\_\_\_  
(Typed, Printed Name)

Title: PRESIDENT

Title: \_\_\_\_\_

Date:

Date:



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# ANDERSON

POLLUTION CONTROL, INC.

## EMERGENCY RESPONSE RATES

### NON-HAZARDOUS MATERIALS (OIL SPILL)

<u>Class</u>	<u>Code</u>	<u>Personnel</u>	<u>UOM</u>	<u>ST Rate</u>	<u>OT Rate</u>
PERS	ER-NH-001	Senior Project Manager - Company Officer	hr	\$95.00	\$142.50
PERS	ER-NH-002	Project Manager	hr	\$80.00	\$120.00
PERS	ER-NH-003	Certified Industrial Hygienist	hr	\$95.00	\$142.50
PERS	ER-NH-004	Certified Safety Professional	hr	\$95.00	\$142.50
PERS	ER-NH-005	Chemist, Biologist, Geologist	hr	\$95.00	\$142.50
PERS	ER-NH-006	Health and Safety Manager	hr	\$60.00	\$90.00
PERS	ER-NH-007	Rescue Supervisor	hr	\$55.00	\$82.50
PERS	ER-NH-008	Rescue Tech	hr	\$40.00	\$60.00
PERS	ER-NH-009	Supervisor	hr	\$55.00	\$82.50
PERS	ER-NH-010	Foreman	hr	\$45.00	\$67.50
PERS	ER-NH-011	Transportation and Disposal Coordinator	hr	\$45.00	\$67.50
PERS	ER-NH-012	Logistics Coordinator	hr	\$45.00	\$67.50
PERS	ER-NH-013	Heavy Equipment Operator (Dozer, Excavator, etc.)	hr	\$45.00	\$67.50
PERS	ER-NH-014	Boat Operator / Response Equipment	hr	\$42.00	\$63.00
PERS	ER-NH-015	Truck Operator (roll off / vac truck)	hr	\$35.00	\$52.50
PERS	ER-NH-016	Mechanic	hr	\$50.00	\$75.00
PERS	ER-NH-017	Welder	hr	\$50.00	\$75.00
PERS	ER-NH-018	Recovery Technician	hr	\$35.00	\$52.50
PERS	ER-NH-019	Pollution Laborer / Flagger / Spotter	hr	\$31.00	\$46.50
PERS	ER-NH-020	Field Clerk	hr	\$35.00	\$52.50
PERS	ER-NH-021	CDL Truck Driver (Supplies, Deliveries, etc.)	hr	\$35.00	\$52.50



## EMERGENCY RESPONSE RATES

### HAZARDOUS MATERIALS (HAZMAT)

<u>Class</u>	<u>Code</u>	<u>Personnel</u>	<u>UOM</u>	<u>ST Rate</u>	<u>OT Rate</u>
PERS	ER-HAZ-002	Project Manager	hr	\$110.00	\$165.00
PERS	ER-HAZ-003	Certified Industrial Hygienist	hr	\$95.00	\$142.50
PERS	ER-HAZ-004	Certified Safety Professional	hr	\$95.00	\$142.50
PERS	ER-HAZ-005	Chemist, Biologist, Geologist	hr	\$95.00	\$142.50
PERS	ER-HAZ-006	Health and Safety Manager	hr	\$75.00	\$112.50
PERS	ER-HAZ-007	Rescue Supervisor	hr	\$75.00	\$112.50
PERS	ER-HAZ-008	Rescue Tech	hr	\$60.00	\$90.00
PERS	ER-HAZ-009	Supervisor	hr	\$65.00	\$97.50
PERS	ER-HAZ-010	Foreman	hr	\$55.00	\$82.50
PERS	ER-HAZ-011	Transportation and Disposal Coordinator	hr	\$50.00	\$75.00
PERS	ER-HAZ-012	Logistics Coordinator	hr	\$50.00	\$75.00
PERS	ER-HAZ-013	Heavy Equipment Operator (Dozer, Excavator, etc.)	hr	\$55.00	\$82.50
PERS	ER-HAZ-014	Boat Operator / Response Equipment	hr	\$50.00	\$75.00
PERS	ER-HAZ-015	Truck Operator (roll off / vac truck)	hr	\$42.00	\$63.00
PERS	ER-HAZ-016	Mechanic	hr	\$50.00	\$75.00
PERS	ER-HAZ-017	Welder	hr	\$50.00	\$75.00
PERS	ER-HAZ-018	Recovery Technician	hr	\$42.00	\$63.00
PERS	ER-HAZ-019	Field Clerk	hr	\$35.00	\$52.50
PERS	ER-HAZ-020	CDL Truck Driver (Supplies, Deliveries, etc.)	hr	\$35.00	\$52.50

# ANDERSON

POLLUTION CONTROL, INC.

<u>Class</u>	<u>Code - 1</u>	<u>Automotive Equipment</u>	<u>UOM</u>	<u>ST Rate</u>	<u>Add'l</u>
AUTO	ER-1-010	Truck, Pickup (1/2 ton) 2-WD	day	\$100.00	
AUTO	ER-1-011	Truck, Pickup (1/2 ton) 4-WD	day	\$150.00	
AUTO	ER-1-012	Truck, Pickup (3/4 - 1 ton) 2-WD	day	\$125.00	
AUTO	ER-1-013	Truck, Pickup (3/4 - 1 ton) 4-WD	day	\$195.00	
AUTO	ER-1-014	Truck, Response - Fully Equipped	day	\$195.00	
AUTO	ER-1-015	Truck, Roll Off (Double Haul Trailer) 80,000 #	hr	\$50.00	+ op
AUTO	ER-1-016	Truck, Roll Off (Bobtail) 65,000 #	hr	\$40.00	+ op
AUTO	ER-1-017	Truck, Roll Off (Tractor) 80,000 #	hr	\$45.00	+ op
AUTO	ER-1-018	Truck, Vacuum - 130 bbl (Carbon Steel)	hr	\$50.00	+ op
AUTO	ER-1-019	Truck, Vacuum - 70 bbl (Carbon Steel)	hr	\$40.00	+ op
AUTO	ER-1-020	Truck, Vacuum - 70 bbl (Stainless Steel)	hr	\$55.00	+ op
AUTO	ER-1-021	Truck, Supply Van w/ Liftgate	hr	\$50.00	+ op
AUTO	ER-1-022	ATV - 4x4	day	\$350.00	
AUTO	ER-1-023	ATV - 6x6	day	\$425.00	
AUTO	ER-1-024	ATV - Mule	day	\$400.00	
AUTO	ER-1-025	Automobile - Passenger Car	day	\$100.00	
AUTO	ER-1-026	Backhoe ( Case 580 or equiv. ) 2 - WD	day	\$450.00	+ op
AUTO	ER-1-027	Backhoe ( Case 580 or equiv. ) 4 - WD	day	\$500.00	+ op
AUTO	ER-1-028	Bobcat / Skid steer	day	\$390.00	+ op
AUTO	ER-1-029	Bull Dozer - Cat D6E (155 hp)	day	\$1,300.00	+ op
AUTO	ER-1-030	Drum Crusher - Hydraulic	day	\$450.00	
AUTO	ER-1-031	Excavator - Komatsu PC300LC	day	\$1,600.00	+ op
AUTO	ER-1-032	Excavator - Mini	day	\$450.00	+ op
AUTO	ER-1-033	Super-Vac, Air Machine - 28" Hg	hr	\$145.00	+ op
AUTO	ER-1-034	Super-Vac, Air Machine - with Cyclone	hr	\$155.00	+ op
AUTO	ER-1-035	Super-Vac, Air Machine - Standard	hr	\$125.00	+ op
AUTO	ER-1-036	Super-Vac, Hydro-Excavator - 28' @ 40 gpm	hr	\$145.00	+ op
AUTO	ER-1-037	Tractor & End Dump Trailer ( 80,000 # )	hr	\$60.00	+ op
AUTO	ER-1-038	Trailer - ATV	day	\$75.00	
AUTO	ER-1-039	Trailer, 16' Lowboy - 7,000 #	day	\$90.00	
AUTO	ER-1-040	Trailer, 20' Gooseneck Lowboy - 14,000 #	day	\$150.00	
AUTO	ER-1-041	Trailer, Response - 16'	day	\$250.00	
AUTO	ER-1-042	Trailer, Response - 28'-32'	day	\$325.00	
AUTO	ER-1-043	Van, 15 Passenger	day	\$200.00	

# ANDERSON

POLLUTION CONTROL, INC.

<u>Class</u>	<u>Code - 2</u>	<u>Marine Equipment</u>	<u>UOM</u>	<u>ST Rate</u>	<u>Add'l</u>
MAR	ER-2-010	Boat, 30' Barge Boat w / twin < 150 hp	day	\$800.00	+ fuel
MAR	ER-2-011	Boat, 26' Fast Response Boat w / twin 150 hp	day	\$600.00	+ fuel
MAR	ER-2-012	Boat, 26' Deep "V" w /Cabin & Radar < 150 hp	day	\$750.00	+ fuel
MAR	ER-2-013	Boat, 24' Work Barge	day	\$350.00	
MAR	ER-2-014	Boat, 18' Flat Boat w/ 25 hp Motor	day	\$300.00	
MAR	ER-2-015	Boat, 18' - 25 ' Fast Response Boat > 200 hp	day	\$450.00	+ fuel
MAR	ER-2-016	Boat, 14' - 16' Flat Boat w / out Motor	day	\$125.00	
MAR	ER-2-017	Boat, 14' - 16' Flat Boat w / 25 hp	day	\$250.00	
MAR	ER-2-018	Boat, Pirogue (or equivalent)	day	\$125.00	
MAR	ER-2-019	Air Compressor - 12 cfm	day	\$110.00	
MAR	ER-2-020	Air Compressor - 20 cfm	day	\$180.00	
MAR	ER-2-021	Anchor 22 #	job	\$65.00	
MAR	ER-2-022	Anchor 40 #	job	\$150.00	
MAR	ER-2-023	Anchor 65 #	job	\$210.00	
MAR	ER-2-024	Anchor 85 #	job	\$275.00	
MAR	ER-2-025	Anchor Buoys	day	\$10.00	
MAR	ER-2-026	Boom - 10" Containment	ft/day	\$1.20	
MAR	ER-2-027	Boom - 18" Containment	ft/day	\$1.40	
MAR	ER-2-028	Boom - 6" Containment	ft/day	\$1.00	
MAR	ER-2-029	Boom Container (Roll-Off Skid Mounted)	day	\$100.00	
MAR	ER-2-030	Boom Lights ( chemical )	ea	\$15.00	
MAR	ER-2-031	Boom Lights ( strobe )	day	\$30.00	
MAR	ER-2-032	Skimmer - Drum (25-35 gpm ) Pneumatic	day	\$400.00	
MAR	ER-2-033	Skimmer - Drum (50-70 gpm ) Pneumatic	day	\$600.00	
MAR	ER-2-034	Skimmer - Duck Bill - Vaccum Truck Operated	day	\$50.00	
MAR	ER-2-035	Skimmer - Weir	day	\$150.00	
MAR	ER-2-036	Trailer, Boom - 16'-20' Lowboy	day	\$110.00	
MAR	ER-2-037	Trailer, Boom - 20 - 30' Gooseneck	day	\$150.00	

# ANDERSON

POLLUTION CONTROL, INC.

<u>Class</u>	<u>Code - 3</u>	<u>Personnel Protective Equipment</u>	<u>UOM</u>	<u>Rate</u>	<u>Add'l</u>
PPE	ER-3-010	Level A - Full Encapsulated (responder)	ea	\$1,800.00	
PPE	ER-3-011	Level B - ( CPF III )	ea	\$125.00	
PPE	ER-3-012	Level B - ( CPF IV )	ea	\$175.00	
PPE	ER-3-013	Level C - ( CPF I )	ea	\$55.00	
PPE	ER-3-014	Level C - ( CPF II )	ea	\$70.00	
PPE	ER-3-015	Level C - ( CPF III )	ea	\$90.00	
PPE	ER-3-016	Level D - ( FRC, hardhat, boots, eyewear )	day	\$35.00	
PPE	ER-3-017	Acid Suit - 2 piece	ea	\$110.00	
PPE	ER-3-018	Boot Covers - HazMat (Chicken Booties)	pair	\$5.00	
PPE	ER-3-019	Boot Covers - Latex	pair	\$8.50	
PPE	ER-3-020	Boot Covers - Silver Shield	pair	\$15.00	
PPE	ER-3-021	Boots - Rubber - Steel Toe/Shank	day	\$18.00	
PPE	ER-3-022	Boots - Nitrile - Steel Toe/Shank	day	\$45.00	
PPE	ER-3-023	Breathing Air Hose 50' ( high pressure )	day	\$25.00	
PPE	ER-3-024	Breathing Air Hose 50' ( low pressure )	day	\$15.00	
PPE	ER-3-025	Breathing Air Manifold	day	\$35.00	
PPE	ER-3-026	Breathing Air Regulator	day	\$25.00	
PPE	ER-3-027	Breathing Air Trailer	day	\$350.00	
PPE	ER-3-028	Bunker Gear - includes pant/boots/gloves/helmet/FRC	day	\$250.00	
PPE	ER-3-029	Drager Hand Pump	day	\$55.00	
PPE	ER-3-030	Drager Tubes - Colorimetric	ea	cost+20%	
PPE	ER-3-031	Ear Muffs	pair	\$11.50	
PPE	ER-3-032	Ear Plugs (box of 100 pair)	ea	\$49.00	
PPE	ER-3-033	Eyewash, Emergency Portable	day	\$50.00	
PPE	ER-3-034	Face shield w / Bracket - Headgear	ea	\$22.00	
PPE	ER-3-035	Glove - Nitrile/Latex Inner Glove	box	\$26.00	
PPE	ER-3-036	Gloves - Cotton String	pair	\$1.50	
PPE	ER-3-037	Gloves - Cotton String w / latex Tips	pair	\$3.00	
PPE	ER-3-038	Gloves - Kevlar ( all-in-one ) Hazmat	pair	\$110.00	
PPE	ER-3-039	Gloves - Leather	pair	\$9.00	
PPE	ER-3-040	Gloves - Nitrile	pair	\$5.50	
PPE	ER-3-041	Gloves - PVC	pair	\$5.00	
PPE	ER-3-042	Gloves - Silver Shield	pair	\$15.00	

# ANDERSON

POLLUTION CONTROL, INC.

<u>Class</u>	<u>Code - 3</u>	<u>Personnel Protective Equipment (continued)</u>	<u>UOM</u>	<u>Rate</u>	<u>Add'l</u>
PPE	ER-3-043	Gloves - Viton w / Liner	pair	\$75.00	
PPE	ER-3-044	Goggles - Chemical Splash	pair	\$9.50	
PPE	ER-3-045	Harness - Full Body	day	\$20.00	
PPE	ER-3-046	Lanyard 6'	day	\$20.00	
PPE	ER-3-047	Lifeline ( rope ) 50'	day	\$25.00	
PPE	ER-3-048	Metatarsal - Foot Protection	day	\$25.00	
PPE	ER-3-049	Monitor - 4 gas (LEL, H2S, CO, O2 )	day	\$125.00	
PPE	ER-3-050	Monitor - Benzene ( PID )	day	\$195.00	
PPE	ER-3-051	Monitor - Jerome 431 -X- ( Hg )	day	\$225.00	
PPE	ER-3-052	Monitor - Personal H2S	day	\$35.00	
PPE	ER-3-053	Monitor - VOC	day	\$125.00	
PPE	ER-3-054	Rescue Kit	day	\$125.00	
PPE	ER-3-055	Respirator - 1/2 Face Disposable (OV, AG)	ea	\$25.00	
PPE	ER-3-056	Respirator - 1/2 Face Disposable Dust Mask	ea	\$5.00	
PPE	ER-3-057	Respirator - Full Face Cartridge (excludes cartridges)	day	\$40.00	
PPE	ER-3-058	Respirator - Supplied Air	day	\$30.00	
PPE	ER-3-059	Respirator - Supplied Air (5 minute escape pack)	day	\$35.00	
PPE	ER-3-060	Respirator Cartridges ( pair ) AG	pair	\$16.50	
PPE	ER-3-061	Respirator Cartridges ( pair ) HEPA	pair	\$12.00	
PPE	ER-3-062	Respirator Cartridges ( pair ) Hg	pair	\$42.00	
PPE	ER-3-063	Respirator Cartridges ( pair ) OV	pair	\$16.50	
PPE	ER-3-064	Respirator Cartridges ( pair ) OV-AG	pair	\$21.00	
PPE	ER-3-065	Rope Ladder	day	\$60.00	
PPE	ER-3-066	SCBA - 30 minute - NFPA Approved	day	\$200.00	
PPE	ER-3-067	SCBA - cylinder refill - 30 minute	ea	\$20.00	
PPE	ER-3-068	SCBA - spare cylinder - 30 minute	day	\$15.00	
PPE	ER-3-069	Signal Air Horn	ea	\$15.00	
PPE	ER-3-070	Slicker Suit - Rain Gear - 2 pc.	ea	\$20.00	
PPE	ER-3-071	Tripod w / Retrieval Winch	day	\$150.00	
PPE	ER-3-072	Tyvek - Coveralls	ea	\$15.00	
PPE	ER-3-073	Tyvek - Coveralls - Poly Coated	ea	\$20.00	
PPE	ER-3-074	Vest - Fluorescent Traffic Safety	day	\$5.00	
PPE	ER-3-075	Waders, Chest	day	\$40.00	
PPE	ER-3-076	Waders, Hip	day	\$30.00	

# ANDERSON

POLLUTION CONTROL, INC

<u>Class</u>	<u>Code - 4</u>	<u>Pumps / Hoses / Washing Equipment</u>	<u>UOM</u>	<u>Rate</u>	<u>Add'l</u>
WASH	ER-4-010	Extended Wand 12' - 4,000 psi	day	\$95.00	
WASH	ER-4-011	Foot Pedal -10k	day	\$45.00	
WASH	ER-4-012	Hose, ADS 4" X 100'	roll	\$150.00	
WASH	ER-4-013	Hose, ADS 6" x 100'	roll	\$210.00	
WASH	ER-4-014	Hose, Air - 3/8" x 50'	day	\$15.00	
WASH	ER-4-015	Hose, Air / Water - 3/4" x 50' ( Chicago )	day	\$15.00	
WASH	ER-4-016	Hose, Chemical Resistant - 2" x 25'	day	\$45.00	
WASH	ER-4-017	Hose, Chemical Resistant - 3" x 25'	day	\$55.00	
WASH	ER-4-018	Hose, Fire 1-1/2" x 100'	day	\$25.00	
WASH	ER-4-019	Hose, Fire 2-1/2" x 100'	day	\$40.00	
WASH	ER-4-020	Hose, Fittings and Adapters (Misc.)	ea / day	\$5.00	
WASH	ER-4-021	Hose, Hydroblast - 10,000 psi x 25'	day	\$40.00	
WASH	ER-4-022	Hose, Hydroblast - 20,000 psi x 25'	day	\$70.00	
WASH	ER-4-023	Hose, Pressure Washer - 5,000 psi x 50'	day	\$25.00	
WASH	ER-4-024	Hose, PVC -1" x 10'	day	\$10.00	
WASH	ER-4-025	Hose, Vaccum Truck - 2" x 25'	day	\$25.00	
WASH	ER-4-026	Hose, Vacuum Truck - 2" x 10'	day	\$10.00	
WASH	ER-4-027	Hose, Vacuum Truck - 3" x 25'	day	\$30.00	
WASH	ER-4-028	Hose, Wash Pump Discharge - 1-1/2" x 10 - 25'	day	\$15.00	
WASH	ER-4-029	Hose, Wash Pump Discharge (Layflat)1-1/2" x 50'	day	\$20.00	
WASH	ER-4-030	Hose, Wash Pump Suction - 2" x 10'	day	\$8.00	
WASH	ER-4-031	Hydro blaster - 10,000 psi (10K)	day	\$595.00	
WASH	ER-4-032	Hydro blaster - 20,000 psi (20K)	day	\$950.00	
WASH	ER-4-033	Metatarsal Foot Protection	day	\$25.00	
WASH	ER-4-034	Miscellaneous Tips / Fittings		cost+20%	
WASH	ER-4-035	Pressure Washer - 3,000 psi ( gas engine )	day	\$150.00	
WASH	ER-4-036	Pressure Washer - 3,500 - 5,000 psi (hot water )	day	\$325.00	
WASH	ER-4-037	Pressure Washer Trailer Mounted (hot water)	day	\$325.00	
WASH	ER-4-038	Pump Diaphragm - 2" Aluminum	day	\$90.00	
WASH	ER-4-039	Pump, Diaphragm 2" Poly	day	\$175.00	
WASH	ER-4-040	Pump, Diaphragm 2" Stainless Steel	day	\$250.00	
WASH	ER-4-041	Pump, Diaphragm 3" Poly	day	\$210.00	
WASH	ER-4-042	Pump, diaphragm 3" Stainless Steel	day	\$310.00	
WASH	ER-4-043	Pump, Disposable Drum	ea	\$21.00	
WASH	ER-4-044	Pump, Rotary Petroleum Fuel - Manuel	day	\$25.00	

# ANDERSON

POLLUTION CONTROL, INC.

<u>Class</u>	<u>Code - 4</u>	<u>Pumps / Hoses / Washing Equipment (cont.)</u>	<u>UOM</u>	<u>Rate</u>	<u>Add'l</u>
WASH	ER-4-045	Roto - Nozzle 10k	day	\$95.00	
WASH	ER-4-046	Shotgun 10k	day	\$50.00	
WASH	ER-4-047	Steam Cleaner - Self Contained	day	\$425.00	
WASH	ER-4-048	Surface Cleaner - 3,000 psi	day	\$175.00	
WASH	ER-4-049	Wash Pump 2" - diesel powered	day	\$110.00	
WASH	ER-4-050	Wash Pump 2" - gasoline powered	day	\$90.00	
WASH	ER-4-051	Wash Pump 3" - diesel powered	day	\$140.00	
WASH	ER-4-052	Wash Pump 3" - gasoline powered	day	\$125.00	

<u>Class</u>	<u>Code - 5</u>	<u>Sorbents</u>	<u>UOM</u>	<u>Rate</u>	<u>Add'l</u>
SORB	ER-5-011	Floor Gator - 50# bag	ea	\$25.00	
SORB	ER-5-012	Kitty Litter	ea	\$15.00	
SORB	ER-5-013	Mortar Mix, 40# bag	ea	\$18.00	
SORB	ER-5-014	Oil Avenger - Granular - 50# bag	ea	\$28.00	
SORB	ER-5-015	Oil Gator - 30# bag	ea	\$43.00	
SORB	ER-5-016	Oil Sponge - General Purpose - 30# bag	ea	\$33.00	
SORB	ER-5-017	Oil-Dri - Granular - 50# bag	ea	\$25.00	
SORB	ER-5-018	Peat Moss - 2 cu. ft.	ea	\$37.00	
SORB	ER-5-019	Snare Boom, Viscous Oil - 50' on Rope	ea	\$80.00	
SORB	ER-5-020	Snare, Viscous Oil 30 / bag	ea	\$69.00	
SORB	ER-5-021	Sorbent, Boom 5" x 10' - 4 / bale ( petro )	bale	\$99.00	
SORB	ER-5-022	Sorbent, Boom 5" x 10' - 4 / bale ( univ )	bale	\$135.00	
SORB	ER-5-023	Sorbent, Boom 8" x 10' - 4 / bale ( petro )	bale	\$175.00	
SORB	ER-5-024	Sorbent, Boom 8" x 10' - 4 / bale ( univ )	bale	\$200.00	
SORB	ER-5-025	Sorbent, Industrial Rug 36" x 300'	ea	\$255.00	
SORB	ER-5-026	Sorbent, Pads - 100 / bale ( chem )	bale	\$70.00	
SORB	ER-5-027	Sorbent, Pads - 100 / bale ( petro )	bale	\$62.00	
SORB	ER-5-028	Sorbent, Pads - 100 / bale ( univ )	bale	\$105.00	
SORB	ER-5-029	Sorbent, Roll - 144' x 38" x 3/8" ( petro )	ea	\$155.00	
SORB	ER-5-030	Sorbent, Sweep - 100' x 17" x 1/4"	ea	\$125.00	
SORB	ER-5-031	Sphag Sorb - 2 cu. ft.	ea	\$43.00	
SORB	ER-5-032	Vermiculite - 2 cu. ft.	ea	\$30.00	
SORB	ER-5-033	Zorbent, Absorbent material - 50# bag	ea	\$60.00	

# ANDERSON

POLLUTION CONTROL, INC.

<u>Class</u>	<u>Code - 6</u>	<u>Haz-Mat Equipment</u>	<u>UOM</u>	<u>Rate</u>	<u>Add'l</u>
HAZ	ER-6-010	Betz" Emergency Offloading Valve	day	\$500.00	
HAZ	ER-6-011	Chlorine "A" Kit	day	\$500.00	
HAZ	ER-6-012	Chlorine "B" Kit	day	\$750.00	
HAZ	ER-6-013	Chlorine "C" Kit	day	\$1,000.00	
HAZ	ER-6-014	Coliwasa, Disposable Glass Tubing	ea.	\$20.00	
HAZ	ER-6-015	Compressor, Corken 2"	day	\$1,750.00	
HAZ	ER-6-016	Drill, Pneumatic	day	\$100.00	
HAZ	ER-6-017	HAZ-MAT Test Kit	day	\$125.00	+ \$ 30.00 / test
HAZ	ER-6-018	Laboratory Analysis		cost+20%	
HAZ	ER-6-019	Nitrogen, Gas Cylinder Refill	ea	\$35.00	
HAZ	ER-6-020	Nitrogen, Liquid Purge		cost+20%	
HAZ	ER-6-021	pH Meter	day	\$50.00	
HAZ	ER-6-022	pH Pen	day	\$25.00	
HAZ	ER-6-023	Safety Shower, Emergency - ( portable )	day	\$125.00	
HAZ	ER-6-024	Sample Kit - Stainless Steel	day	\$25.00	
HAZ	ER-6-025	Sample Tubing - Tygon 1/4"	ft	\$3.00	
HAZ	ER-6-026	Sample, Soil Auger - Stainless Steel	day	\$75.00	
HAZ	ER-6-027	Stinger, 1-1/2" x 60" - PVC	day	\$25.00	
HAZ	ER-6-028	Stinger, 1-1/2" x 60" - Stainless Steel	day	\$50.00	
HAZ	ER-6-029	Tedlar Bag	ea	\$60.00	
HAZ	ER-6-030	Thermometer, Infrared	day	\$75.00	

# ANDERSON

POLLUTION CONTROL, INC

<u>Class</u>	<u>Code - 7</u>	<u>Drums and Containers</u>	<u>UOM</u>	<u>Rate</u>	<u>Add'l</u>
CONT	ER-7-010	Drum Dolly	day	\$40.00	
CONT	ER-7-011	Drum Labels	ea	\$3.00	
CONT	ER-7-012	Drum Lift - Forklift Attachment	day	\$40.00	
CONT	ER-7-013	Drum Liner, 6 ml	ea	\$1.50	
CONT	ER-7-014	Drum Patch Kit	ea	\$75.00	
CONT	ER-7-015	Drum Sling	day	\$20.00	
CONT	ER-7-016	Drum Wrench - Brass ( Bung Wrench )	day	\$15.00	
CONT	ER-7-017	Drum, 55 Gallons CT - Poly	ea	\$65.00	
CONT	ER-7-018	Drum, 55 Gallons CT - Steel	ea	\$65.00	
CONT	ER-7-019	Drum, 55 Gallons OT - Poly	ea	\$65.00	
CONT	ER-7-020	Drum, 55 Gallons OT - Steel	ea	\$65.00	
CONT	ER-7-021	Drum, 85 Gallons Salvage - Steel	ea	\$165.00	
CONT	ER-7-022	Drum, 95 Gallon Over Pack - Poly	ea	\$310.00	
CONT	ER-7-023	Frac Tank - 250 bbl capacity ( mini )	day	\$55.00	
CONT	ER-7-024	Frac Tank - 500 bbl capacity	day	\$75.00	
CONT	ER-7-025	Frac Tank - 500 bbl capacity ( Stainless )	day	\$175.00	
CONT	ER-7-026	Lab Pack, 10 Gallon	ea	\$50.00	
CONT	ER-7-027	Lab Pack, 5 Gallon	ea	\$40.00	
CONT	ER-7-028	Poly Tanks 1,000 - 8,000 Gallons	day	cost+20%	
CONT	ER-7-029	Roll Off Box, 20 - 30 cu. yd. ( wt ) Roll Top	day	\$75.00	
CONT	ER-7-030	Roll Off Box, 20 - 30 cu. yd. ( wt ) Tarped	day	\$25.00	
CONT	ER-7-031	Secondary Containment ( Frac Tank )	day	\$55.00	
CONT	ER-7-032	Tank Trailer - 150 bbl capacity	day	\$200.00	
CONT	ER-7-033	Tote - Poly - 325 Gallons	day	\$75.00	
CONT	ER-7-034	Vacuum Box, 25 cu. yd.	day	\$65.00	

# ANDERSON

POLLUTION CONTROL INC.

<u>Class</u>	<u>Code - 8</u>	<u>Miscellaneous Equipment</u>	<u>UOM</u>	<u>Rate</u>	<u>Add'l</u>
MISC	ER-8-010	Air Compressor 12 cfm - Gasoline	day	\$90.00	
MISC	ER-8-011	Air Compressor 185 cfm - Diesel	day	\$250.00	
MISC	ER-8-012	Air Compressor 20 cfm - Gasoline	day	\$180.00	
MISC	ER-8-013	Air Compressor 375 cfm - Diesel	day	\$325.00	
MISC	ER-8-014	Barrier Tape	roll	\$29.00	
MISC	ER-8-015	Bill Of Lading	ea	\$2.00	
MISC	ER-8-016	Binoculars	day	\$10.00	
MISC	ER-8-017	Blower, Air Horn - Confined Space	day	\$50.00	
MISC	ER-8-018	Blower, Coppus - Confined Space	day	\$90.00	
MISC	ER-8-019	Chain 25' Tow	day	\$20.00	
MISC	ER-8-020	Chain Saw	day	\$125.00	
MISC	ER-8-021	Drill, Pneumatic	day	\$100.00	
MISC	ER-8-022	Drop Light, Explosion Proof / Electric	day	\$90.00	
MISC	ER-8-023	Epoxy Stick	ea	\$12.00	
MISC	ER-8-024	Extension Cord - 100'	day	\$20.00	
MISC	ER-8-025	Fence - Safety Orange	roll	\$75.00	
MISC	ER-8-026	Flashlight	day	\$15.00	
MISC	ER-8-027	Generator 4 - 5 kw	day	\$175.00	+ fuel
MISC	ER-8-028	Generator 6 - 8 kw	day	\$250.00	+ fuel
MISC	ER-8-029	Generator 8 - 12 kw	day	\$325.00	+ fuel
MISC	ER-8-030	Grounding / Bonding Cables - Rods	day	\$25.00	
MISC	ER-8-031	Hand Cleaner	ea	\$15.00	
MISC	ER-8-032	Hand Tools ( shovel, rake, net... )	day	\$15.00	
MISC	ER-8-033	Hand Tools ( wrenches, sockets )	day	\$15.00	
MISC	ER-8-034	Heat Stress	man/day	\$10.00	
MISC	ER-8-035	Hole Saw - 2 - 1/2"	ea	\$25.00	
MISC	ER-8-036	Lockout - Tagout Kit	day	\$50.00	
MISC	ER-8-037	Manifest - Waste	ea	\$5.00	
MISC	ER-8-038	Mercon Wipes	ea	\$1.25	
MISC	ER-8-039	Mercury Indicator Powder - 250 grams	ea	\$62.50	
MISC	ER-8-040	Mercury Vacuum, Stainless Steel	day	\$225.00	
MISC	ER-8-041	Oxy - Acetylene Cutting Outfit	day	\$210.00	
MISC	ER-8-042	Paint, Ground Marking	can	\$12.00	
MISC	ER-8-043	Pallet Grabber	day	\$40.00	
MISC	ER-8-044	Pallet Jack	day	\$75.00	

# ANDERSON

POLLUTION CONTROL, INC.

<u>Class</u>	<u>Code - 8</u>	<u>Miscellaneous Equipment (continued)</u>	<u>UOM</u>	<u>Rate</u>	<u>Add'l</u>
MISC	ER-8-045	Personnel Decontamination Brush	ea	\$8.00	
MISC	ER-8-046	pH Strips ( Box )	box	\$15.00	
MISC	ER-8-047	Pipeline Probe	day	\$15.00	
MISC	ER-8-048	Plug - N - Dike	can	\$21.00	
MISC	ER-8-049	Pollution Bags - 6 ml - (100 / roll)	roll	\$120.00	
MISC	ER-8-050	Pollution Can - 20 Gallon	ea	\$25.00	
MISC	ER-8-051	Pool, Personnel Decontamination	ea	\$22.00	
MISC	ER-8-052	Portable Lighting - Electric Halogen	day	\$70.00	
MISC	ER-8-053	Roll off Box Liner	ea	\$50.00	
MISC	ER-8-054	Rope 1/2" Poly x 600'	roll	\$75.00	
MISC	ER-8-055	Rope 1/4" Poly x 600'	roll	\$45.00	
MISC	ER-8-056	Rope 3/4" Poly x 600'	roll	\$85.00	
MISC	ER-8-057	Rope 3/8" Poly x 600'	roll	\$65.00	
MISC	ER-8-066	Sample Jar - 1/2 pint	ea	\$2.00	
MISC	ER-8-067	Sample Jar - pint	ea	\$2.00	
MISC	ER-8-068	Sample Jar - Quart	ea	\$2.00	
MISC	ER-8-069	Scare Cannon - Propane Operated (automatic)	day	\$200.00	
MISC	ER-8-070	Shop Vac - Wet / Dry	day	\$90.00	
MISC	ER-8-071	Stake, Wooden Survey	ea	\$2.00	
MISC	ER-8-072	T - Post 5' - Steel	ea	\$12.00	
MISC	ER-8-073	T- Post Driver	day	\$25.00	
MISC	ER-8-074	Tape, Chemical (PPE)	roll	\$33.00	
MISC	ER-8-075	Tape, Duct	roll	\$12.00	
MISC	ER-8-076	Tape, Flagging ( fluorescent )	roll	\$9.50	
MISC	ER-8-077	Tape, Teflon	roll	\$5.00	
MISC	ER-8-078	Tiller, Gas Operated	day	\$115.00	
MISC	ER-8-079	Visqueen 20' x 100'	roll	\$90.00	
MISC	ER-8-080	Visqueen 40' x 100'	roll	\$140.00	
MISC	ER-8-081	Weed Eater ( 2 cycle )	day	\$90.00	
MISC	ER-8-082	Welding Machine	day	\$225.00	
MISC	ER-8-083	Welding Supplies	ea	cost 20%	
MISC	ER-8-084	Wheel - Measuring / Roller	day	\$20.00	
MISC	ER-8-085	Wheelbarrow	day	\$25.00	

# ANDERSON

POLLUTION CONTROL, INC.

<u>Class Code - 9</u>	<u>Communications Equipment</u>	<u>UOM</u>	<u>Rate</u>	<u>Add'l</u>
COMM ER-9-010	Cellular Phone	day	\$25.00	
COMM ER-9-011	Computer and Printer	day	\$75.00	
COMM ER-9-012	Copier	day	\$90.00	
COMM ER-9-013	Digital Camera	day	\$25.00	
COMM ER-9-014	Facsimile Machine	day	\$50.00	
COMM ER-9-015	Global Positioning System	day	\$40.00	
COMM ER-9-016	Photos - Prints - Digital Copies		cost+20%	
COMM ER-9-017	Radio, 2 way Hand Held	day	\$25.00	
COMM ER-9-018	Radio, 2 way Hand Held - UL approved	day	\$50.00	
COMM ER-9-019	Satellite Telephone		cost+20%	
COMM ER-9-020	Video Camera	day	\$75.00	

<u>Class Code - 10</u>	<u>Chemicals and Neutralizers</u>	<u>UOM</u>	<u>Rate</u>	<u>Add'l</u>
CHEM ER-10-010	Acetic Acid - 5 gallon pail	ea	\$85.00	
CHEM ER-10-011	Acetic Acid - 55 gallon drum	ea	\$925.00	
CHEM ER-10-012	Ammonia - Household	gal	\$8.00	
CHEM ER-10-013	Bleach, Household 5% - 1 gallon	ea	\$5.00	
CHEM ER-10-014	Citric Acid - 50# bag	ea	\$72.00	
CHEM ER-10-015	D-Limonator - 5 gallon pail	ea	\$152.50	
CHEM ER-10-016	D-Limonator - 55 gallon drum	ea	\$1,655.00	
CHEM ER-10-017	Ecosorb - Mercapthan Neutralizer	gal	\$79.50	
CHEM ER-10-018	Hydrochloric Acid - 30% solution	gal	\$8.50	
CHEM ER-10-019	Hydrogen Peroxide - 55 gallon drum	ea	\$520.00	
CHEM ER-10-020	Micro-Blaze - 5 gallon	ea	\$195.00	
CHEM ER-10-021	Petro-Clean - 5 gallon	ea	\$182.50	
CHEM ER-10-022	Petro-Clean 55 gallon	ea	\$1,750.00	
CHEM ER-10-023	PS-51, Degreaser - 55 gallon drum		cost+20%	
CHEM ER-10-024	Soda ASH - 50# bag	ea	\$21.00	
CHEM ER-10-025	Sodium Bicarbonate - 50# bag	ea	\$36.00	
CHEM ER-10-026	Sodium Carbonate ( fly ash )		cost+20%	
CHEM ER-10-027	Sodium Hydroxide - 50% solution	gal	\$50.00	
CHEM ER-10-028	Sodium Hypochlorite - 10% solution	gal	\$7.50	



## Attachment "A" - 2010 Emergency Response Price Schedule

## Fuel Surcharge Letter / Schedule

At Anderson Pollution Control, Inc., we work diligently to provide you the best possible services at rates, which are highly competitive. Regrettably, due to the dramatic rise in the price for diesel fuel, we must ask that you accept a temporary increase in rates in the form of a fuel surcharge.

We will implement a fuel surcharge for all equipment such as (but not limited to) DOT trucks, pickup trucks, and / or any fuel burning equipment which is not noted as a "plus fuel" item on the preceding price schedule. The surcharge will be determined in the following fashion taken from the the USDOE (United States Department of Energy) national average of diesel fuel pricing.

National Avg. Price / Gal		Surcharge Percent Applied to Hourly / Daily Rate of Equipment
\$ 2.10	\$ 2.19	14%
\$ 2.20	\$ 2.29	15%
\$ 2.30	\$ 2.39	16%
\$ 2.40	\$ 2.49	17%
\$ 2.50	\$ 2.59	18%
\$ 2.60	\$ 2.69	19%
\$ 2.70	\$ 2.79	20%
\$ 2.80	\$ 2.89	21%
\$ 2.90	\$ 2.99	22%
\$ 3.00	\$ 3.09	23%
\$ 3.10	\$ 3.19	24%
\$ 3.20	\$ 3.29	2%
\$ 3.30	\$ 3.39	26%
\$ 3.40	\$ 3.49	27%
\$ 3.50	\$ 3.59	28%
\$ 3.60	\$ 3.69	29%
\$ 3.70	\$ 3.79	30%
\$ 3.80	\$ 3.89	31%
\$ 3.90	\$ 3.99	32%
\$ 4.00	\$ 4.09	33%
\$ 4.10	\$ 4.19	34%
\$ 4.20	\$ 4.29	35%



## Attachment "B" - 2010 Emergency Response Price Schedule

### Explanation / Clarification to Emergency Response Rate Schedule

#### **Personnel:**

Experienced supervisory, technical, and equipment operating personnel are available for emergency spill response and spill cleanup operations, 24 hours per day, 365 days per year. Normal hours of operation are from 0700 hours (7:00 a.m.) to 1600 hours (4:00 p.m.) Monday through Friday. All labor charges will be in accordance with Anderson Pollution Control, Inc. service receipts. Charges for personnel are portal to portal. Anderson Pollution Control, Inc. will invoice customer for personnel and the time required to mobilize, service, repair, and restock all vehicles and response equipment used in the performance of services. **Overtime Rates** for personnel will be charged at a rate of time and one half between 1600 hours (4:00 p.m.) and 0700 hours (7:00 a.m.) Monday through Thursday, and between the hours of 1600 hours and 0700 hours on Friday through 0700 hours on Monday. **Doubletime Rates** will be applied to the following National Holidays: New Year's Day, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day. **A 4-hour minimum call-out charge will apply to all labor / equipment call-outs.**

In the event that Anderson Pollution Control, Inc. responds to a request from a governmental agency and/or third party and/or customer and/or on behalf of customer for record gathering and/or litigation support, including but not limited to any proceeding, deposition, hearing, or trial, and whether during the performance of services or any time after; Customer hereby agrees to and will pay to Anderson Pollution Control, Inc. the charges for the personnel provided and/or requested and/or required in the amount corresponding to the personnel designation in this rate sheet and will further reimburse Anderson Pollution Control, Inc. for reasonable expenses incurred as a result including transportation, parking and/or lodging if necessary.

#### **Travel, Lodging, and Per Diem:**

For all Anderson Pollution Control, Inc. employees and designees who do not reside in the local commuting area from the work site, a minimum Per Diem charge of \$ 125.00 per day per employee will be invoiced to the customer for such expenses incurred. Furthermore, any expenses for commercial transportation will be invoiced back to the customer at a rate of cost plus 20%.

#### **Automotive Equipment:**

All automotive equipment rate charges are portal to portal. A 4 hour minimum times will be charged on all call-out services. A mileage charge of \$ 0.50 per mile after the first 50 miles will be added to all automotive equipment. A fuel and insurance surcharge will be assessed on all autos and equipment. (See Attachment "A" for surcharge schedule). Fuel and insurance Surcharges are calculated on the hourly or daily rate of equipment / autos times the percentage applied based on National Diesel Fuel Price Average according to the USDOE.

#### **Equipment Decontamination:**

Spill control equipment is billed on a time and material basis from portal to portal, and will continue until decontamination or washout services are complete. Third party washout facility's charges will be billed at a rate of cost plus 20%.

#### **Damaged or Contaminated Equipment Replacement:**

If, during performance of a service and/or services for a customer, equipment sustains damage which renders the equipment beyond repair or renders decontamination impossible, said equipment will be subject to a replacement charge at Anderson Pollution Control, Inc.'s cost plus 20% unless said damage was sustained as a result of misuse by an Anderson Pollution Control, Inc. employee.



## Attachment "B" - 2010 Emergency Response Price Schedule (continued)

### Explanation / Clarification to Emergency Response Rate Schedule

#### **Fuel Surcharge:**

A fuel surcharge will be assessed on all hourly/daily equipment /vehicle rate will be charged on all motorized equipment. The fuel surcharge calculation Anderson Pollution Control, Inc. is listed as "Attachment A" of this document. Charges will be assessed on equipment only. Further explanation of fuel surcharge calculations are also mentioned in the "Automotive Equipment" Section of this document.

#### **Insurance:**

The rates in the rate schedule include insurance coverage for Worker's Compensation, General Liability, Pollution and Automobile Liability. A Certificate of insurance will be forwarded upon request. These rates do **NOT** include work performed under the U.S. Longshoremen's and Harbor Workers Act (33 USC ss 9010950). For work performed under this statute, an additional 69% surcharge per \$ 100.00 of wages will be assessed on labor ONLY.

#### **Stand-By Rates:**

Stand-by rate will be equal to the daily rates in this schedule unless otherwise agreed to in writing on a case-by-case basis. Full rates will apply for personnel and per diem, while equipment will be billed at half the daily or hourly rate until utilized or released. A minimum daily charge of eight (8) hours per day will be billed for standby work done outside of 150-mile radius of employee's home office.

#### **Place of Performance:**

the procurement of Anderson Pollution Control, Inc.'s services may not be in the same county as the work-site area. Customer is obligated to make payment to Anderson Pollution control, Inc. in Montgomery County, Texas for services provided. Because this agreement has been procured and/or managed and administered by Anderson Pollution Control, inc.'s corporate office in Montgomery County, Texas. The validity, interpretation, and performance of the services and payment and the contents herein are to be interpreted and enforced pursuant to the laws of the State of Texas and any suit in connection herewith will be filed in Montgomery County, Texas

#### **Subcontract Services / Third Party Services:**

A 20% handling charge will apply and be invoiced for all shipping and transportation of equipment, materials, and goods regardless of whether such equipment, materials, and goods appear on Anderson Pollution Control, Inc.'s rate schedule. This includes but is not limited to personnel, equipment, materials or goods, laboratory services, damage waivers and/or other services. Cost, as used herein, is defined as the amount invoiced to Anderson Pollution Control, Inc. by a third party supplier of materials, goods, personnel, equipment, and/or services.

#### **Taxes:**

All domestic, federal, state, and municipal taxes, except income taxes and ad-valorem taxes, now and hereinafter imposed with respect to services rendered, to rental equipment, to the processing, manufacture, repair, and to the delivery and transportation of equipment and supplies will be added to become part of the total price payable by the customer. If a customer claims an exemption from payment of Texas Sales and Use Tax, the customer will be required to render an exemption certificate or a Resale Certification to Anderson Pollution Control, Inc. for said exemption to apply to the services rendered. If for any reason the services rendered result in the assessment of foreign income taxes, excise taxes, or other fees alleged as owing to a foreign state or government, the customer will pay directly the amount of any assessment or fee. In the event Anderson Pollution Control, Inc. pays any such foreign tax or fee directly, customer will promptly reimburse Anderson Pollution Control, Inc. for such amount.



Attachment "B" - 2010 Emergency Response Price Schedule (continued)

Explanation / Clarification to Emergency Response Rate Schedule

**Terms:**

The term of payment for all invoices is Net 15 days upon receipt of invoice in US Dollars (USD) (US\$). The balance of any invoice not timely paid will accrue a finance charge computed at the periodic rate of one and one half percent (1.5 %) per month beginning on the first day of the first month following any delinquency. Customer is obligated to make payment to Anderson Pollution Control, Inc. at it's principal office at 1011 West Lewis - Suite A -- Conroe, Texas 77301-2219 in Montgomery County, Texas.

# **OIL MOP, LLC**

## **Houston COTP Zone**

131 Keating Drive  
Belle Chasse, LA 70037

Phone: (504) 394-6110  
Fax: (504) 392-8977



March 5, 2010

Pasadena Refining Systems, Inc.  
Attn: Ms. Alisa White  
111 Red Bluff Road  
Pasadena, TX 77506

RE: Letter of Intent – Agreement for Emergency Spill Response

Dear Mr. Ceramic

Thank you for the opportunity to be of service Pasadena Refining Systems, Inc. *Oil Mop LLC (Oil Mop)* can provide emergency response services to your facilities on a 24 hour basis. All of our response resources are listed within our United States Coast Guard (“USCG”) Oil Spill Removal Organization (“OSRO”) Classification. Our resources are maintained and exercised annually in accordance with the USCG PREP and OPA 90 readiness guidelines *Oil Mop* is listed as an MM through W3 Company with the USCG. Per 33 CFR 154.1045 paragraph (c)(1) and (c)(2), all time and equipment requirements will be met for the worst-case discharge.

All of *Oil Mop's* response resources, maintenance and training records are available for inspection by Customer upon request. *Oil Mop* will provide response services to Customer on an immediate basis. In the event *Oil Mop* is unable to provide immediate response services for any reason whatsoever, *Oil Mop* will subcontract and/or assign the work to be performed hereunder. Response times will vary due to facility/vessel location.

The response agreement covers a three-year period, starting in March 2010 through March 2013..

#### 24-Hour Emergency Response Hotline

1-800-645-6671

This Letter of Intent will provide proof of our intention to respond with all available resources; however, it is highly recommended that a Master Service Agreement be executed between Oil Mop, LLC and Pasadena Refining Systems, Inc. prior to responding to any incident.

Again thank you for the opportunity to be of service to Pasadena Refining Systems, Inc. If we can be of any further assistance please feel free to call at any time.

Sincerely,

Roxann B. Baudean  
Contract Administrator

**OIL MOP, LLC**  
**THE TOTAL SOLUTION**

131 Keating Drive  
 Belle Chasse, Louisiana 70037

PHONE (504) 394-6110  
 FAX (504) 393-8878

**MASTER SERVICE AGREEMENT**

**CONTRACT NUMBER: \_\_\_\_\_**

This Master Service Agreement (the "Agreement"), is made this \_\_\_\_\_ day of \_\_\_\_\_, 2009, (the "Effective Date"), by and between \_\_\_\_\_ a \_\_\_\_\_ company, hereinafter sometimes called "Company", and **Oil Mop, L.L.C.**, a Louisiana Limited Liability Company, hereinafter sometimes called "Oil Mop", (Company and Oil Mop sometimes being referred to herein collectively as the "Parties," and individually as a "Party").

1. Authority, Purpose and Scope - The person signing this Agreement is an authorized representative of that Party. This Agreement is a master contract between Company and Oil Mop whereby in consideration of the covenants and provisions hereinafter provided, it shall control and govern all services performed by Oil Mop for Company, and the purchase from Oil Mop, of materials and equipment utilized in connection with such services (hereinafter the "Work").

2. Definitions -

- (a) "Affiliate" means a company owning fifty percent (50%) or more of the stock of Company or Oil Mop, a company in which Company or Oil Mop owns fifty percent (50%) or more of its stock, or a company fifty percent (50%) or more of whose stock is owned by the same company that owns fifty percent (50%) or more of the stock of Company or Oil Mop.
- (b) "Claim" or "Claims" means, unless specifically provided otherwise herein, all claims (including, but not limited to, those for bodily injury, personal injury, illness, disease, maintenance, cure, loss of consortium, loss of support, death, and wrongful termination of employment), damages (except consequential damages), liabilities, losses, demands, liens, encumbrances, fines, penalties, causes of action of any kind (including actions in rem or in personam), obligations, costs, judgments, interest and awards (including payment of reasonable attorneys' fees and costs of litigation) or amounts, of any kind or character (except punitive or exemplary damages), whether under judicial proceedings, administrative proceedings or otherwise, or conditions in the premises of or attributable to any person or persons or any party or parties, breach of representation or warranty (expressed or implied), under any theory of tort, contract, breach of contract (including any Claims which arise by reason of indemnification or assumption of liability contained in other contracts entered into by Company Indemnitees or Oil Mop Indemnitees) arising out of, or incident to or in connection with this Agreement or the performance of the Work under this Agreement.
- (c) "Company Indemnitees" and "Company's Indemnitees" means Company, its Affiliates, if any, and its and their directors, agents, representatives, employees and insurers and its and their suppliers, subcontractors, their other contractors, and their respective employees.
- (d) "Oil Mop Indemnitees" and "Oil Mop's Indemnitees" means Oil Mop, its Affiliates, if any, and its and their directors, agents, representatives, employees and insurers and its and their suppliers,

contractors, subcontractors, and their respective employees.

- (e) "Third Party" means a person or entity other than any of the Company Indemnitees and the Oil Mop Indemnitees.
- (f) The term "REGARDLESS OF FAULT" shall mean WITHOUT REGARD TO THE CAUSE OR CAUSES OF ANY CLAIM, INCLUDING, WITHOUT LIMITATION, EVEN THOUGH A CLAIM IS CAUSED IN WHOLE OR IN PART BY THE NEGLIGENCE (WHETHER SOLE, JOINT, CONCURRENT, COMPARATIVE, CONTRIBUTORY, ACTIVE, PASSIVE, GROSS, OR OTHERWISE), WILLFUL MISCONDUCT, STRICT LIABILITY, OR OTHER FAULT, OF ANY MEMBER OF COMPANY'S INDEMNITEES, OIL MOP'S INDEMNITEES AND/OR INVITEES OR THIRD PARTIES, AND WHETHER OR NOT CAUSED BY A PRE-EXISTING CONDITION OR THE UNSEAWORTHINESS OF ANY VESSEL OR UNAIRWORTHINESS OF ANY AIRCRAFT OF A PARTY WHETHER CHARTERED, OWNED, OR PROVIDED BY COMPANY OR OIL MOP.

3. Daily Reports - Oil Mop shall endeavor to submit daily reports on all equipment, personnel and supplies utilized during the preceding twenty-four (24) hours to the Company. Daily reports will be submitted to the Company representative for the purpose of developing invoices. These reports are not invoices, but will be utilized as documentation for the creation of invoices as provided for herein.

4. Permits - Unless specified to the contrary in the Work Order, the Company shall obtain and pay for all necessary permits, licenses and inspection clearance for Oil Mop, its subcontractors, suppliers and vendors, and their respective employees, required to be obtained in their respective names in connection with the Work hereunder. The Company shall further be responsible for obtaining all necessary permits for the right of ingress or egress on private or public lands necessary to operations by Oil Mop. In the event operations are required in a designated remote work area, all requirements for ingress and egress shall be obtained by the Company for its account. In the event a representative of any governmental body regulating the Work finds any violation upon inspection of the job site during the performance of this Agreement, corrective action shall be taken immediately by the Company at the Company's sole expense.

5. Controlling Documents - This Agreement does not obligate the Parties to order Work from each other, nor does it obligate the Parties to accept Orders for Work, but this Agreement shall control and govern all Work accepted by and between the Parties and shall define the rights and obligations of the Parties during the term hereof.

6. Independent Contractor - The Parties agree that Oil Mop shall be an independent contractor with respect to all Work done and services performed hereunder, and have the status of, an independent contractor and shall not be in any way employees or agents of the Company. It is understood that by this provision, neither Party is assuming any liability for the actions or omissions of the other Party, except as is stated in this Agreement.

7. Transportation Charges & Waste Disposal - All tools, equipment and services are provided F.O.B. the nearest Oil Mop points. Applicable transportation charges shall apply for delivery of tools, equipment and personnel to the work site(s) and return to the point of origin, plus daily charges and cleaning, as required.

If the Company requests that Oil Mop handle waste disposal, all waste generated during the spill or any other event will be handled in accordance with the Company's requirements to assure compliance with all local, state and federal rules and regulations. All waste generated during Company's spill or other event and handled by Oil Mop remains the property of the Company and the Company will be responsible for compliance with all storage, transportation, disposal, and record-keeping requirements including, without limitation, all manifests required for shipment and disposal. Disposal pricing and the extent of the support services provided will be compatible with the Company's disposal contracting standards.

8. Taxes and Liens - Company agrees to pay and discharge all taxes, lienable claims, charges or other impositions imposed and to be imposed by law on Oil Mop which arise out of, are in connection with, or result from, the Work performed hereunder.

9. Force Majeure - A delay in or failure to perform by a Party, other than the payment of money, shall not constitute a default that exposes it to liability for breach if and to the extent the delay or failure to perform is caused by an occurrence beyond the reasonable control of the Party, including, but not limited to an act of God or the public enemy; expropriation or confiscation of facilities; compliance with any order or requirement of any governmental authority; act of war, rebellion or sabotage or damage resulting therefrom; fire, flood, explosion or accident; riots or strikes or other concerted acts of workmen, whether direct or indirect; inability after diligent effort to obtain necessary licenses or permits; or any other cause, whether or not of the same class or kind as those specifically above named, which is not within the control of the Party and which, by the exercise of reasonable diligence, the Party is unable to prevent or remedy.

10. Insolvency - Should either Party become insolvent or make an assignment for the benefit of creditors or be adjudicated a bankrupt or admit in writing its inability to pay its debts generally as the same become due, or should any proceedings be instituted under any state or Federal law for relief of debtors or for the appointment of a receiver, trustee or liquidator of either Party, or should voluntary petition in bankruptcy or a reorganization or any adjudication of either Party as an insolvent or a bankrupt be filed, or should an attachment be levied upon either Party's equipment and not removed within five (5) days therefrom, then upon the occurrence of any such event, the other Party shall thereupon have the right to cancel this Agreement, without notice, and to terminate immediately all Work hereunder without further obligation. Such action by either Party does not relieve the other Party of its obligation hereunder.

11. Entire Agreement - This Agreement, its Exhibits (if any), and any applicable Work Order(s) constitute the sole and complete agreement of the Parties and supersedes all other agreements or representations of any kind, oral or otherwise, not included herein. In case of conflict or inconsistency between this Agreement, its Exhibits (if any), and any applicable Work Order(s), the Agreement shall prevail.

12. Proprietary Information - The Parties may acquire certain information with respect to each other and its respective operations. The Parties agree that they will not divulge any such information to persons not employed by the other Party without that Party's prior written consent, and the Parties will not use any such information for any purpose except as may be specifically agreed upon in writing by the other Party.

13. Public Announcements - Neither Party nor any representative, affiliate, contractor, vendor, supplier or agent of either Party shall make or issue any public announcement or statement with respect to this

Agreement or any Work Order without the prior written consent of the other Party.

14. Enforceability of the Agreement - If any part or provision of this Agreement is judicially declared invalid, such declaration shall not have the effect of invalidating or voiding the remainder of this Agreement, and the Parties agree that the part or parts of this Agreement so held to be invalid, void or unenforceable shall be modified to the extent to make it enforceable, or, if necessary, the Agreement shall be deemed to be amended to delete the unenforceable part or provision, and the remainder shall have the same force and effect as if such part or provision had never been included herein.

15. Notices - All notices to be given under this Agreement shall be in writing and shall be sent to:

Oil Mop, L.L.C.:

Company:

131 Keating Drive  
Fax No: (504) 393-8878

Address:  
Fax No-

Attn: Mr. Joseph Christiana

Attn:

Title: Vice-President

Title:

The addresses given here may be changed by either Party by advising the other in writing of its new address. All notices and other communications required or permitted to be given in this Agreement shall be deemed given twenty-four (24) hours after confirmed Fax transmission (eight of which hours occur during normal business days) or five (5) days after deposit of mailing when sent by certified mail, return receipt requested, to the recipient at the address hereinabove stated.

16. Survival of Terms - Notwithstanding the suspension or termination of this Agreement or any Force Majeure event, the Parties shall continue to be bound by the provisions of this Agreement that reasonably require some action or forbearance after such termination, including but not limited to those set out in Sections 5, 8, 11, 14, 23, 25, 26 and 28.

17. Headings - Headings or other subdivisions of this Agreement are inserted for convenience of reference and shall not limit or affect the legal construction of any provision hereof.

18. Binding Authority - Each of the persons executing this Agreement represents and warrants that he or she has full right and authority to execute this instrument on behalf of Company or Oil Mop, as the case may be, and to bind such Party to the fulfillment of all of the provisions hereof.

19. Commencement, Modification and Term of Work - Oil Mop agrees to use its best efforts to commence and complete said Work within the times specified in the Work Order. If no commencement date is specified, Oil Mop agrees to use its best efforts to commence said Work at the time requested by Company. If no completion date is specified, Oil Mop agrees to complete said Work with due diligence and in a timely manner.

Nothing in this Agreement shall be construed as authorizing any employee of either Party to modify, alter, amend or waive in any manner this Agreement or any provision hereof, including, without limitation, the liability and indemnity provisions hereof. This Agreement may be amended, modified or otherwise altered or its provisions waived only by an amendment in writing signed by a designated

representative of each Party. The waiver of any requirement or provision in this Agreement on any particular occasion shall not be deemed a waiver of such requirement or provision, or serve as a precedent, for other work, service or operations under this Agreement on other occasions.

This Agreement shall be effective as of the Effective Date and shall continue in force until terminated in accordance with the provisions hereof. As a master contract with respect to potential future work, services and materials not then subject to a Work Order, this Agreement may be terminated prospectively by either Party at any time, without cause and without liability, upon thirty (30) days prior written notice to the other Party; provided, however, the terms and provisions of this Agreement shall continue to apply to all Work Orders then in existence, and neither Party shall by reason of such prospective termination of this Agreement be relieved of its respective obligations and liabilities theretofore or thereafter arising from or incident to Work performed or services rendered under any existing Work Order. Notwithstanding the above, if a Party breaches any material provision hereunder, the other Party shall have the right to immediately terminate this Agreement without notice.

20. Work Conditions: The Company or its duly authorized agent, because of uncertain and unknown conditions and incidental hazards under which the Work may be performed, shall be present whenever requested or required at designated work areas, and to ascertain conditions under which Oil Mop's services and/or equipment will be utilized. Conditions at the designated work area(s) which prevent performance of the Work by Oil Mop, or a change in plans by Company shall not relieve the Company of its obligation to pay for all Work performed, including without limitation, personnel, rental or equipment and transportation charges.

21. Response Resources Readiness and Availability - Oil Mop's response resources are listed within its United States Coast Guard ("USCG") Oil Spill Removal Organization ("OSRO") Classification. Resources are maintained and exercised annually in accordance with the USCG PREP and OPA 90 readiness guidelines. Oil Mop is listed as an MM through W3 company with the USCG. All of Oil Mop's response resources and maintenance records are available for inspection by Company upon request. Oil Mop will provide response services to Company on a first request, first served basis with response resources provided on an as-available basis. Response times will vary due to facility/vessel location. In the event Oil Mop is unable to provide immediate response services for any reason whatsoever, Oil Mop will subcontract and/or assign the Work to be performed hereunder.

22. Mobilization & Orders - Company may mobilize Oil Mop by contacting the following number at any time:

Primary 24-Hour Response Hotline: 1-800-645-6671

Upon Company notifying Oil Mop from time to time of the Work requested hereunder, Oil Mop will undertake the same and thereafter carry it on with due diligence to completion, subject, however, to Paragraphs 5 and 9 hereof. Each job shall be the subject of an order for work issued by Company to Oil Mop (the "Work Order"). The Work Order will be either written or oral with confirmation in writing, and provide, where applicable, a description of the Work to be performed; the job location; equipment, services, supplies, personnel to be provided by Oil Mop, material and equipment to be purchased by Company and the consideration to be paid for same. The Work Order may be in a form similar to Exhibit "A" or any other form that is agreed to by the Parties. Nothing in any Work Order, whether written or oral, shall modify or change the terms and conditions contained in this Agreement. If written

confirmation of an oral Work Order is not received by Oil Mop within forty-eight (48) hours, Company agrees that such oral Work Order will have the same effect as a written Work Order.

23. Choice of Law and Venue – The enforcement and application of this Agreement shall be governed by and interpreted in accordance with **THE GENERAL MARITIME LAW, IF THE GENERAL MARITIME LAW IS NOT APPLICABLE, THE LAWS OF THE STATE OF LOUISIANA (EXCLUSIVE OF ANY PRINCIPLES OF CONFLICTS OF LAWS WHICH WOULD DIRECT APPLICATION OF THE SUBSTANTIVE LAWS OF ANOTHER JURISDICTION) SHALL GOVERN.** In the event of a dispute over the meaning, interpretation or application of this Agreement, it shall be construed fairly and reasonably and neither more strongly for nor against either Party. The Parties agree and stipulate that the exclusive venue for any dispute arising out of or in connection with this Agreement shall be the United States District Court of the Eastern District of Louisiana located in New Orleans, Louisiana, federal jurisdictional requirements permitting.

24. Assignment – Oil Mop may, at its sole discretion, assign or subcontract this Agreement, or any part thereof, and the assignment of this Agreement, or the subcontracting of any Work to be performed hereunder, shall relieve Oil Mop of its obligations hereunder.

25. Compensation – The consideration to be paid by Company to Oil Mop shall be the amount invoiced at the prices and rates provided in the Rate Schedule, attached hereto as Exhibit "B." This Rate Schedule is valid until superseded by Oil Mop. Oil Mop shall submit periodic invoices for Work performed, at its discretion, and shall submit its final invoice for Work performed within sixty (60) days of completion of the Work described in the applicable Work Order of Company.

In the event Company disputes one or more items in an invoice, Company shall, within ten (10) days of receipt of such invoice, notify Oil Mop in writing of the item or items under dispute and the reasons therefore. Payment of such disputed items may be withheld by Company until settlement of the dispute. The undisputed amount, however, shall be paid within fifteen (15) days of Company's receipt of invoice.

All invoices are due fifteen (15) days from date of invoice. A service charge of one and one-half percent (1 1/2%) per month (18% per annum) shall be applied to all balances remaining unpaid beyond fifteen (15) days. In the event that it becomes necessary to retain the services of an attorney to collect any of the balance due, Company agrees to pay, in addition to the applicable service charge, all reasonable attorneys' fees and costs as allowed by law. The remedies provided herein shall be in addition to any and all applicable liens, privileges and security interests (both statutory and contractual) allowed under law. Company hereby agrees that in the event of failure to pay Oil Mop, that Oil Mop shall have the right, without protest by Company, to file and record appropriate liens against any facility and/or property involved in the Work.

26. Warranty and Quality Standards - Oil Mop warrants the Work will be and has been completed in accordance with the Agreement for the period of thirty (30) days from the time Oil Mop completes said Work. This warranty extends only to the Company, and in no event shall Oil Mop be liable for damage sustained by a person designated by the law of any jurisdiction as a third party beneficiary of this warranty. **THE WARRANTY DESCRIBED IN THIS PARAGRAPH SHALL BE THE SOLE REMEDY OF THE COMPANY AND SHALL BE IN LIEU OF ALL CLAIMS OR OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED**

WARRANTY OF MERCHANTABILITY OR FITNESS OF USE OR FOR A PARTICULAR PURPOSE, OR ANY CLAIMS, WHETHER BASED IN TORT, CONTRACT, FAULT, NEGLIGENCE OR STRICT LIABILITY, AS WELL AS, ANY AND ALL CLAIMS FOR ANY VICES OR DEFECTS, WHETHER OBVIOUS OR LATENT, KNOWN OR UNKNOWN, EASILY DISCOVERABLE OR HIDDEN, AND FOR ANY CLAIM(S) OR CAUSE(S) OF ACTION FOR REDHIBITION PURSUANT TO LOUISIANA CIVIL CODE ARTICLES 2520, ET SEQ., OR FOR DIMINUTION OF PURCHASE PRICE PURSUANT TO LOUISIANA CIVIL CODE ARTICLES 2541, ET SEQ., OR FOR FITNESS FOR COMPANY'S ORDINARY USE PURSUANT TO LOUISIANA CIVIL CODE ARTICLE 2524, ET SEQ. Oil Mop's sole liability hereunder is limited to the replacement of defective parts of the Work or the re-performance or repair thereof. NOTWITHSTANDING ANY OTHER PROVISION TO THE CONTRARY IN THIS AGREEMENT, OIL MOP'S MAXIMUM AGGREGATE LIABILITY FOR DEFAULT, NEGLIGENCE, FAULT, WARRANTY, OR FOR ANY BREACH OF LIABILITY ARISING OUT OF OR CONNECTED TO THIS AGREEMENT, WHETHER OR NOT THIS AGREEMENT IS TERMINATED FOR ANY REASON, SHALL BE LIMITED TO THE AGREEMENT PRICE FOR THE WORK IN QUESTION. NOTWITHSTANDING ANYTHING IN THIS AGREEMENT TO THE CONTRARY, NEITHER OIL MOP, NOR ITS SUBCONTRACTORS OR SUPPLIERS OR VENDORS OR THEIR RESPECTIVE UNDERWRITERS SHALL BE LIABLE (IN WARRANTY, TORT, CONTRACT OR OTHERWISE) FOR ANY INCIDENTAL, PUNITIVE OR CONSEQUENTIAL DAMAGES, INCLUDING, BUT NOT LIMITED TO, LOSS OF PROFITS, LOSS OF USE OF THE GOODS OR ANY ASSOCIATED EQUIPMENT; COST OF SUBSTITUTED EQUIPMENT, FACILITIES OR SERVICES, POLLUTION, OR CLAIMS OF CUSTOMERS OF COMPANY FOR SUCH DAMAGES.

27. Insurance - As to all operations provided for herein, each Party shall carry and maintain for the benefit of the other Party, to the extent of the specific risks and liabilities assumed in the defense and indemnification provisions set out herein in this Agreement by the respective Parties, the following minimum insurance coverage with policy territory sufficient to cover the Work hereunder.

(a) Workmen's Compensation Insurance, with statutory limits in accordance with all applicable State, Federal and Maritime laws, and Employer's Liability Insurance of \$1,000,000 per accident/occurrence, including but not limited to an "Alternate Employer" or "Borrowed Servant" endorsement in favor of the other Party and its respective Company Indemnitees or Oil Mop Indemnitees, whichever is applicable. If the operations are over water or where the laws hereinafter mentioned apply, the Party shall carry the following additional insurance as applicable: U.S. Longshoremen's and Harbor Worker's Compensation Act Liability (including the Outer Continental Shelf Lands Act) for statutory limits, and Maritime Employer's Liability of \$1,000,000 per accident/occurrence (including but not limited to coverage for Jones Act, General Maritime Laws and Death on the High Seas Act; Transportation, Wages, Maintenance and Cure; Alternate Employer/Borrowed Servant endorsement in favor of the other Party and its respective Company Indemnitees or Oil Mop Indemnitees, whichever is applicable; and "In rem" endorsement).

(b) Comprehensive General Liability Insurance, with limits of \$1,000,000 per accident/occurrence and \$2,000,000 aggregate, including but not limited to coverage for public liability, bodily/personal injury, advertising injury, property damage premises coverage, contractual liability for those risks and liabilities assumed by the respective Parties in this Agreement, cross liability or severability of interest, liability for pollution and cleanup on a sudden and accidental basis, products and completed operations, and protective liability/independent subcontractors/work sublet.

(c) Automobile Liability Insurance, with limits of \$1,000,000 combined single limit per

accident/occurrence for bodily/personal injury and property damage, including but not limited to coverage for all owned, hired and non-owned vehicles or automotive equipment used by or for the respective Parties and contractual liability for those risks and liabilities assumed by the Parties in this Agreement.

(d) Property Insurance covering each Party's respective machinery and equipment for its replacement value and including removal of wreck/debris coverage.

(e) For all vessels owned, operated, chartered, or brokered by or for each Party in connection with its Work under the Agreement, each Party shall carry or require the owner or operator of such vessels to carry (including the Umbrella Excess Liability Insurance):

(1) Hull Insurance for replacement cost value, including but not limited to coverage for Collision and Tower's Liability, Removal of Wreck on a voluntary basis and/or where required by law, regulation or contract. The phrase "as owner of vessel named herein" and all similar phrases purporting to limit the insurer's liability to that of an owner shall be deleted.

(2) Protection and Indemnity Insurance, with limits of \$1,000,000 combined single limit per occurrence, including, but not limited to, coverage for contractual liability for those risks and liabilities assumed by the respective Parties in this Agreement, liability for pollution and cleanup on a sudden and accidental basis as per WQIS policy form or equivalent, full crew coverage, Collision and Tower's Liability, Cargo Legal Liability. The insurer(s) shall waive its right to limit its liability to value of vessel but only with respect to Company Indemnitees or Oil Mop Indemnitees, whichever is applicable.

(3) Charterer's Legal Liability Insurance, with limits of \$1,000,000 combined single limit per occurrence.

(4) The policies listed in (1) and (2) above shall provide that seaworthiness of vessels used to perform services under this Agreement is accepted by insurers (or that insurers shall waive in favor of the Company Indemnitees or Oil Mop Indemnitees, whichever is applicable, the vessel owner's and/or Oil Mop's warranty of seaworthiness).

(5) Delete the "non-owned watercraft exclusion" under the Comprehensive General Liability Insurance above.

(f) Umbrella Excess Liability Insurance, with limits of \$10,000,000 per accident/occurrence, in excess of the primary liability coverages and limits above.

(g) To the extent of the specific risks and liabilities assumed by the respective Parties in this Agreement, all of the above insurance shall be endorsed to provide that:

(1) The Party's insurers waive their right of subrogation (equitable or by assignment, express or implied, loan receipt or otherwise) against the Company Indemnitees or Oil Mop Indemnitees, whichever is applicable.

(2) The Party's insurers name Company Indemnitees or Oil Mop Indemnitees, whichever is applicable, as additional insureds (except for Worker's Compensation and Property Insurance).

(3) All said insurance policies must contain clauses to the effect that any other policies covering Oil Mop, its parents, affiliates and subsidiaries, and their directors, agents, representatives, employees and insurers, and their suppliers, other subcontractors, and their respective employees, are to be non-contributory and the coverage required by this Agreement is to be primary. No "other

insurance" provision shall be applicable to Oil Mop, its parents, affiliates and subsidiaries, and their directors, agents, representatives, employees and insurers, and their suppliers, other subcontractors, and their respective employees, by virtue of having been named an additional assured under any policy.

At the inception of this Agreement and whenever requested by a Party thereafter, the other Party shall furnish insurance certificates to evidence the insurance required herein. Each Party's insurance shall be carried with insurance companies satisfactory to the other Party and shall contain endorsements stating that insurer will give thirty (30) days' written notice to the other Party of non-renewal, cancellation or substantial amendment or alteration of such coverage. All deductible amounts, premiums, franchise amounts or other charges due with respect to each Party's required insurance herein shall be the sole obligation of the respective Party except as specifically provided for herein. Maintaining the prescribed insurance shall not relieve the Parties of any other obligation under this Agreement. Each Party will require and assure that each of its respective subcontractors, suppliers and vendors shall carry and pay for insurance in amounts and on terms necessary to cover the work and the obligations of the particular subcontractor, supplier or vendor.

28. Indemnities -

- (a) **Bodily injury, death, and damage to property of Company's employees and its customers, contractors (other than Oil Mop), subcontractors, vendors and suppliers:**

Notwithstanding anything to the contrary in the other provisions of this Agreement, COMPANY AGREES TO BE RESPONSIBLE FOR AND ASSUME ALL LIABILITY FOR AND HEREBY AGREES TO DEFEND, RELEASE, INDEMNIFY, AND HOLD HARMLESS OIL MOP INDEMNITEES AGAINST CLAIMS ARISING IN CONNECTION WITH: (i) BODILY INJURY AND/OR DEATH TO COMPANY'S EMPLOYEES, COMPANY'S CUSTOMERS, VENDORS, SUPPLIERS, SUBCONTRACTORS AND OTHER CONTRACTORS AND THEIR RESPECTIVE EMPLOYEES, AND COMPANY'S INVITEES; AND/OR (ii) DAMAGE TO PROPERTY OF COMPANY'S EMPLOYEES, COMPANY'S CUSTOMERS, VENDORS, SUPPLIERS, SUBCONTRACTORS AND OTHER CONTRACTORS AND THEIR RESPECTIVE EMPLOYEES, AND COMPANY'S INVITEES; ARISING OUT OF OR RESULTING FROM OR ALLEGED TO ARISE OUT OF OR RESULT FROM THE PERFORMANCE OF THIS AGREEMENT, REGARDLESS OF FAULT. THE INDEMNITY OBLIGATIONS SET FORTH IN THIS PARAGRAPH 28(a) SHALL INCLUDE ANY MEDICAL, COMPENSATION, OR OTHER BENEFITS PAID BY OIL MOP OR ANY MEMBER OF OIL MOP INDEMNITEES AND SHALL APPLY EVEN IF THE EMPLOYEE IS DETERMINED TO BE THE BORROWED OR STATUTORY EMPLOYEE OF OIL MOP OR ANY OTHER MEMBER OF OIL MOP INDEMNITEES.

- (b) **Bodily injury, death, and damage to property of Oil Mop's employees and its subcontractors, vendors and suppliers:**

Notwithstanding anything to the contrary in the other provisions of this Agreement, OIL MOP AGREES TO BE RESPONSIBLE FOR AND ASSUME ALL LIABILITY FOR AND HEREBY AGREES TO DEFEND, RELEASE, INDEMNIFY, AND HOLD HARMLESS THE COMPANY INDEMNITEES AGAINST CLAIMS ARISING IN CONNECTION WITH: (i) BODILY INJURY AND/OR DEATH TO OIL MOP'S EMPLOYEES, OIL MOP'S SUBCONTRACTORS AND VENDORS AND THEIR RESPECTIVE EMPLOYEES, AND OIL MOP'S INVITEES; AND/OR (ii) DAMAGE TO PROPERTY OF OIL MOP'S EMPLOYEES, OIL MOP'S SUBCONTRACTORS AND VENDORS AND THEIR RESPECTIVE EMPLOYEES, AND OIL MOP'S INVITEES; ARISING OUT OF OR RESULTING FROM OR ALLEGED TO ARISE OUT OF OR RESULT FROM THE PERFORMANCE OF THIS AGREEMENT, REGARDLESS OF FAULT.

THE INDEMNITY OBLIGATIONS SET FORTH IN THIS PARAGRAPH 28(b) SHALL INCLUDE ANY MEDICAL, COMPENSATION, OR OTHER BENEFITS PAID BY COMPANY OR ANY MEMBER OF COMPANY INDEMNITEES AND SHALL APPLY EVEN IF THE EMPLOYEE IS DETERMINED TO BE THE BORROWED OR STATUTORY EMPLOYEE OF COMPANY OR ANY OTHER MEMBER OF COMPANY INDEMNITEES.

**(c) Company's Property:**

Notwithstanding anything to the contrary in the other provisions of this Agreement, COMPANY AGREES TO BE RESPONSIBLE FOR AND ASSUME ALL LIABILITY FOR AND HEREBY AGREES TO DEFEND, RELEASE, INDEMNIFY, AND HOLD HARMLESS OIL MOP INDEMNITEES FROM AND AGAINST CLAIMS ARISING IN CONNECTION WITH THE DAMAGE TO OR LOSS OR DESTRUCTION OF COMPANY'S PROPERTY AND THAT OF ITS CUSTOMERS, SUBCONTRACTORS, VENDORS, SUPPLIERS AND OTHER CONTRACTORS, REGARDLESS OF FAULT.

**(d) Oil Mop's Property:**

Notwithstanding anything to the contrary in the other provisions of this Agreement, OIL MOP AGREES TO BE RESPONSIBLE FOR AND ASSUME ALL LIABILITY FOR AND HEREBY AGREES TO DEFEND, RELEASE, INDEMNIFY, AND HOLD HARMLESS COMPANY INDEMNITEES FROM AND AGAINST CLAIMS ARISING IN CONNECTION WITH THE DAMAGE TO OR LOSS OR DESTRUCTION OF OIL MOP'S PROPERTY AND THAT OF ITS SUBCONTRACTORS AND VENDORS, REGARDLESS OF FAULT.

**(e) Pollution and Hazardous Materials and Substances:**

Company's Responsibilities:

Subject to the indemnity obligations contained in Paragraphs 28(a)-(d), and notwithstanding anything to the contrary in the other provisions of this Agreement, COMPANY AGREES TO BE RESPONSIBLE FOR AND ASSUME ALL LIABILITY FOR AND HEREBY AGREES TO DEFEND, RELEASE, INDEMNIFY AND HOLD HARMLESS OIL MOP INDEMNITEES AGAINST CLAIMS ARISING IN CONNECTION WITH DAMAGE TO PROPERTY THAT RESULTS FROM POLLUTION, INCLUDING BUT NOT LIMITED TO CONTROL, REMOVAL, RESTORATION AND CLEANUP OF ALL POLLUTION OR CONTAMINATION BY ANY CHEMICAL AND/OR PHYSICAL SUBSTANCE DEFINED UNDER ANY FEDERAL, STATE OR LOCAL LAW OR REGULATION TO BE POLLUTION OR A CONTAMINATE, ARISING FROM OR ON ACCOUNT OF POLLUTION OR CONTAMINATION WHICH ORIGINATES FROM COMPANY'S PROPERTY AND THAT OF ITS AFFILIATES, IF ANY, AND ITS AND THEIR DIRECTORS, AGENTS, REPRESENTATIVES EMPLOYEES AND INSURERS AND ITS SUPPLIERS, CUSTOMERS OTHER CONTRACTORS AND THEIR RESPECTIVE EMPLOYEES, REGARDLESS OF FAULT, AND ALTHOUGH THEIR USE OR DISPOSITION MAY BE AT OIL MOP'S DIRECTION.

Oil Mop's Responsibilities:

Subject to the indemnity obligations contained in Paragraphs 28(a)-(d), and notwithstanding anything to the contrary in the other provisions of this Agreement, OIL MOP AGREES TO BE RESPONSIBLE FOR AND ASSUME ALL LIABILITY FOR AND HEREBY AGREES TO DEFEND, RELEASE, INDEMNIFY AND HOLD HARMLESS COMPANY INDEMNITEES AGAINST CLAIMS ARISING IN CONNECTION WITH DAMAGE TO PROPERTY THAT RESULTS FROM POLLUTION, INCLUDING BUT NOT LIMITED TO CONTROL, REMOVAL, RESTORATION AND CLEANUP OF ALL POLLUTION OR CONTAMINATION, ARISING FROM OR ON ACCOUNT OF POLLUTION OR

**CONTAMINATION WHICH ORIGINATES FROM OIL MOP'S PROPERTY, REGARDLESS OF FAULT, AND ALTHOUGH THEIR USE OR DISPOSITION MAY BE AT COMPANY'S DIRECTION.**

In support of the indemnity obligations contained in Paragraphs 28(a)-(e) herein, the Parties agree to provide coverage and amounts of liability insurance, which in no event shall be less than the minimum set out in Paragraph 27 of this Agreement PROVIDED, HOWEVER, AND NOTWITHSTANDING THE ABOVE, in the event that an injury or accident causing loss or liability occurs which is subject to jurisdiction where there is a prohibition or limitation of the Parties' ability to indemnify each other, then, if such law must be applied and only in that instance, both Parties' liability shall exist to the full extent allowed by the law of such jurisdiction, and the Parties shall be required to carry the maximum amount of insurance which may be allowed or required by the law of such jurisdiction for protection against such assumed loss or liability.

The Parties agree to immediately notify each other of any accident or incident in which physical injury occurs and to complete an accident report for each occurrence and to provide the other Party with a copy of each such accident report. Each Party agrees to promptly notify the other Party after receipt of any Claim for which it may seek indemnification.

In the event either Party fails to furnish a defense and indemnity as provided for herein or in the event either Party breaches an obligation in this Agreement, the other Party shall be entitled to receive from the offending Party, in addition to its attorneys' fees, costs, expenses and any amounts paid in judgment or settlement, all costs, expenses, and attorneys' fees incurred in the enforcement of this Agreement, including specifically, but not limited to, Claims for contractual indemnity and insurance coverage.

Notwithstanding the provisions of Paragraph 28 (a) through (e) above, neither Oil Mop nor Company shall indemnify or hold the other liable for its consequential, indirect, special, punitive, or exemplary damages.

Notwithstanding any other provision of this Agreement, the Parties waive and release any claim against each other (and those for which the other Party may be responsible) for indirect, special or consequential damages, however and whenever arising under this Agreement or as a result of or in connection with the Work, and whether based on negligence, unseaworthiness, breach of warranty, breach of contract, strict liability and/or other fault of the other Party or those for which the other Party may be responsible.

Consequential damages shall include, but are not limited to, loss of revenue, profit or use of capital, production delays, loss of product, reservoir loss or damage losses resulting from failure to meet other contractual commitments or deadlines, extended or increased project management costs, and downtime of owned, hired, chartered or leased facilities, vessels or equipment, including the subject of this Agreement.

**THE FOLLOWING PROVISIONS APPLY WHERE WORK IS TO BE PERFORMED IN OR OFFSHORE LOUISIANA OR WHENEVER LOUISIANA LAW IS DEEMED TO APPLY, NOTWITHSTANDING ANY PROVISIONS IN THE AGREEMENT TO THE CONTRARY.**

- i) Independent of the consideration herein by and between the Parties, each Party shall reimburse the other Party for the actual cost of the additional premium (if any) arising from each Party being named as an additional insured on the other Party's liability

policies, including contractual liability coverage for the liabilities assumed under the Agreement and, if applicable, excess liability or umbrella policies. Each Party is obligated to notify the other Party if there is to be an additional premium for such coverage, including any renewal or replacement thereof, and supply satisfactory documentation from their respective insurer. Each Party warrants and represents that it has communicated with its insurer(s) regarding this obligation. All notices regarding such coverage shall be in writing and sent in accordance with Paragraph 15. If a Party fails to notify the other Party of any additional premium charged for such coverage, it shall be conclusively presumed that there is no additional premium for such coverage.

- ii) Within fifteen (15) days of its receipt of notice of the additional premiums charged for such coverage, the receiving Party shall notify the sending Party whether it will pay or reimburse the sending Party for the additional premium. If the receiving Party notifies the sending Party that it does not wish to pay for this additional premium or fails to notify the sending Party within such fifteen (15) day period, the sending Party shall not be obligated to provide such coverage in favor of the receiving Party.

IN WITNESS WHEREOF, the parties have caused this Agreement to be executed by their duly authorized representatives as of the day and year first above written.

**OIL MOP, L.L.C.:** \_\_\_\_\_;

Signature: \_\_\_\_\_

Signature: \_\_\_\_\_

By: Joseph J. Christiana  
Print Name:

By: \_\_\_\_\_  
Print Name

Title: Vice President

Title: \_\_\_\_\_

Date: \_\_\_\_\_

Date: \_\_\_\_\_



**OIL MOP, LLC**

**1-800-645-6671**

**Rate Schedule**

**January 1, 2009**

PERSONNEL					
Oil Spill	Straight Time	Overtime	*Haz-Mat	Straight Time	Overtime
Administrative/Logistical Support	\$35.00/hr	\$52.50/hr	Administrative/Logistical Support	\$35.00/hr	\$52.50/hr
Response Technician	\$36.00/hr	\$54.00/hr	Haz-Mat Technician	\$50.00/hr	\$75.00/hr
Equipment Operator/Driver	\$40.00/hr	\$60.00/hr	Mechanic	\$47.00/hr	\$70.50/hr
Foreman	\$45.00/hr	\$67.50/hr	Sampling/Monitoring Specialist	\$50.00/hr	\$75.00/hr
Sampling/Monitoring Specialist	\$45.00/hr	\$67.50/hr	Equipment Operator/Driver	\$50.00/hr	\$75.00/hr
Mechanic	\$45.00/hr	\$67.50/hr	Logistics Coordinator	\$50.00/hr	\$75.00/hr
Logistics Coordinator	\$50.00/hr	\$75.00/hr	Disposal & Transportation Coordinator	\$50.00/hr	\$75.00/hr
Disposal & Transportation Coordinator	\$50.00/hr	\$75.00/hr	Foreman	\$57.00/hr	\$85.50/hr
Heavy/Specialized Response Equip. Oper.	\$55.00/hr	\$82.50/hr	Heavy/Specialized Response Equip. Oper.	\$67.00/hr	\$100.50/hr
Supervisor	\$57.00/hr	\$85.50/hr	Supervisor	\$75.00/hr	\$112.50/hr
Site Safety Officer	\$60.00/hr	\$90.00/hr	Site Safety Officer	\$75.00/hr	\$112.50/hr
Site/Zone Manager	\$75.00/hr	\$112.50/hr	Site/Zone Manager	\$75.00/hr	\$112.50/hr
Health & Safety Manager/Consultant	\$100.00/hr	\$150.00/hr	Health & Safety Manager/Consultant	\$100.00/hr	\$150.00/hr
Consultant/Project Manager	\$100.00/hr	\$150.00/hr	Consultant/Project Manager	\$100.00/hr	\$150.00/hr
			High Hazard Technician	\$120.00/hr	\$180.00/hr
			High Hazard Supervisor	\$165.00/hr	\$247.50/hr

**\*Hazmat rates will be used on material with a 2 or greater hazard rating per NFPA 704 or if a job requires respiratory protection.**

STANDBY RESCUE SERVICES		
3 Person Team	\$150.00	per hour
2 Person Team	\$110.00	per hour
Standby Rescue Trailer	\$25.00	per hour

#### PERSONNEL

- Personnel will be charged Portal-to-Portal, with a (4) four-hour minimum upon activation. The client will be charged for the time required to service, repair and restock all vehicles and equipment used during the project. This fee will be charged at the conclusion of the project.
- Straight-Time rates apply to the first (1st) 8 hours "WORKED" between 0800-1600, Monday through Friday. All other hours worked, including Saturday and Sunday will be charged at the Overtime rate. Double Time (**Double the straight time rate**) will be charged for all OMI Holidays, which include Christmas Day, New Years Day, Mardi Gras Day, Good Friday, Memorial Day, Independence Day, Labor Day, and Thanksgiving Day. When these holidays fall on a weekend, the nearer weekday will be charged at the Overtime rate.
- Subsistence will be charged when an employee is performing work over fifty (50) miles from their normally assigned OMI Branch location at a rate of \$110.00 per/day-per/man. When working in high cost areas as defined by U.S. Government Travel Regulations, subsistence rates may increase.
- Personnel travel time via air, land or water will be charged as per OMI's current rate sheet. Extraordinary travel expenses i.e. airline tickets, charter aircraft, taxi, parking etc., will be charged at cost plus 20%. Travel expenses for long-term, on-site personnel who are permitted to return home every three (3) weeks will be charged at cost plus 20%.
- Personnel Protection Equipment not listed will be billed at cost +20%.
- HEAT STRESS** Due to working conditions and elevated temperatures, all personnel will be provided water and electrolyte drinks throughout the project in an effort to reduce heat related injuries.
- SITE SAFETY** Due to the number of personnel or conditions at a work site, OMI may require a safety officer(s) to be dispatched to the site. The safety officers will remain on site and billed for until OMI and Customer agree that the services are no longer needed.
- Any additional or follow-up work; reports, permitting, meetings, consent orders, insurance meetings or any other commitment of time requested by client or required by governmental agencies, courts or other involved parties will be charged to the client at the applicable daily rate (not less than \$ 500.00/day) plus transportation and subsistence.
- OMI reserves the right to bill the client for all items and adjustments made by third party negotiators (qualified individual, adjusters, etc.).
- OMI reserves the right to bill for adjustments made necessary due to quality assurance checks and/or internal audits.
- OMI will at no time allow post emergency response negotiated rates to become retroactive.

**Equipment & Miscellaneous**

1. Equipment is charged portal-to-portal; from time of activation.
  - a. Equipment billed on an hourly basis will be billed for a minimum of four (4) hours upon activation. Equipment billed on a daily basis will be billed for a full day upon activation, unless the response is canceled within the first four hours, and the equipment has not been used, in which case it will be billed at half the daily rate. Daily rate charges are the minimum and maximum charges. Equipment identified on the rate sheet as a daily rate charge will be billed at the daily rate for any period of time used between 0001 and 2400 hours of the same day.
  - b. All fuel and lube oil charges will be billed at cost plus 20%.
  - c. Upon completion of the project the equipment will be returned to its condition at the time of activation. The client will be billed at the equipment rate while the equipment is being decontaminated and/or repaired. If, during the performance of a service and/or services for a client, equipment and/or material sustain damage which renders the equipment and/or material beyond repair or renders decontamination impossible, said equipment and/or materials will be subject to a replacement charge at OMI's cost plus 20% unless said damage was sustained as a result of misuse by OMI personnel.
2. All equipment and/or expendables not listed on the current rate schedule will be billed at cost plus 20%.
3. Unless otherwise stated all Equipment charges are WITHOUT operator.
4. All federal, state and municipal taxes, except income taxes and ad-valorem taxes, now and hereinafter imposed with respect to services rendered; to rental equipment; to processing, manufacture, repair, delivery, transportation of equipment and supplies shall be added to and become part of the total price payable by the client. If the client claims an exemption from payment of State Sales and Use Tax, the client will be required to render an Exemption Certificate or Resale Certificate to OMI prior to invoicing.
5. Disposal of recovered product and contaminated materials is the client's responsibility, as generator. OMI will assist with arranging transportation and disposal, if requested.
6. The term of payment for all invoices is Net 30 days from the date of invoice. A finance charge computed at the periodic rate of one and one half percent (1.5%) per month (18% per annum) will be applied to all invoices with an unpaid balance beginning on the thirty-first (31st) day from the date of invoice.
7. It is the client's responsibility to pay all invoices within 30 days regardless of insurance or third party claims.

**STANDBY RATES FOR EQUIPMENT & PERSONNEL**

- A. Equipment held in reserve, either on-site or at a dispatch point for the exclusive benefit of the client, will be charged at a stand-by rate equal to half the standard rate until released by the client. If the equipment is needed on another project, the client will be notified and offered the option of releasing the equipment. If the client chooses to retain the equipment on stand-by it will be charged at the full daily rate until released.
- B. Personnel held in reserve, either on-site or at a dispatch point for the exclusive benefit of the client, will be charged at full rates.
- C. Subsistence at a rate of \$110.00 per day/per man will be charged when a standby employee is required to be held off-site. When working in high cost areas as defined by U.S. Government Travel Regulations, subsistence rates may increase

**AUTOMOTIVE**

1-Ton Pickup Truck or Smaller	\$150.00	per day	ATV-4 X 4 or 4 X 6	\$300.00	per day
1-Ton Pickup Truck 4 X 4	\$200.00	per day	ATV (Utility Vehicle - Mule)	\$400.00	per day
1-Ton Stake bed (Dually)	\$175.00	per day	Rubber Tire Backhoe	\$550.00	per day
15 Passenger Van	\$200.00	per day	Dozer	Cost +	20%
Mechanic's Truck	\$175.00	per day	Excavator	Cost +	20%
2.5 -Ton HAZMAT Response Truck	\$500.00	per day	Forklift	\$250.00	per day
25 -Ton Crane Truck	\$75.00	per hour	Delivery and pickup of all rental equipment.	Cost +	20%
2 Ton Flatbed w/Autocrane	\$275.00	per day			

• Mileage for all motorized vehicles will be charged according to the cost per gallon of fuel. \$4.00 per gallon or less will be charged @ \$.90 per mile. \$4.00 per gallon or greater will be charged @ \$1.25 per mile.

**TRUCKS WITH OPERATOR**

Roll-Off, Bobtail	\$75.00	per hour	Vacuum Truck (70 bbl)(Stainless Steel)	\$115.00	per hour
Roll-Off, Tractor-Trailer	\$75.00	per hour	Vacuum Truck (130 bbl)	\$75.00	per hour
Roll-Off, Transportation Charges	Trip Rates Apply		Vacuum Truck Wet/Dry (air mover)	\$150.00	per hour
Vacuum Truck (70 bbl)(Carbon Steel)	\$75.00	per hour	24' Bobtail Flatbed with Lift Gate	\$75.00	per hour
Flat Bed Trailer	Trip Rates Apply		Drop-Deck Trailer	Trip Rates Apply	
Dry Van Trailer	Trip Rates Apply				

\*A fuel surcharge will be added to all tickets based on the U.S.D.O.E. average cost

**TRAILERS**

Hazardous Response Trailer	\$450.00	per day	Trailer, Flatbed/Box (over 40')	\$150.00	per day
Non-Haz Response Trailer	\$300.00	per day	Trailer, Utility (under 40')	\$130.00	per day
Transfer Trailer, Chemical	\$450.00	per day	Command Trailer	\$1,000.00	per day

**MARINE EQUIPMENT**

Air Boat	\$650.00	per day	20' Barge Boat with 30 bbl storage	\$800.00	per day
16' Flat Boat w/o motor	\$110.00	per day	26'-28' Fast Response Vessel	\$650.00	per day
16' Flat Boat w/Motor	\$200.00	per day	18' Mud Boat	\$225.00	per day
18'-24' Fast Response Vessel	\$400.00	per day	30' Barge Boat	\$1,000.00	per day
26' Cabin Boat	\$650.00	per day	Pirogue	\$45.00	per day
Tug Boat	Cost +	30%	Deck Barge	Cost +	30%
Crew Boat	Cost +	30%	Spud Barge	Cost +	30%

**SPECIALIZED TOOLS & EQUIPMENT**

*Chlorine Kit - A	\$500.00	per day	Mercury Spill Kit	\$175.00	each
*Chlorine Kit - B	\$700.00	per day	Putty Repair, Plug & Dike	\$35.00	each
*Chlorine Kit - C	\$900.00	per day	Plug & Patch Kit	\$200.00	each
Fittings Charge for Transfer	\$250.00	each	*Magnetic Patch Kit	\$850.00	per day
Betts Emergency Transfer Valve (BET)	\$300.00	per day	*Midland Kit	\$1,500.00	per day
Full Body Harness w/lanyard	\$35.00	per day	Pressure Gauge	\$50.00	per day
Non-Sparking Tool Kit	\$150.00	per day	Grounding Rods	\$50.00	per day
Portable Flare Stack	\$250.00	per day	Grounding Cables	\$75.00	per day
Tripod & Retrieval Device	\$150.00	per day	Ground Megger	\$150.00	per day

\* Chlorine, Midland and Magnetic Patch Kits are daily cost plus rebuilds and or repairs.

**RECOVERY EQUIPMENT**

I-4D Rope Mop w/50' Rope Mop & Tail Pulley	\$400.00/day		Hydraulic Power Pack up to 25 HP.	\$350.00	per day
II-4D Rope Mop w/100' Rope Mop & Tail Pulley	\$425.00/day		Skimmer Drum - Single Barrel	\$500.00	per day
II-6D Rope Mop w/100' Rope Mop & Tail Pulley	\$475.00/day		Skimmer Drum - Double Barrel (Small)	\$550.00	per day
II-9D Rope Mop w/200' Rope Mop & Tail Pulley	\$575.00/day		Skimmer Drum - Double Barrel (Large)	\$750.00	per day
4" Rope Mop	\$1.00	ft. per day	Skimmer Duck Bill	\$50.00	per day
6" Rope Mop	\$1.00	ft. per day	Skimmer Marco 28' Recovery Vessel	\$3,500.00	per day
9" Rope Mop	\$1.00	ft. per day	Marco Belt-Light Oil Pads (Set of 4)	Cost+	20%
12" Tail Pulley	\$10.00	Day/Each	Skimmer Marco Drive Belt	Cost+	20%
16" Tail Pulley	\$20.00	Day/Each	Skimmer Pelican 18"-24"	\$125.00	per day
HEPA/Mercury Vacuum	\$300.00	per day	Self-Propelled Shallow Water Barge & Oil Recovery System	\$2,000.00	per day
HEPA Filter Replacement	\$75.00	per day	Vacuum Unit (Skid Mounted, Portable)	\$600.00	per day
			Self-Propelled Shallow Water Debris & Oil Recovery System	\$1,500.00	per day

Note: Drum Skimmer prices include Air Compressor and Air Hose.

Note: Rope Mop Skimmer pricing is + replacement of Rope Mop if damaged.

**BOOM AND ANCHOR SYSTEMS**

6" Marsh Boom	\$0.75	per foot	48" Ocean Boom	\$6.00	per foot
10" Swamp Boom	\$1.25	per foot	Boom Anchor Systems (18" boom)	\$25.00	Day/Each
18" Containment Boom	\$1.50	per foot	Boom Anchor Systems (24"-48" boom)	\$45.00	Day/Each
24" Containment Boom	\$3.00	per foot	Boom Lights	\$25.00	per day
36" Containment Boom	\$4.25	per foot			

Boom Anchor Systems consist of Anchor, Chain, Rope and Buoy. Any system component lost or not recoverable will be billed at cost + 20%

**TEMPORARY STORAGE**

20 - 25 yard Roll Tarp Box	\$25.00	per day	41 bbl Storage Tanks	\$50.00	per day
24 bbl Debris/Cutting Box	\$75.00	per day	500 bbl Frac Tank (Not including Delivery)	\$85.00	per day
30 bbl Storage Barge (Closed)	\$425.00	per day	Vacuum Box	\$50.00	per day

**AIR COMPRESSOR/GENERATORS**

Air Compressor (375 CFM)	\$300.00	per day	Generator (12kw)	\$200.00	per day
Air Compressor (175 CFM)	\$225.00	per day	Generator (8kw)	\$150.00	per day
Air Compressor (10 CFM)	\$110.00	per day	Generator (5kw)	\$100.00	per day

**PUMP/HOSE**

1" Chemical Drum Pump	\$150.00	per day	Hose 1" or less (Air)	\$0.45	
1" S/S Diaphragm Pump	\$150.00	per day	Hose 1" Chemical	\$8.00	ft. per day
1" Trash/Wash Pump	\$75.00	per day	Hose 2" Chemical	\$10.00	ft. per day
1" Poly/Alum Diaphragm Pump	\$75.00	per day	Hose 3" Chemical	\$15.00	ft. per day
2" S/S Air Diaphragm Pump	\$250.00	per day	Hose 3" or less (Flat Discharge/Fire)	\$0.50	ft. per day
2" Chemical Transfer Pump	\$350.00	per day	Hose 3" or less (Hydrocarbon)	\$30.00	section/day
2" Peristaltic Pump	\$350.00	per day	Hose 1.5"-3" (Fire)	\$1.50	ft. per day
2" Poly Air Diaphragm Pump	\$250.00	per day	Hose 5" (Fire)	\$3.00	ft. per day
2" Pump, Air Diaphragm (double/single)	\$90.00	per day	Hose 4"-6" (Flat Discharge)	\$0.80	ft. per day
2" Pump, Trash/Wash	\$100.00	per day	Hose (Anhydrous Ammonia)	\$15.00	ft. per day
3" Chemical Transfer Pump	\$400.00	per day	Hose (LPG)	\$15.00	ft. per day
3" Pump, Air Diaphragm	\$100.00	per day	Hose (Monel)	\$30.00	ft. per day
3" Pump, Wash	\$120.00	per day	Hose 4" ADS	\$1.75	per foot
4" Pump, Hydraulic Submersible	\$400.00	per day	Hose 6" ADS	\$1.75	per foot
4" Sludge Master-Poppet Pump	\$500.00	per day	Hydraulic Power Pack up to 25 HP.	\$350.00	per day
6" Pump, Hydraulic Submersible	\$500.00	per day			
4" PD Pump	\$300.00	ft. per day			

All diaphragm pumps are daily cost plus rebuild.

**DECONTAMINATION**

Decon Basin (6' Pool)	\$25.00	each	Fastank	\$200.00	per day
Decon Pool (10'x10')	\$150.00	per day	Steam Cleaner/Pressure Washer	\$450.00	per day
Decon Pool (25'x50')	\$300.00	per day	Hudson Sprayer	\$25.00	per day
Decon Pool (20'x100')	\$450.00	per day	Kwik Tank	\$100.00	per day

**ENVIRONMENTAL SAMPLING EQUIPMENT**

Met Station	\$150.00	per day	Multi Rae	\$200.00	per day
Air Sampling Pump-Personal	\$55.00	per day	Ultra Rae	\$200.00	per day
Bailer, Disposable	\$30.00	each	Ultra Rae Benzene Tubes	\$25.00	each
Chemical Specific Detector Tube	\$25.00	each	Jerome Mercury Vapor Meter	\$350.00	per day
Direct Read Meter (Four Gas)	\$175.00	per day	LEL-02 Meter	\$150.00	per day
Draeger Gas Detector (Not including tube)	\$30.00	per day	Noise Dosimeter	\$50.00	per day
Drum Thief	\$10.00	each	Organic Vapor Analyzer (FID)	\$400.00	per day
HAZCAT Analysis Kit	\$50.00	per test	Organic Vapor Monitor (PID)	\$150.00	per day
Hydrogen Sulfide (H2S) Meter	\$50.00	per day	PH Meter	\$40.00	per day
Interface Probe	\$100.00	per day	PH Paper Strips	\$25.00	per pack
Draeger CMS	\$175.00	per day	Radiation Meter	\$125.00	per day
CMS Chips	Cost +	20%	Disposable Sample Scoops	\$3.00	each

**PERSONAL PROTECTIVE EQUIPMENT****LEVELS OF PROTECTION**

Level A Protection	\$1,500.00	each	Level D	\$40.00	each
Level B Protection	\$450.00	each	(Nomex and/or 2 Changes of Tyvek or		
Level C Protection	\$200.00	each	Rainsuits)		

Level "A" Protection shall consist of the following: Positive pressure, full face self contained breathing apparatus (SCBA) or supplied air respirator with escape SCBA, up to Tychem TK640 or equivalent totally encapsulating chemical protective suit, chemical resistant inner and outer gloves and chemical resistant boots.

Level "B" Protection shall consist of the following: Positive pressure, full face SCBA or supplied air respirator with escape SCBA, up to Kappler CPF III or equivalent hooded chemical protective suit, chemical resistant inner and outer gloves and chemical resistant boots.

Level "C" Protection shall consist of the following: Full face or half mask air purifying respirator with appropriate cartridges, up to Kappler CPF II or equivalent hooded or non-hooded chemical protective suit, chemical resistant gloves and chemical resistant boots or boot covers.

Level "D" protection consists of working uniform and head-hand-foot-eye and/or hearing protection as necessary.

Level "D" Protection Rate of \$40.00per/day-per/man will be charged in lieu of the \$15.00 charge when personnel are in "Nomex" coveralls and/or up to two (2) daily changes/per/man of poly-coated tyvek or rain gear.

**Head & Eye Protection**

Hard Hats	\$35.00	each
Face Shields	\$40.00	each
Safety Glasses	\$10.00	each
Safety Goggles	\$25.00	each

**SUITS**

CPF I	\$35.00	each	Tyvek Suit	\$10.00	each
CPF II	\$50.00	each	Tyvek Polycoated	\$25.00	each
CPF III	\$105.00	each	PVC Rain Suits	\$18.00	each
CPF IV	\$250.00	each	Body Armor	\$100.00	per day
Aluminized Outer Garment	\$1,500.00	each	Cool Vest	\$25.00	per day
NFPA Spec. Bunker Gear (Full set)	\$250.00	per day	Flame Retardant Coveralls	\$25.00	per day
PVC Acid Suits	\$75.00	each			

**FOOT PROTECTION**

Chemical Boots	\$85.00	per pair	Fire Boots	\$150.00	per pair
Boots Rubber Steel Toe	\$45.00	per pair	Latex Boot Covers	\$6.00	per pair
Chest Waders/Hip Waders	Cost +	20%			

**HAND PROTECTION**

Butyl Gloves	\$45.00	per pair	Neoprene Gloves	\$9.00	per pair
Cotton Gloves	\$3.00	per pair	Neox Gloves	\$9.00	per pair
Latex Inner Gloves (box)	\$20.00	per box	PVA Gloves	\$35.00	per pair
Leather Gloves	\$10.00	per pair	PVC Gloves	\$3.00	per pair
Nitrile Gloves	\$5.00	per pair			

**RESPIRATORY PROTECTION EQUIPMENT**

5 minute escape pack	\$150.00	per day	Refill Bottles (up to 4500psi)	Cost +	20%
30 minute S.C.B.A.	\$175.00	per day	Respirator Cartridge	\$35.00	per pair
60 minute S.C.B.A.	\$225.00	per day	Respirator Full Face	\$35.00	per day
Breathing Air Cascade w/regulator (6 bottles)	Cost +		Respirator Half Face	\$20.00	per day
Portable Breathing Air Compressor w/Cascade (6 bottles)	Cost +				

**SORBENT MATERIALS**

Bio-Degradable Sorbent	\$65.00	per bag	Sorbent Boom 5" (40' per bale)	\$85.00	per bale
Chemical Sorbent Pads	\$70.00	per bale	Sorbent Boom 8" (40' per bale)	\$105.00	per bale
Chemical Sorbent Rolls	\$170.00	per roll	Sorbent Pads (100 per bale)	\$45.00	per bale
Viscous Sweep (65 # bale)	\$125.00	per bale	Sorbent Rolls (144' x 38")	\$150.00	per roll
Shave (15 # box 30 count)	\$60.00	per box	Spag Sorb	\$30.00	per bag
Sorbent Sweep (100' per bale)	\$100.00	per bale	Floor Dri (Granular Sorbent)	\$25.00	per bag
4" Rope Mop	\$27.95	per foot	Industrial Carpet (300' roll)	\$275.00	per roll
6" Rope Mop	\$29.95	per foot	Oil Gator	\$25.00	per bag
9" Rope Mop	\$31.95	per foot			

**COMMUNICATION**

Digital Camera	\$30.00	per day	Laptop Computer with Printer	\$75.00	per day
Digital Video Camera	\$75.00	per day	Air Card (for Laptop Computers)	\$75.00	per day
Disposable Camera/Photo Processing	Cost +	20%	Two-Way Communications	\$50.00	ea per day
Cell Phone	\$25.00	per day	Intrinsically Safe Handheld Radio	\$75.00	ea per day
Satellite Phone (day rate plus airtime)	\$200.00	per day			
GPS Monitor	\$25.00	per day	Comms Unit w/Tower & Repeater	\$650.00	per day

**CHEMICALS**

Citric Acid	\$150.00	per bag	OMI 110 Degreaser	\$25.00	per gal.
Hg Absorbent	\$30.00	per lb.	OMI 500 Degreaser	\$25.00	per gal.
Hydrochloric Acid	\$5.00	per gal.	Soda Ash (50lb)	\$30.00	per bag
Hydrogen Peroxide (35%)	\$6.00	per gal.	Sodium Hypochlorite Solution (15%)	\$6.75	per gal.
Lime (50lb)	\$15.00	per bag	Sulfuric Acid (50lb)	\$85.00	per bag
Micro-Blaze	\$39.00	per gal.	Surfactant	\$30.00	per gal.
			Multek 1500	\$25.00	per gal.

Specialty Chemicals not listed will be priced upon request

**MISCELLANEOUS**

5 Gallon Bucket w/lid	\$15.00	each	Hand Tools	\$35.00	each
20 Gallon Pollution Can	\$20.00	each	Leaf Blower	\$45.00	per day
55 Gallon Drum (poly)	\$75.00	each	Light Stand High Intensity	\$50.00	per day
55 Gallon Drum (steel)	\$76.50	each	Light Tower	\$250.00	per day
85 Gallon Overpack Drum (steel)	\$185.00	each	Plate Lifter	\$25.00	per day
95 Gallon Overpack Drum (poly)	\$250.00	each	Pollution Bags (50 count)	\$75.00	per box
110 Gallon Overpack Drum (poly)	\$375.00	each	Polyethylene Roil (Visqueen) 20'x100'	\$75.00	per roil
Air Drill (1/2")	\$75.00	per day	Polypropylene Rope (1/4")	\$75.00	per roil
Barrel Siphon Pump	\$25.00	each	Polypropylene Rope (3/8")	\$75.00	per roil
Box Liners (roll-off)	\$50.00	each	Polypropylene Rope (1/2")	\$100.00	per roil
Box of Rags	\$35.00	each	Polypropylene Rope (3/4")	\$175.00	per roil
Chain Saw	\$75.00	per day	Scare Gun w/fuel	\$60.00	per day
Chains and Binders	\$20.00	per day	Shrink Wrap Roll	\$48.00	per roil
Drinking Water	\$25.00	per case	Shrink Wrap Tool	\$10.00	per day
Electrolyte Drinks	\$35.00	per case	Tape (Barrier) (hazardous, caution)	\$35.00	per roil
Drum Crusher	\$150.00	per day	Tent 20'x30' Personnel Staging	\$150.00	per day
Drum Dolly	\$20.00	per day	Tripod and Surveying Rod	\$30.00	per day
Drum Lift w/chain	\$25.00	per day	Weed Eater	\$45.00	per day
Duct Tape	\$7.50	each	Welding Machine	\$100.00	per day
Forklift Drum Caddie	\$25.00	per day	Wheelbarrow	\$20.00	per day
Gaylord Box	\$175.00	each	Extension Cord	\$10.00	per day
Pallet Jack	\$100.00	per day	Flash Lights	\$10.00	per day
Extension Ladder	\$25.00	per day	GFCI	\$5.00	per day
Decon Brushes	\$15.00	per day	T-Post	\$15.00	per day
Port-O-Lets (Including servicing)	Cost +	20%	Portable Air Horns	\$30.00	per day
Lunches/Catering Services	Cost +	20%			

## APPENDIX D

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### EVACUATION PLAN

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# EVACUATION PLAN

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## Evacuation Procedures

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:

- Give verbal alarm (via radio or whatever means necessary).
- Call Security Control for internal/external notifications.
- Shut down loading, unloading, pipeline, and marine operations.
- Turn off all vehicles and evacuate upwind to nearest rally point.
- Evacuate trucks from facility (provided that a safe operating environment exists).
- Divert incoming trucks/vessels to a safe distance away from the Facility.
- Evacuate all personnel to the Rally Point (see diagram).
- Consider prevailing wind directions and speed, as well as water current and tidal conditions because certain conditions may eliminate the use of specific evacuation routes and/or muster points.

All internal systems/signals are clearly understood by all personnel, checked and practiced frequently, and the communications equipment is maintained in "intrinsically safe" condition.

Security Control operates the refinery Emergency Notification System (ENS). When an emergency is called in to Security Control the ENS is activated and detailed alert information will broadcast to the facility. If the ENS is inoperable, the nitrogen evacuation alarm is the emergency backup.

Evacuation diagrams are posted throughout the refinery, tank farm, and at the dock, showing evacuation routes from different areas of the Facility. These routes are as follows:

### Refinery Area

Primary Route – safest route to the nearest rally point (North, South, East or West)

### Dock Area

Primary Route – safest route to the nearest rally point

Evacuation points have also been established for each area. These points are as follows:

North – Old Fab Yard – west of Tank 353

South – Administration Building Parking Lot – Gate #7

East – Gate #13

West – Warehouse Yard at Gate #2

A roll call would be taken to account for all personnel.

### RBTF

Main Access Gate

### Operations

All Non Emergency Response Team Operating Personnel will remain in assigned areas and safely operate critical equipment unless instructed otherwise by IC or Operations Supervision.

Arrival routes of emergency response personnel and response equipment and transportation routes of injured personnel would be via Washburn Tunnel Service Road, Old Crown Road, North Witter Road and Red Bluff Road.

Shelter locations at the Facility consist within the following structures:

- Reformer #3 Alkylation Control Room
- Planning Building
- Administration Building
- Lab
- Maintenance Building Offices
- Operations Building
- Refinery Control Center

The primary Emergency Operation Center (EOC) is located in the Pasadena Refining Administration Building on the second floor.

Area wide alarms do not exist at this Facility. Evacuation of the surrounding community would be the responsibility of the City of Pasadena/Local Emergency Planning Committee (LEPC).

### ***Wind and Tidal Conditions***

The Houston Ship Channel area typically experiences two (2) high tides and two (2) low tides on a daily (24 hour) cycle. The mean tidal range during the fall/winter is approximately 0.5 feet; whereas, the mean tidal range during the spring/summer is approximately 3.0 feet. Water currents range from approximately 0.5 knots during ebb conditions to approximately 2.1 knots during flood conditions. The water conditions in the Houston Ship Channel area represent a sheltered environment.

Prevailing winds in Houston are typically out of the southeast throughout the year. Cold fronts will change the prevailing wind to the northwest. Depending on the cold front strength and speed, strong winds can occur 2 to 3 days in advance and last 1 to 2 days after.

# **EVACUATION DIAGRAM REFINERY**

Evacuation Diagram

Pasadena Refining System, Inc  
Pasadena, TX

DATE:	JOB No:	SCALE:	EDITED BY:
4/17/14	-	AS NOTED	MJDS

WITT O'BRIEN'S

818 TOWN & COUNTRY, STE 200  
HOUSTON, TEXAS 77024  
PHONE (281) 320-9796  
FAX (281) 320-9700

**EVACUATION DIAGRAM  
RED BLUFF TANK FARM**

	PASADENA REFINING SYSTEM, INC. RED BLUFF TANK FARM PASADENA, TEXAS	JOB NO: 59083	DATE: 04-08-14	EVACUATION DIAGRAM	WITT O'BRIEN'S	818 Town & Country Blvd., Suite 200 Houston, Texas 77024 Phone: (281) 320-9796
DRAWN: EDH	SCALE: N/S					

## APPENDIX E

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### FOLLOW-UP INVESTIGATION

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## **FOLLOW-UP INVESTIGATION**

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### ***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***

The items noted below should be examined by a team composed of outside people knowledgeable in spill response and key members of the response teams. 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?

Was this information useful (and used) for spill trajectory forecasts? Were such forecasts realistic?

**Assessment/Evaluation (Cont'd)**

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?

**Response - resources used (Cont'd)**

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?

***Command structure (Cont'd)***

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?

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?

***Government relations (Cont'd)***

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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### WASTE MANAGEMENT

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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 Manager of Environmental to manage waste disposal needs during an oil spill cleanup.

### WASTE CLASSIFICATION

#### *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 (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 storm water 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 recycle, treatment 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, treated 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:

- 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.
- 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.

## **Waste Transfer (Cont'd)**

- **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:

- 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 off-load 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.

## WASTE STORAGE (Cont'd)

Steel or rubber tanks can be used to store oil recovered near the shoreline. To facilitate off loading, 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.

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 storm water 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 disposed of at a solid waste landfill. Treatment is the next best alternative, Landfill disposal is a final option. Treatment or stabilization prior to landfilling may be required for some wastes including Hazardous Wastes with Land Disposal Restrictions.

During an oil spill incident, PRSI 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. PRSI maintains a list of approved disposal sites that satisfy local, state, and federal regulations and company requirements. This identification of suitable waste treatment and disposal sites would be prepared by Environmental Matters Representative 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.

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.

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 processed in the refinery to remove water and be run through the normal refining processes with other recovered oil. Non-hazardous Oily Dirt can be recycled into Department of Transportation Specification Material at approved KEI/Southern Crushed Concrete recycling facilities.

PRSI's **Manager of Health Safety & Environment** is responsible for ensuring that all waste materials be properly disposed of at a PRSI internally approved disposal site.

### ***Landfill Disposal***

Class 1 non-hazardous Oily Trash and Oily Dirt can be disposed of at the Waste Management Conroe Landfill. Class 2 non-hazardous Oily Dirt can be disposed of at the Waste Management Landfill in Baytown. Disposal at a non-approved facility would require approval by PRSI **Manager of Health Safety & Environment** prior to sending any waste to such a facility.

### ***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.

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

## Table F-1

**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	5	5
Tendency to Emulsify Fluids	1	4	3	3	3	3	5	5	2	5	5	5	5	4	3	4
Ability to Run Dry	5	3	2	1	2	3	4	3	3	2	5	5	5	4	3	4
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	4	4	4	4	3	3	3	
Back Pressure/Head	1	5	5	5	4	3	4	5	5	2	1	1	1	3	3	
Portability	5	3	3	2	4	4	3	2	2	4		2	2	1	1	3
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	3	F	A	B	B,D	A,C,D	F,G,I	F,G,I	F,G	2	2	G,H,I

**KEY TO RATINGS:**

5 = Best; 1 = Worst

**KEY TO COMMENTS:**

- 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**

<b>CONTAINER</b>	<b>ONSHORE</b>	<b>OFFSHORE</b>	<b>SOLIDS</b>	<b>LIQUIDS</b>	<b>NOTES</b>
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

TYPE OF MATERIAL	SEPARATION METHODS	DISPOSAL METHODS
<b>LIQUIDS</b>		
Non-emulsified oils	Gravity separation of free water	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 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	Use of recovered oil as refinery/production facility feedstock Direct disposal Stabilization with inorganic material Degradation through land farming or composting
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	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	Direct disposal Degradation through land farming or composting for oil mixed with seaweed or natural sorbents
Tar balls	Separation from sand by sieving	Direct disposal

**Table F-4**  
**DISPOSAL PLAN**

<b>MATERIAL</b>	<b>DISPOSAL FACILITY</b>	<b>LOCATION</b>	<b>RCRA PERMIT/MANIFEST</b>
1. Recovered Product	On-site	Recovered Oil System	N/A
2. Contaminated Soil	On-site	In-Situ	N/A
3. Contaminated Soil	Waste Management	Baytown, Texas	Manifest
4. Contaminated Soil	Waste Management	Atascosita, Texas	Manifest
5. Contaminated Soil	HPP/SCC	Various	N/A
6. Contaminated Soil	HPP/SCC	Various	N/A
7. Contaminated Equipment	On-Site	Clean-up Pad	N/A
8. Contaminated Equipment	Waste Management	Atascosita, Texas	Manifest
9. Contaminated Equipment	Veolia	Port Arthur, Texas	Both
10. Personnel Protective Equipment	Waste Management	Atascosita, Texas	Manifest
11. Personnel Protective Equipment	Veolia	Port Arthur, Texas	Both
12. Decontamination Solution	On-Site	Process Sewer	N/A
13. Absorbents	Waste Management	Atascosita, Texas	Manifest
14. Absorbents	Veolia	Port Arthur, Texas	Both
15. Spent Chemicals	On-Site	Recovered Oil system	N/A
16. Spent Chemicals	On-Site	Process Sewer	N/A
17. Spent Chemicals	Waste Management	Baytown, Texas	Manifest
18. Spent Chemicals	Waste Management	Atascosita, Texas	Manifest
19. Spent Chemicals	Veolia	Port Arthur, Texas	Both
20. Spent Chemicals	CWM	Port Arthur, Texas	Both
21. Spent Chemicals	CWM	Sulfur, Louisiana	Both

## APPENDIX G

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### WORST CASE DISCHARGE ANALYSIS AND SCENARIOS

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## INTRODUCTION

The Pasadena Refining System, Inc. - Pasadena Refinery is classified as a "Complex Facility" which operates in a Higher 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:

EPA Discharge Volume Calculation	
●	<b>Worst Case Discharge</b> <i>100% of the largest single tank</i>
●	<b>Medium Discharge</b> <i>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</i>
●	<b>Small Discharge</b> <i>Discharge of less than or equal to 2,100 gallons (50 Bbls), not to exceed the WCD</i>

USCG Discharge Volume Calculation	
●	<b>Worst Case Discharge (WCD)</b> <i>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:</i>  <i>{ [ Maximum Discovery Time (hrs) + Maximum Shutdown Time (hrs) ] * Maximum Flow Rate (Bbls/Hr) } + Total Line Fill (Bbls) = WCD (Bbls)</i>
●	<b>Maximum Most Probable Discharge (MMPD)</b> <i>1,200 Bbls or 10% of the WCD, whichever is less</i>
●	<b>Average Most Probable Discharge (AMPD)</b> <i>50 Bbls or 1% of the WCD, whichever is less</i>

## INTRODUCTION (Cont'd)

### DOT Discharge Volume Calculation

- **Worst Case Discharge (WCD)**

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(s) in the response expressed in barrels.

$$\{ [ \text{Maximum Release Time (hrs)} + \text{Maximum Shutdown Time (hrs)} ] * \text{Maximum Flow Rate (Bbls/Hr)} \} + \text{Total Line Fill (Bbls)} = \text{WCD (Bbls)}$$

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 are scheduled to increase in 1998 and potentially again in 2003.

#### ***Scenario Types***

The occurrence of a Small/Average Most Probable, Medium/Maximum Most Probable, or Worst Case Discharge could be the result of any number of scenarios at the Facility including:

- Pipeline transfer
- Truck loading
- Vessel loading/unloading operations.
- Tank overfill and/or failure.
- Piping rupture.
- Piping leak, under pressure and not under pressure.
- Explosion or fire.

## INTRODUCTION (Cont'd)

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### ***Scenario Types (Cont'd)***

- 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 and 3.2. 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.

### **DOT/PHMSA**

Abnormal operations which could result in a substantial threat of a worst case discharge, may include:

- Unintended closure of valves;
- Pressure differential exceeds or drops below the normal operating limits;
- Loss of communications;
- Operations of any safety device (i.e. relief valve or rupture disc).

If any of these events occur, the affected system will be investigated, corrective action initiated, and the situation monitored by pipeline personnel. All corrective actions will be performed by qualified personnel appropriate to the task.

Refer to the Oil Movements Procedures, General Book for specific response procedures pertaining to abnormal operations.

## INTRODUCTION (Cont'd)

### USCG/EPA/DOT TABLES FOR WORST CASE DISCHARGE RESPONSE RESOURCES DETERMINATION AND REMOVAL CAPACITY PLANNING

Spill Location	(1) Rivers & Canals			(2) Nearshore/Inland/Great Lakes		
Sustainability of on-water oil recovery	3 Days			4 Days		
		<b>D</b>	<b>E</b>		<b>D</b>	<b>E</b>
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 (bbbls/day) (Maximum Required Recovery levels)

AREA	TIER 1	TIER 2	TIER 3
Rivers and Canals	1,500	3,000	6,000
Great Lakes	5,000	10,000	20,000
Inland/Nearshore	10,000	20,000	40,000

#### 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

A small / average most probable discharge at this Facility is considered to be a discharge that does not exceed 50 barrels.

#### **Description**

This size discharge would most likely occur due to minor equipment failures or human error. Examples may include, but not limited to,

- Truck overfill
- Pump seal leak
- Dock hose rupture
- Valve leak
- Container rupture
- Slop tank spill.
- Pipe rupture

The types of material that could be discharged include: gasoline, diesel, no. 2 fuel oil, crude oil, xylene, naphtha, kerosene, methanol, spent caustic and/or additives.

This size discharge would likely be noticed quickly and appropriate clean up measures taken since product transfers are monitored by Facility persons in charge (PICs) and/or by vessel or barge tankermen. These types of small spills are typically contained on the dock platform or on the barge or vessel deck truck transfer racks routine facility maintenance; however, the facility is located within ¼ mile of fish and wildlife, sensitive areas, and down gradient water. Therefore, impact to these areas should be avoided and/or minimized if at all possible. For more detailed information pertaining to these areas, refer to Section 6.0.

#### **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 unloading of product from vessels/barges. In addition, preventive maintenance of equipment is performed at regularly scheduled intervals to ensure that any weaknesses are discovered. 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 dock or barge or vessel deck could be diverted to the slop tank and then to product tanks or the miscellaneous tank. Such spills that go into the water can be handled by response contract vacuum truck, absorbent pad and boom, or other equipment.

This type of spill would not impact shoreside wells or drinking water intakes. Finally, this spill type is not one that would result in a chain reaction of failures of other equipment.

## RESPONSE CAPABILITY SCENARIOS (Cont'd)

### Small /Average Most Probable Discharge = 50 Bbls (Cont'd)

#### **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 50 Bbl discharge typically will not escape the containment of the Facility.
- In the unlikely event that a spill did escape the containment of the Facility, it would be expected to impact Houston Ship Channel or the facility wastewater treatment system, 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 50 Bbls) and can be implemented at the Facility, as the situation demands.
- A minimum of 100 Bbls 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 PRSI, C.I.M.A, and contract resources, as the situation demands.
- All recovered volumes can be handled through the refinery system and all disposal issues are handled by the Manager of the Environmental Matters. For more detailed information pertaining to disposal, refer to Appendix F.

#### **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 = 1,200 Bbls

A medium/maximum most probable discharge at this Facility is considered to be a discharge that does not exceed 1200 Bbls.

#### **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
- Misc. Tank failure
- Tank or truck overfill
- Pipeline manifold rupture.

The types of material that could be discharged include: gasoline, diesel, no. 2 fuel oil, crude oil, xylene, naphtha, kerosene, methanol, spent caustic and/or additives.

Because of diked and other containment located throughout the Refinery/Tank Farm, it is very unlikely that the discharge would leave the Facility property or reach a navigable waterway before a spill containment could begin; however, the facility is located within ¼ mile of fish and wildlife, sensitive areas, and down gradient water. Therefore, impact to these areas should be avoided and/or minimized if at all possible. For more detailed information pertaining to these areas, refer to Section 6.0.

#### **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 barge unloading and 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.

#### **Additional Comments**

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 attempt to contain the discharge and divert it to the diked area, the miscellaneous tank, and/or product tanks, or spill contractor storage tanks and trucks. Diked area containment of large spills can be handled with the use of contractor vacuum trucks.

This type of spill would not impact shoreside wells or drinking water intakes. Finally, this type of spill is not one that would result in a chain reaction of failures of other equipment.

## RESPONSE CAPABILITY SCENARIOS (Cont'd)

### Medium/Maximum Most Probable Discharge = 1,200 Bbls (Cont'd)

#### **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 12 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.

- Oil recovery devices with an effective daily recovery capacity of 50% of the Medium/Maximum Most Probable Discharge volume secured from the OSRO(s) will be on scene within 6 hours.
- 1200 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 wastewater treatment system and/or Houston Ship Channel.
- All disposal issues are handled by the Manager of Health Safety & Environment. For More detailed information pertaining to disposal, refer to Appendix F.

#### **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), (b)

#### **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-induced spills
- Tornado-induced spills
- Pipeline manifold rupture

The type of material that could be discharged in this Worst Case Scenario is Crude Oil.

Diking and containment areas are located throughout the Facility. For a discharge 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, preventive 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, associated flooding, and hurricanes would also increase the chances of an oil spill from leaving the property via the diked area stormwater outfall which may have to be opened to avoid severe Facility flooding (i.e. flooding that results in floating tanks and flooded pumps).

Nevertheless, the stormwater drainage could be stopped by shutting down pumps and/or closing valves, and 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.

Regarding other adverse weather, the Facility would not be subject to flooding from the waterway itself. Also, emergency valve closing procedures to stop drainage necessitated as a result of tornado related damage would not differ and would likely be unnecessary in any event because Facility valves would be closed unless the tornado event was associated with severe flooding as described above.

## RESPONSE CAPABILITY SCENARIOS (Cont'd)

Worst Case Discharge = (b) (7)(F), (b) (3)

### ***Worst Case Spill Pathway Scenario (Cont'd)***

In the event of tank rupture, the product may splash over the dike wall and enter into another moat or Facility Wastewater Treatment System.

For a spill that is confined to the land along the pathway, Facility personnel would have at least two (2) options by which to contain the spill:

- Dams
- Trenches

However, given the layout of the Facility, if a worst case spill breached containment, it would reach navigable waters in a relatively short period of time. Since the facility is located within ¼ mile of fish and wildlife, sensitive areas, and down gradient water, impact to these areas needs to be minimized if at all possible. For more detailed information pertaining to these areas, refer to Section 6.0.

### ***Protection of Groundwater***

The chances of groundwater impact due to a spill are minimal because the pathway between the Facility and the waterway is improved and/or impervious to a large extent. However, if a spill moved downward through the soil horizons and reached the groundwater table, then it would be necessary to contain and recover the product.

If the groundwater is near the surface, a possible solution might be a trench or an existing ditch. The back side of the trench or ditch could be lined with a polyethylene sheeting material which can serve to collect product for transfer to the oil/water separator. The groundwater would then be allowed to continue in its movement. If, however, the contaminated area is large and slow moving, an open trench may not be the answer. A deflecting barrier could be used as a structure which is more permanent than a trench or ditch and that moves the skimmed floating product to an upright recovery culvert with slits cut in the sides to allow the product to move inside and filter out the rocks.

Deep groundwater recovery could be accomplished by using a cone of depression type of pumping method. By placing a well suction beneath the floating product and producing a funnel type of effect, the product could be brought to a general area. This cone of depression forms a greater area of product. The second pump shaft could then be placed in this region.

### ***Ditch Containment***

A spill may also be contained in stormwater ditches. Some practical containment methods are:

- A board skimming device
- Earth dam and weir
- Wire fence filter boom
- Culvert weir
- Under flow dam.

These methods are simple to construct and effective for containment.

## RESPONSE CAPABILITY SCENARIOS (Cont'd)

**Worst Case Discharge = (b) (7)(F), (b) (3)**

### ***Spills that Reach the Waterway***

The Facility and Dock Areas are located on Houston Ship Channel. The priority during larger spills is to prevent oil from getting to the waterway. Although the Facility would take action, oil spill response organizations (OSROs) are under contract for the Facility. Some of these OSROs can initiate boom deployment and anchoring at the waterway within one (1) hour.

### ***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 PRSI 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 PRSI resources, or made available within the Facility's storage facilities.
- All disposal issues are handled by the Manager of Health Safety & Environment located at the Facility. For more detailed information pertaining to disposal, refer to Appendix F.
- At least 20% of the on-water response equipment secured from the OSRO(s) and other PRSI resources will be capable of operating in water of 6 feet or less depth.

**Worst Case Discharge = (b) (7)(F), (b) (3)*****Facility Response Resources/Capability (Cont'd)***

- 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 PRSI 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 PRSI 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.

***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.

## Pasadena Refining System, Inc. - Pasadena Refinery Response Planning Volume Calculations

Location Data			
Location Type	(b) (7)(F), (b) (3)		
Port Type			
WCD Product Type (worst case combination of volume and persistency)			
Product Group			
Maximum Vessel Unloading Rate (bbls/hr/line)			
Maximum Number of Simultaneous Vessel Operations			
Worst Case Discharge Scenario Pumping Time (detection + shut down, hrs)			
Total Line Fill Volume From Dock to First Valve w/in Containment (bbls) [11 line			
Capacity of the Largest Single Tank plus the Volume of All Tanks Without Adequate Secondary Containment (bbls)			
Discharge Volumes/Calculations			
Average Most Probable or Small Discharge (bbls)	(b) (7)(F), (b) (3)		
Maximum Most Probable or Medium Discharge (bbls)			
Worst Case Discharge - Based on USCG criteria (bbls)			
<b>Worst Case Discharge - Based on EPA criteria (bbls)</b>			
<p>**Based on the analysis of the WCD volumes calculated under USCG and EPA guidance, the EPA volume is largest and will be utilized throughout the plan as the Planning Volume.</p> <p>USCG WCD Calculation: (Pump Rate * Pump Time * Number of Pump Operations) + Line Fill            DOT/PHMSA WCD Calculation: (Detection + Shutdown Times) * Max Flow Rate + Line Fill            EPA WCD Calculation: 100% * Capacity of Largest Single Tank</p>			
Selected Calculation Factors			
Removal Capacity Planning Volume - Percent Natural Dissipation	40%		
Removal Capacity Planning Volume - Percent Recovered Floating Oil	15%		
Removal Capacity Planning Volume - Percent Oil Onshore	45%		
Emulsification Factor	1.8		
Tier 1 - On Water Oil Recovery Resource Mobilization Factor	30%		
Tier 2 - On Water Oil Recovery Resource Mobilization Factor	40%		
Tier 3 - On Water Oil Recovery Resource Mobilization Factor	60%		
Response Planning Volume Calculation			
On-Water Recovery Volume (bbls)	(b) (7)(F), (b) (3)		
Shoreline Recovery Volume (bbls)			
Shoreline Cleanup Volume (bbls)			
	Tier 1	Tier 2	Tier 3
On-Water Recovery Cpcty (bbls/day)	40,500	54,000	81,000
Shallow Water Resp Cpblty (bbls/day)	8,100	10,800	16,200
Storage Capacity (bbls/day)	81,000	108,000	162,000
On-Water Response Caps (bbls/day)	1,875	3,750	7,500
Additional Response Req'd (bbls/day)	(b) (3), (b) (7)(F)		
Response Time (hrs)	12	36	60

## U.S. Coast Guard Discharge Volume Calculations

### ***Worst Case Discharge Volume Calculations from Marine Operations (WCD)***

- Potential simultaneous pumping operations (SO):
- Maximum pumping flow rate (MFR):
- Maximum discharge discovery time (MDT):
- Maximum discharge shut down time (MSDT):
- Maximum line fill volume (LFV):

(b) (7)(F), (b) (3)

(see Hazard Evaluation, Appendix H for Pipeline detail)

- $WCD = [(MDT + MSDT) * MFR * SO] + LFV$
- $WCD = (b) (7)(F),$

### ***Maximum Most Probable Discharge Calculations (MMPD)***

- 1,200 Bbls <or> 10 % of the WCD (whichever is less)
- **MMPD = 720 Bbls**

### ***Average Most Probable Discharge Calculations (AMPD)***

- 50 Bbls <or> 1 % of the WCD (whichever is less)
- **AMPD = 50 Bbls**

## U.S. EPA Discharge Volume Calculations

### ***Worst Case Discharge Calculations (WCD)***

- The volume of the largest single tank plus the volume of all other tanks without adequate secondary containment.
- $WCD = (b) (7)(F), (b) (3)$  (Tank 831)  
(largest single tank, see Hazard Identification Tanks Table in SPCC Plan)

### ***Medium Discharge (MD) Calculations***

- 857 Bbls <or> 10 % of the capacity of the largest tank (whichever is less)
- **MD = 857 Bbls**

### ***Small Discharge (SD) Calculations***

- Less than or equal to 50 Bbls
- **SD = 50 Bbls**

## U.S. DEPARTMENT OF TRANSPORTATION Discharge Volume Calculations

### *Worst Case Discharge Calculations (WCD)*

#### **Pipeline WCD:**

- Pipelines maximum release time (MRT). (b) (7)(F), (b) (3)
- Maximum shutdown response time (MSRT) (b) (7)(F), (b) (3)
- Maximum flow rate (MFR) (b) (7)(F), (b) (3)
- Largest Line drainage volume (LLDV), after shutdown of line section(s) (b) (7)(F), (b) (3)  
(see Hazard Evaluation, Appendix H for Pipeline detailed)
- **WCD** = (MRT + MSRT) \* MFR + LLDV
- **WCD** = (b) (7)(F), (b) (3)

#### **Breakout Tank WCD (Tank 807):**

- **WCD** = (b) (7)(F), (b) (3)

#### **Historical WCD:**

- There has never been a reportable spill from a DOT Breakout Tank or Pipeline.

Prevention measure	Standard	Credit (%)
Secondary containment > 100%	NFPA 30	50
Built/repaired to API standards	API STD 620/650/653	10
Overfill protection standards	API RP 2350	5
Testing/cathodic protection	API STD 650/651/653	5
<b>Maximum allowable credit</b>		<b>70</b>

### **Planning Distance Calculation "Oil Transport on Tidal Influence Areas"**

- Persistent oils - planning distance = 15 miles ebb and flood tide.

## APPENDIX H

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### HAZARD EVALUATION

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## Hazard Identification

### ***Loading / Unloading of Transportation Vehicles***

The Facility conducts marine vessel unloading. Truck loading/unloading operations is not currently performed. These operations are typically conducted as follows:

<b>TRUCK LOADING</b>	
<b>Loading Bays:</b>	Two (2)
<b>Loading Rate:</b>	600-700 gpm ( <i>per truck</i> )
<b>Truck Capacity:</b>	9,000 gallons ( <i>maximum</i> )
<b>Simultaneous Operations:</b>	Two (2) trucks at a time
<b>Loads per Day:</b>	0
<b>Products:</b>	Spent Caustic, B-B-MIX, Butane mix, normal Butane, Propane, Propylene

<b>TRUCK UNLOADING</b>	
There are no unloading operations at this facility.	

<b>MARINE OPERATIONS</b>	
<b>Transfer Points:</b>	One (1) berth, one (1) coke dock. One (1) old dock and one (1) new loading station dock.
<b>Discharging Rate:</b>	2,500 to 15,000 BPH ( <i>Vessel dependent</i> )
<b>Loading Rate:</b>	2,000 to 7,000 BPH ( <i>Vessel dependent</i> )
<b>Simultaneous Operations:</b>	Two (2) operations ( <i>maximum</i> )
<b>Transfers per Day:</b>	Approximately five (5) marine transfers per week
<b>Products:</b>	Benzene, slurry, gasoline, naphtha, No. 2 fuel oil, crude oil, FCC charge stock, No. 6 fuel oil and petroleum coke

## Hazard Identification (Cont'd)

### Loading / Unloading of Transportation Vehicles (Cont'd)

PIPELINES FROM DOCK TO FACILITY				
Pipeline (Dia., Product, Group)	Length (Feet) (Approx)	Line-Vol (Bbls) (Approx)	Flow Rate (Bbls/hr) (Approx)	WCD Volume (Discovery + Shutdown) * Flow Rate + Line-Vol
8" General Purpose (Group 1)	1,487	92	2,000-4,000	(b) (3), (b) (7)(F) b) (7)(F), (b) (3)
8" Naptha (Group 1)	1,487	92	3,000	
8" Gasoline (Group 1)	1,487	92	2,500	
Out of Service (8")	2,327	144	3,000	
8" Gasoline (Group 1)	1,140	71	2,500	
8" Gasoline (Group 1)	843	52	3,000	
18" Crude (Group 4)	1,207	168	11,000	
12" Furnace Oil (Group 3)	2,030	284	11,000	
12" Multipurpose (Group 4)	1,940	271	2,000	
12" Mirando (Group 2)	1,940	271	4,000	
Out of Service (8")	2,551	158	3,000	
8" Kerosene	2,050	127.5	3,000	
6" Ballast	1,960	68.6	400	
4' Recovered Oil	1,940	30.2	100	

**Note:** The line length utilized for these calculations was based on the distance from the dock facilities to the "First Valve(s) Within Secondary Containment."

## Hazard Identification (Cont'd)

### Loading / Unloading of Transportation Vehicles (Cont'd)

PIPELINES FROM REFINERY TO TANK FARM					
Pipeline (Dia., Product, Group)	Length (Feet) (Approx)	Line-Vol (Bbls) (Approx)	Flow Rate (Bbls/hr) (Approx)	(b) (3), (b) (7)(F)	WCD Volume (Discovery + Shutdown) * Flow Rate + Line-Vol
6" Out of Service	4,690	0	0		(b) (7)(F), (b) (3)
Out of Service (10")	8,455	821	11,000		
12" Crude and Heavy Gas Oil (Group 4)	7,254	1,015	11,000		
14" Crude Oil (Group 4)	10,600	2,018	11,000		
16" Crude and Heavy Gas Oil (Group 4)	7,257	1,804	14,000		
Magellan Pipeline to RBTF 24" Crude and Heavy Gas Oil (Group 4)	2,070	651	11,000		

**Note:** The line length utilized for these calculations was based on the distance from Pasadena Refinery to Red Bluff Tank Farm (RBTF).

## Hazard Identification (Cont'd)

### *Loading / Unloading of Transportation Vehicles (Cont'd)*

PIPELINES FROM REFINERY TO KINDER MORGAN					
Pipeline (Dia., Product, Group)	Length (Feet) (Approx)	Line-Vol (Bbls) (Approx)	Flow Rate (Bbls/hr) (Approx)	(b) (3), (b) (7)(F)	WCD Volume (Discovery + Shutdown) * Flow Rate + Line-Vol
36" Gasoline (Group 1 & 3)	3,379	4,254	34,000	(b) (7)(F), (b) (3)	(b) (7)(F), (b) (3)
40" Furnace Oil (Group 1 & 3)	2,332	3,609	54,000		
16" Furnace Oil (Group 1 & 3)	3,393	844	10,000		
16" Gasoline (Group 1 & 3)	2,337	581	10,000		
Out of Service - 6" Gasoline, Furnace Oil (Group 1 & 3)	2,312	81	0		

**Note:** The line length utilized for these calculations was based on the distance from Pasadena Refinery to Kinder Morgan.

### **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:

- Barge unloading operations
- Pipeline operations
- Truck loading operations
- Tank Ship 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.

## Hazard Identification (Cont'd)

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### **Secondary Containment Volumes**

Secondary containment is provided for the bulk storage tanks and/or transfer points at the Facility. Detailed information pertaining to secondary containment is located in the SPCC Plan, under separate tab.

### **Normal Daily Throughput**

The Normal Daily Throughput for the Facility:

Normal Daily Throughput	Average Daily Storage	Total Storage
102,598.05 Bbls/Day <i>(including pipeline/truck vessel receipts and loadout)</i>	(b) (3), (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. This facility only has tanker/barge activity that is scheduled on an as needed basis. The Truck Rack operates as business needs dictate.

### **Hazard Identification Tank Table**

The Hazard ID Tank table has been combined with the Spill Potentials List and is located in the SPCC Plan, under separate tab.

### **Discharge Prevention (Onshore Pipeline)**

#### **Integrity Testing Schedule**

Using the risk factors described in 195.452 for establishing an assessment schedule for continual integrity assessment, a five (5) year assessment interval has been established. At minimum, the integrity plan will be reviewed every three (3) years to determine if population or environmental changes have occurred around the pipeline that could affect the need for assessment interval change. Additionally, new or modified regulations, operational changes, pipeline repairs or third party activity around the pipeline will trigger an immediate review of the integrity plan and assessment interval. The other lines, being inactive, will be hydrostatically tested prior to implementation of any plans to return any of the lines to service according to 49 CFR Part 195, Subpart E.

## **Hazard Identification (Cont'd)**

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### ***Discharge Prevention (Onshore Pipeline) (Cont'd)***

#### ***Cathodic Protection***

Cathodic protection is active on the pipeline system and is surveyed quarterly by a third party, Yamauchi Corrosion Control, Inc., including recommended repairs/changes. Readings are reviewed and repairs/anode additions are completed in a timely fashion.

#### ***Discharge Detection***

Detailed information pertaining to discharge detection, for areas of the Facility under EPA jurisdiction, is located in the SPCC Plan, under separate tab.

#### ***Pipeline Monitoring***

The pipeline flow and pressure are monitored 24 hours per day, 7 days per week in the Exxon Control Center located in downtown Houston. Meter readings are recorded at 5 a.m. and 1 p.m. each day. The Exxon Control Center dispatcher will immediately notify the PRSI Central Pump House Operator of any abnormal condition on the pipeline such as loss of flow and/or pressure. If the problem cannot be immediately identified, it is assumed that an immediate hazardous situation may exist and the pipeline is shutdown and blocked in until field operators can identify the problem. Telephone communication with alternate numbers is available around the clock. Should a leak be reported to either the Exxon field or control room dispatcher, or to the PRSI LPC operator or control room personnel, the pipeline would be shut down within minutes of the reported leak. The entire pipeline is subjected to a ground survey fourteen (14) times per year by a PRSI Central Pipeline Inspector who documents the inspection with the Oil Movements Manager. In addition to the ground survey, an aerial survey is conducted once per month using a local flying service and the results documented with the Oil Movements Manager. The PRSI Central operators are trained and qualified in the operation of the pipeline according to the "Receiving and Pumping of Propylene" Procedure OM2082.

#### ***Security***

Detailed information pertaining to security is located in the SPCC Plan, under separate tab and Facility's Emergency Action Plan.

## Vulnerability Analysis

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### ***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 Pasadena, TX.
- The Facility lies on the south bank of the Houston Ship Channel immediately southeast of the Washburn Tunnel.
- Topography is essentially flat in the area of the Facility with drainage ultimately towards the Houston Ship Channel.

The following vulnerable zones have been established based on the current storage capacity and site conditions at the facilities:

Pipeline: Harris County

### ***Water Intakes***

(b) (7)(F), (b) (3)

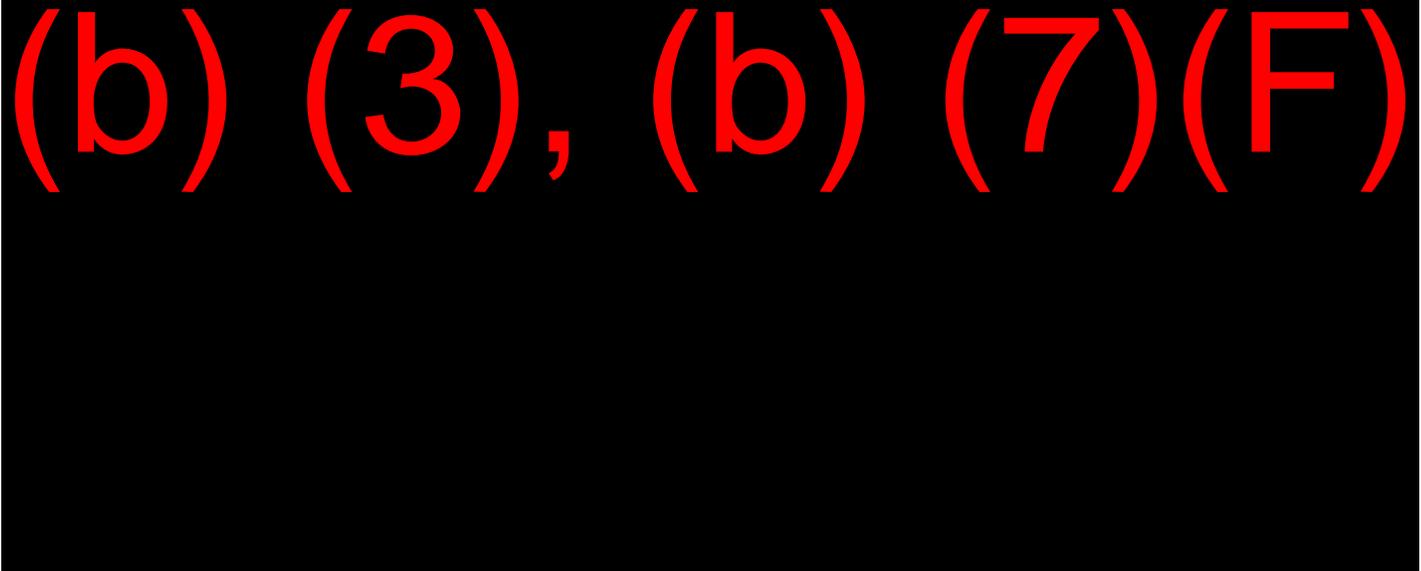
### ***Schools***

(b) (3), (b) (7)(F)

## Vulnerability Analysis (Cont'd)

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### *Medical Facilities*



### *Residential Areas*

Residential populations begin within a quarter mile of the Facility and continue outward. The coverage area of these areas is not continuous, rather it is broken up by commercial areas.

Any evacuation efforts for these areas will be coordinated with the local emergency assistance agencies (police department, fire department, etc.). Additional detail on the residential areas within the area of the Facility are included on the maps in Figure 6.1. Telephone reference is provided in Figure 2.5.

### *Businesses*

The immediate area surrounding the Facilities are for the most part commercialized. The listing of businesses in the area of the Facility is extensive and is detailed in the applicable ACP.

Any evacuation efforts for these areas will be coordinated with the local emergency assistance agencies (police department, fire department, etc.). Additional detail on the general layout of businesses within the area of the Facility are included on the maps in Figure 6.1. Telephone reference is provided in Figure 2.5.

## **Vulnerability Analysis (Cont'd)**

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### ***Fish and Wildlife, Wetlands, and other Sensitive Environments***

The immediate area surrounding the Facilities and pipeline are commercialized and supports only minor amounts of wildlife. The overall impact on fish and wildlife, wetlands, and other sensitive environments will happen upon impact of the local waterways and associated non-commercialized areas.

The local ecosystem is host to a variety of species including migratory as well as year round inhabitants. The general species found in the area of the Facility are detailed in the applicable ACP. State and Federal agencies as well as contract resources will provide guidance on response and protection strategies during an actual response situation.

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.

Wetland habitats (as applicable) within the potential impact area of a spill originating from the Facility are identified on the Texas General Land Office and National Oceanic & Atmospheric Administrations Texas Oil Spill Planning and Response Atlas in Figure 6.1.

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***

The lakes, streams, and rivers that may be potentially impacted by a discharge originating at the Facility are identified on the Texas General Land Office and National Oceanic & Atmospheric Administrations Texas Oil Spill Planning and Response Atlas in Figure 6.1.

### ***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 6.5.

## Vulnerability Analysis (Cont'd)

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### ***Recreational Areas***

The recreational areas that may be potentially impacted by a discharge originating at the Facility are identified on the Texas General Land Office and National Oceanic & Atmospheric Administrations Texas Oil Spill Planning and Response Atlas in Figure 6.1.

### ***Transportation Routes (air, land, and water)***

Land and water transportation routes could both potentially be effected by a discharge originating from the Facility. These transportation routes are identified on the Texas General Land Office and National Oceanic & Atmospheric Administrations Texas Oil Spill Planning and Response Atlas in Figure 6.1.

The local emergency assistance agencies (police department, fire department, etc.) and the U.S. Coast Guard (as applicable) would be contacted for traffic control in the area of the discharge. Telephone reference is provided in Figure 2.5.

### ***Utilities***

(b) (3), (b) (7)(F)

### ***Other Areas of Economic Importance***

The local waterways are bordered by various dock facilities, other commercial facilities, and recreational/public use areas. These areas are identified on the maps in Figure 6.1.

Any evacuation efforts necessary for these areas will be coordinated with the local emergency assistance agencies (police department, fire department, etc.), State Police, U.S. Coast Guard, and other agencies as the situation demands. Telephone references are provided in Figure 2.5.

## **Analysis of the Potential for a Spill**

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The potential for a significant spill at the Facilities and pipeline are 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.

Spill prevention measures include a number of discharge detection methods and various inspection procedures, which are described further in the SPCC Plan (included under separate tab).

Facility operating procedures are defined in the Pasadena Refining System, Inc. Pasadena Refinery Operations Manual. 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. The Facility is under continuous operation and is always attended by responsible operators.

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

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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.

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	6-19-93
<b><i>Location of discharge.</i></b>	#1 Trap spillway/HSC
<b><i>Discharge cause(s).</i></b>	Excessive rainfall
<b><i>Material(s) discharged.</i></b>	Sheen
<b><i>Amount discharged.</i></b>	-1 gal
<b><i>Amount of discharge that reached navigable waters.</i></b>	-1 gal
<b><i>Amount recovered.</i></b>	-1 gal
<b><i>Effectiveness and capacity of secondary containment.</i></b>	Overflow of Secondary Containment
<b><i>Clean-up actions taken.</i></b>	Deployed absorbents and absorbed all visible material
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Unusual rainfall amounts – Tropical storm Arlene – increased pumping capacity via additional rental pumps.
<b><i>Total storage capacity of the tank(s) or impoundment(s) from which the material discharged.</i></b>	N/A
<b><i>Enforcement actions.</i></b>	
<b><i>Effectiveness of monitoring equipment.</i></b>	N/A
<b><i>Description of how spill was detected.</i></b>	Observation via Operator

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	11-16-93
<b><i>Location of discharge.</i></b>	#1 Trap/HSC
<b><i>Discharge cause(s).</i></b>	Excessive rainfall
<b><i>Material(s) discharged.</i></b>	Oil
<b><i>Amount discharged.</i></b>	-2 Bbls
<b><i>Amount of discharge that reached navigable waters.</i></b>	-2 Bbls
<b><i>Amount recovered.</i></b>	-2 Bbls
<b><i>Effectiveness and capacity of secondary containment.</i></b>	Overflow of secondary containment
<b><i>Clean-up actions taken.</i></b>	Deployed boomed and cleaned pad area
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Unusual rainfall amounts – used additional rental pumps to increase pumping capacity
<b><i>Total storage capacity of the tank(s) or impoundment(s) from which the material discharged.</i></b>	N/A
<b><i>Enforcement actions.</i></b>	
<b><i>Effectiveness of monitoring equipment.</i></b>	N/A
<b><i>Description of how spill was detected.</i></b>	Observation via Operator

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	11-28-93
<b><i>Location of discharge.</i></b>	Stream trap at Dock/HSC
<b><i>Discharge cause(s).</i></b>	Excessive rainfall
<b><i>Material(s) discharged.</i></b>	Gas Oil
<b><i>Amount discharged.</i></b>	- 2 gal
<b><i>Amount of discharge that reached navigable waters.</i></b>	-2 gal
<b><i>Amount recovered.</i></b>	-2 gal
<b><i>Effectiveness and capacity of secondary containment.</i></b>	Secondary Containment not necessary for steam line.
<b><i>Clean-up actions taken.</i></b>	Blocked line
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Operators instructed on double checking steam line connections.
<b><i>Total storage capacity of the tank(s) or impoundment(s) from which the material discharged.</i></b>	N/A
<b><i>Enforcement actions.</i></b>	
<b><i>Effectiveness of monitoring equipment.</i></b>	N/A
<b><i>Description of how spill was detected.</i></b>	Observation via Operator

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	2-11-94
<b><i>Location of discharge.</i></b>	1 Trap HSC
<b><i>Discharge cause(s).</i></b>	Cracks in concrete barrier
<b><i>Material(s) discharged.</i></b>	Oil Sheen
<b><i>Amount discharged.</i></b>	- 1 gal
<b><i>Amount of discharge that reached navigable waters.</i></b>	-1 gal
<b><i>Amount recovered.</i></b>	-1 gal
<b><i>Effectiveness and capacity of secondary containment.</i></b>	Overflow of Secondary Containment
<b><i>Clean-up actions taken.</i></b>	Deployed boom
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Repair seams
<b><i>Total storage capacity of the tank(s) or impoundment(s) from which the material discharged.</i></b>	N/A
<b><i>Enforcement actions.</i></b>	
<b><i>Effectiveness of monitoring equipment.</i></b>	N/A
<b><i>Description of how spill was detected.</i></b>	Reported via Operator

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	7-27-94
<b><i>Location of discharge.</i></b>	Docks/HSC
<b><i>Discharge cause(s).</i></b>	Hose leak
<b><i>Material(s) discharged.</i></b>	Gas Oil
<b><i>Amount discharged.</i></b>	5-10 gal
<b><i>Amount of discharge that reached navigable waters.</i></b>	5-10 gal
<b><i>Amount recovered.</i></b>	
<b><i>Effectiveness and capacity of secondary containment.</i></b>	Failure of hose quality
<b><i>Clean-up actions taken.</i></b>	Deployed absorbents
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Replace with inspected hose
<b><i>Total storage capacity of the tank(s) or impoundment(s) from which the material discharged.</i></b>	N/A
<b><i>Enforcement actions.</i></b>	
<b><i>Effectiveness of monitoring equipment.</i></b>	N/A
<b><i>Description of how spill was detected.</i></b>	Operator present

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	10-15-94
<b><i>Location of discharge.</i></b>	1 Trap/HSC
<b><i>Discharge cause(s).</i></b>	Excessive rainfall
<b><i>Material(s) discharged.</i></b>	Coke dust and oil sheen
<b><i>Amount discharged.</i></b>	-1 Bbl
<b><i>Amount of discharge that reached navigable waters.</i></b>	-1 Bbl
<b><i>Amount recovered.</i></b>	-1 Bbl
<b><i>Effectiveness and capacity of secondary containment.</i></b>	Overflow of Secondary Containment
<b><i>Clean-up actions taken.</i></b>	Deployed boom
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Unusual rainfall amounts – cleaned force main to waterwater treatment plant.
<b><i>Total storage capacity of the tank(s) or impoundment(s) from which the material discharged.</i></b>	N/A
<b><i>Enforcement actions.</i></b>	
<b><i>Effectiveness of monitoring equipment.</i></b>	N/A
<b><i>Description of how spill was detected.</i></b>	Operator Observation

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	11-8-94
<b><i>Location of discharge.</i></b>	Dock/HSC
<b><i>Discharge cause(s).</i></b>	Hose drainage error
<b><i>Material(s) discharged.</i></b>	Gas Oil
<b><i>Amount discharged.</i></b>	1-2 gal
<b><i>Amount of discharge that reached navigable waters.</i></b>	1-2 gal
<b><i>Amount recovered.</i></b>	-1-2 gal
<b><i>Effectiveness and capacity of secondary containment.</i></b>	N/A
<b><i>Clean-up actions taken.</i></b>	Sorbent boom deployed
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Assure hose lines are empty before prior to lifting
<b><i>Total storage capacity of the tank(s) or impoundment(s) from which the material discharged.</i></b>	N/A
<b><i>Enforcement actions.</i></b>	
<b><i>Effectiveness of monitoring equipment.</i></b>	N/A
<b><i>Description of how spill was detected.</i></b>	Operator Observation

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	12-3-94
<b><i>Location of discharge.</i></b>	#1 Trap/HSC
<b><i>Discharge cause(s).</i></b>	Excessive rainfall
<b><i>Material(s) discharged.</i></b>	Wastewater/oil
<b><i>Amount discharged.</i></b>	-3 Bbls
<b><i>Amount of discharge that reached navigable waters.</i></b>	-3 Bbls
<b><i>Amount recovered.</i></b>	-3 Bbls
<b><i>Effectiveness and capacity of secondary containment.</i></b>	Overflow of secondary containment
<b><i>Clean-up actions taken.</i></b>	OSRO deployed boom and absorbents
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Unusual rainfall amounts – cleaned force main to wastewater treatment plant – conducted pressure surveys and additional cleaning.
<b><i>Total storage capacity of the tank(s) or impoundment(s) from which the material discharged.</i></b>	N/A
<b><i>Enforcement actions.</i></b>	
<b><i>Effectiveness of monitoring equipment.</i></b>	N/A
<b><i>Description of how spill was detected.</i></b>	Operator Observation

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	2-26-95
<b><i>Location of discharge.</i></b>	Dock/HSC
<b><i>Discharge cause(s).</i></b>	Bleeder left open
<b><i>Material(s) discharged.</i></b>	Vacuumed gas oil
<b><i>Amount discharged.</i></b>	1-2 Bbls
<b><i>Amount of discharge that reached navigable waters.</i></b>	1-2 Bbls
<b><i>Amount recovered.</i></b>	-1-2 Bbls
<b><i>Effectiveness and capacity of secondary containment.</i></b>	Float switch on sump failed
<b><i>Clean-up actions taken.</i></b>	OSRO deployed boom and absorbents
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Instruct operators to double check all bleeders and repair float switch
<b><i>Total storage capacity of the tank(s) or impoundment(s) from which the material discharged.</i></b>	N/A
<b><i>Enforcement actions.</i></b>	
<b><i>Effectiveness of monitoring equipment.</i></b>	N/A
<b><i>Description of how spill was detected.</i></b>	Operator Observation

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	2-28-95
<b><i>Location of discharge.</i></b>	Dock/HSC
<b><i>Discharge cause(s).</i></b>	Overflow of sump
<b><i>Material(s) discharged.</i></b>	Vacuumed gas oil
<b><i>Amount discharged.</i></b>	42 gal
<b><i>Amount of discharge that reached navigable waters.</i></b>	42 gal
<b><i>Amount recovered.</i></b>	-42 gal
<b><i>Effectiveness and capacity of secondary containment.</i></b>	Pump failure an alarm failure
<b><i>Clean-up actions taken.</i></b>	OSRO responded with sorbents & boom
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Repairs to be made – manually cut off bleeder and sump
<b><i>Total storage capacity of the tank(s) or impoundment(s) from which the material discharged.</i></b>	N/A
<b><i>Enforcement actions.</i></b>	
<b><i>Effectiveness of monitoring equipment.</i></b>	N/A
<b><i>Description of how spill was detected.</i></b>	Operator Observation

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	3-6-95
<b><i>Location of discharge.</i></b>	Dock/HSC
<b><i>Discharge cause(s).</i></b>	Overflow of sump during hydro-testing
<b><i>Material(s) discharged.</i></b>	Slop Oil
<b><i>Amount discharged.</i></b>	1 Bbl
<b><i>Amount of discharge that reached navigable waters.</i></b>	1 Bbl
<b><i>Amount recovered.</i></b>	-1 Bbl
<b><i>Effectiveness and capacity of secondary containment.</i></b>	Sump Full
<b><i>Clean-up actions taken.</i></b>	OSRO deployed boom and water washed recoverable area
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Operational change sump to be pumped once per shift.
<b><i>Total storage capacity of the tank(s) or impoundment(s) from which the material discharged.</i></b>	N/A
<b><i>Enforcement actions.</i></b>	
<b><i>Effectiveness of monitoring equipment.</i></b>	N/A
<b><i>Description of how spill was detected.</i></b>	Operator Observation

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	4-4-95
<b><i>Location of discharge.</i></b>	No. 2 Trap at outfall to HSC
<b><i>Discharge cause(s).</i></b>	Bypass of oil/water/solids separator
<b><i>Material(s) discharged.</i></b>	Unknown hydrocarbons
<b><i>Amount discharged.</i></b>	42 gal
<b><i>Amount of discharge that reached navigable waters.</i></b>	42 gal
<b><i>Amount recovered.</i></b>	-42 gal
<b><i>Effectiveness and capacity of secondary containment.</i></b>	
<b><i>Clean-up actions taken.</i></b>	Stop stormwater outfall and deploy containment and absorbents
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Cleaned outfall #2 separator – blocked in outfall. Cleaned force main to GCWDA
<b><i>Total storage capacity of the tank(s) or impoundment(s) from which the material discharged.</i></b>	N/A
<b><i>Enforcement actions.</i></b>	
<b><i>Effectiveness of monitoring equipment.</i></b>	N/A
<b><i>Description of how spill was detected.</i></b>	Operator Observation

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	12-17-95
<b><i>Location of discharge.</i></b>	Retaining wall at NW corner of refinery/HSC
<b><i>Discharge cause(s).</i></b>	Excessive rainfall overflowed containment
<b><i>Material(s) discharged.</i></b>	Oil
<b><i>Amount discharged.</i></b>	-1 gal
<b><i>Amount of discharge that reached navigable waters.</i></b>	-1 gal
<b><i>Amount recovered.</i></b>	-1 gal
<b><i>Effectiveness and capacity of secondary containment.</i></b>	Overflow of secondary containment
<b><i>Clean-up actions taken.</i></b>	Deployed containment boom and absorbents
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Heavy rainfall cleaned forced main to water treatment plant. Conducted pressure surveys and additional cleaning.
<b><i>Total storage capacity of the tank(s) or impoundment(s) from which the material discharged.</i></b>	N/A
<b><i>Enforcement actions.</i></b>	
<b><i>Effectiveness of monitoring equipment.</i></b>	N/A
<b><i>Description of how spill was detected.</i></b>	Operator Observation

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	6-25-96
<b><i>Location of discharge.</i></b>	Coke storage area/Dock/HSC
<b><i>Discharge cause(s).</i></b>	Excessive rainfall overflowed retaining wall
<b><i>Material(s) discharged.</i></b>	Tar/Coke
<b><i>Amount discharged.</i></b>	5 gal
<b><i>Amount of discharge that reached navigable waters.</i></b>	5 gal
<b><i>Amount recovered.</i></b>	-5 gal
<b><i>Effectiveness and capacity of secondary containment.</i></b>	Overflow of Secondary Containment
<b><i>Clean-up actions taken.</i></b>	Deployed absorbents
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Heavy rainfall amounts – cleaned force main and pressure testing line
<b><i>Total storage capacity of the tank(s) or impoundment(s) from which the material discharged.</i></b>	N/A
<b><i>Enforcement actions.</i></b>	
<b><i>Effectiveness of monitoring equipment.</i></b>	N/A
<b><i>Description of how spill was detected.</i></b>	Operator Observation

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	9-4-96
<b><i>Location of discharge.</i></b>	Dock/HSC
<b><i>Discharge cause(s).</i></b>	Valve bonnet failure
<b><i>Material(s) discharged.</i></b>	Gas Oil
<b><i>Amount discharged.</i></b>	20 gal
<b><i>Amount of discharge that reached navigable waters.</i></b>	20 gal
<b><i>Amount recovered.</i></b>	-20 gal
<b><i>Effectiveness and capacity of secondary containment.</i></b>	N/A
<b><i>Clean-up actions taken.</i></b>	OSRO deployed boom and absorbents
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Repaired plugs on valve and depressured line
<b><i>Total storage capacity of the tank(s) or impoundment(s) from which the material discharged.</i></b>	N/A
<b><i>Enforcement actions.</i></b>	
<b><i>Effectiveness of monitoring equipment.</i></b>	N/A
<b><i>Description of how spill was detected.</i></b>	Operator Observation

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	9-19-96
<b><i>Location of discharge.</i></b>	Coke storage area/Dock/HSC
<b><i>Discharge cause(s).</i></b>	Excessive rainfall
<b><i>Material(s) discharged.</i></b>	Waste Oil
<b><i>Amount discharged.</i></b>	5-25 gal
<b><i>Amount of discharge that reached navigable waters.</i></b>	5-25 gal
<b><i>Amount recovered.</i></b>	-5-25 gal
<b><i>Effectiveness and capacity of secondary containment.</i></b>	Overflow of Secondary Containment unusual rainfall amounts
<b><i>Clean-up actions taken.</i></b>	OSRO deployed boom and absorbents
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Conducted pressure surveys in addition to cleaning force main to treatment facility
<b><i>Total storage capacity of the tank(s) or impoundment(s) from which the material discharged.</i></b>	N/A
<b><i>Enforcement actions.</i></b>	
<b><i>Effectiveness of monitoring equipment.</i></b>	N/A
<b><i>Description of how spill was detected.</i></b>	Operator Observation

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	11-3-96
<b><i>Location of discharge.</i></b>	Dock/HSC
<b><i>Discharge cause(s).</i></b>	Drip pan sump backed into septic sump
<b><i>Material(s) discharged.</i></b>	Gas Oil
<b><i>Amount discharged.</i></b>	21 gal
<b><i>Amount of discharge that reached navigable waters.</i></b>	21 gal
<b><i>Amount recovered.</i></b>	-21 gal
<b><i>Effectiveness and capacity of secondary containment.</i></b>	Overflow of sump
<b><i>Clean-up actions taken.</i></b>	OSRO deployed boom and used vacuum head to recover
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	A blind was installed between the drip pan sump and septic sump
<b><i>Total storage capacity of the tank(s) or impoundment(s) from which the material discharged.</i></b>	N/A
<b><i>Enforcement actions.</i></b>	
<b><i>Effectiveness of monitoring equipment.</i></b>	N/A
<b><i>Description of how spill was detected.</i></b>	Operator Observation

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	1-27-97
<b><i>Location of discharge.</i></b>	#1 Trap/HSC
<b><i>Discharge cause(s).</i></b>	Overflow of containment wall
<b><i>Material(s) discharged.</i></b>	Gas Oil Debris
<b><i>Amount discharged.</i></b>	-1 Bbl
<b><i>Amount of discharge that reached navigable waters.</i></b>	-1 Bbl
<b><i>Amount recovered.</i></b>	-1 Bbl
<b><i>Effectiveness and capacity of secondary containment.</i></b>	Overflow of Secondary Containment
<b><i>Clean-up actions taken.</i></b>	Deployed containment boom and sorbents
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Looking into raising containment wall and installing additional pumping capacity
<b><i>Total storage capacity of the tank(s) or impoundment(s) from which the material discharged.</i></b>	N/A
<b><i>Enforcement actions.</i></b>	
<b><i>Effectiveness of monitoring equipment.</i></b>	N/A
<b><i>Description of how spill was detected.</i></b>	Operator Observation

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	3-12-97
<b><i>Location of discharge.</i></b>	#2 Trap Outfall/HSC
<b><i>Discharge cause(s).</i></b>	Stormwater contaminated with oil
<b><i>Material(s) discharged.</i></b>	-1 gal
<b><i>Amount discharged.</i></b>	
<b><i>Amount of discharge that reached navigable waters.</i></b>	Sheen
<b><i>Amount recovered.</i></b>	-0
<b><i>Effectiveness and capacity of secondary containment.</i></b>	
<b><i>Clean-up actions taken.</i></b>	Cutoff outfall flow and deployed absorbents – OSRO
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Change out boom in trap and pumped oily water to process sewer
<b><i>Total storage capacity of the tank(s) or impoundment(s) from which the material discharged.</i></b>	N/A
<b><i>Enforcement actions.</i></b>	
<b><i>Effectiveness of monitoring equipment.</i></b>	N/A
<b><i>Description of how spill was detected.</i></b>	Operator Observation

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	10-9-98
<b><i>Location of discharge.</i></b>	Outfall No. 2/HSC
<b><i>Discharge cause(s).</i></b>	Excessive rainfall
<b><i>Material(s) discharged.</i></b>	Recovered Oil
<b><i>Amount discharged.</i></b>	< 10 gal
<b><i>Amount of discharge that reached navigable waters.</i></b>	< 10 gal
<b><i>Amount recovered.</i></b>	- 10 gal
<b><i>Effectiveness and capacity of secondary containment.</i></b>	Bypass of stormwater treatment system
<b><i>Clean-up actions taken.</i></b>	OSRO mobilized onscene, USCG prohibited deployment due to unsafe surface conditions, USCG prohibited work
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Unusual Rainfall amounts – Tropical Storm Frances
<b><i>Total storage capacity of the tank(s) or impoundment(s) from which the material discharged.</i></b>	N/A
<b><i>Enforcement actions.</i></b>	
<b><i>Effectiveness of monitoring equipment.</i></b>	N/A
<b><i>Description of how spill was detected.</i></b>	Operator Observation

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	11-7-98
<b><i>Location of discharge.</i></b>	Dock sump/HSC
<b><i>Discharge cause(s).</i></b>	Equipment failure/gasket @ sump
<b><i>Material(s) discharged.</i></b>	MTBE
<b><i>Amount discharged.</i></b>	20 gal
<b><i>Amount of discharge that reached navigable waters.</i></b>	20 gal
<b><i>Amount recovered.</i></b>	-20 gal
<b><i>Effectiveness and capacity of secondary containment.</i></b>	Relief valve failure/gasket failure
<b><i>Clean-up actions taken.</i></b>	Deployed boom and absorbents
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Repaired gasket/valve asap
<b><i>Total storage capacity of the tank(s) or impoundment(s) from which the material discharged.</i></b>	N/A
<b><i>Enforcement actions.</i></b>	
<b><i>Effectiveness of monitoring equipment.</i></b>	N/A
<b><i>Description of how spill was detected.</i></b>	Operator Observation

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	11-9-98
<b><i>Location of discharge.</i></b>	Dock/barge/HSC
<b><i>Discharge cause(s).</i></b>	Bleeder not open – causing spill
<b><i>Material(s) discharged.</i></b>	Slurry Oil
<b><i>Amount discharged.</i></b>	< 10 gal
<b><i>Amount of discharge that reached navigable waters.</i></b>	< 10 gal
<b><i>Amount recovered.</i></b>	- 10 gal
<b><i>Effectiveness and capacity of secondary containment.</i></b>	N/A
<b><i>Clean-up actions taken.</i></b>	Deployed absorbents
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Insure Operators are trained properly on hose draining
<b><i>Total storage capacity of the tank(s) or impoundment(s) from which the material discharged.</i></b>	N/A
<b><i>Enforcement actions.</i></b>	
<b><i>Effectiveness of monitoring equipment.</i></b>	N/A
<b><i>Description of how spill was detected.</i></b>	Operator Observation

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	1-15-99
<b><i>Location of discharge.</i></b>	#2 Trap Outfall
<b><i>Discharge cause(s).</i></b>	Outfall release
<b><i>Material(s) discharged.</i></b>	Oil Sheen
<b><i>Amount discharged.</i></b>	< 1 gal
<b><i>Amount of discharge that reached navigable waters.</i></b>	< 1 gal
<b><i>Amount recovered.</i></b>	- 1 gal
<b><i>Effectiveness and capacity of secondary containment.</i></b>	N/A
<b><i>Clean-up actions taken.</i></b>	Deployed absorbents
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Insure Outfall remains closed
<b><i>Total storage capacity of the tank(s) or impoundment(s) from which the material discharged.</i></b>	N/A
<b><i>Enforcement actions.</i></b>	
<b><i>Effectiveness of monitoring equipment.</i></b>	N/A
<b><i>Description of how spill was detected.</i></b>	Operator Observation

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	3-25-99
<b><i>Location of discharge.</i></b>	Dock
<b><i>Discharge cause(s).</i></b>	Ship
<b><i>Material(s) discharged.</i></b>	Ship
<b><i>Amount discharged.</i></b>	< 10 gal
<b><i>Amount of discharge that reached navigable waters.</i></b>	< 10 gal
<b><i>Amount recovered.</i></b>	- 10 gal
<b><i>Effectiveness and capacity of secondary containment.</i></b>	N/A
<b><i>Clean-up actions taken.</i></b>	Deployed absorbents
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Insure Operators are trained properly on hose draining
<b><i>Total storage capacity of the tank(s) or impoundment(s) from which the material discharged.</i></b>	N/A
<b><i>Enforcement actions.</i></b>	
<b><i>Effectiveness of monitoring equipment.</i></b>	N/A
<b><i>Description of how spill was detected.</i></b>	Operator Observation

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	5-28-99
<b><i>Location of discharge.</i></b>	Dock
<b><i>Discharge cause(s).</i></b>	Leak in hose
<b><i>Material(s) discharged.</i></b>	Hydraulic Oil
<b><i>Amount discharged.</i></b>	14 gal
<b><i>Amount of discharge that reached navigable waters.</i></b>	14 gal
<b><i>Amount recovered.</i></b>	14 gal
<b><i>Effectiveness and capacity of secondary containment.</i></b>	N/A
<b><i>Clean-up actions taken.</i></b>	Deployed absorbents
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Insure Operators are trained properly on hose draining
<b><i>Total storage capacity of the tank(s) or impoundment(s) from which the material discharged.</i></b>	N/A
<b><i>Enforcement actions.</i></b>	
<b><i>Effectiveness of monitoring equipment.</i></b>	N/A
<b><i>Description of how spill was detected.</i></b>	Operator Observation

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	4-6-2000
<b><i>Location of discharge.</i></b>	Dock/barge/HSC
<b><i>Discharge cause(s).</i></b>	Line unhooked early
<b><i>Material(s) discharged.</i></b>	Furnace Oil
<b><i>Amount discharged.</i></b>	1/2 Bbl
<b><i>Amount of discharge that reached navigable waters.</i></b>	1/2 Bbl
<b><i>Amount recovered.</i></b>	1/2 Bbl
<b><i>Effectiveness and capacity of secondary containment.</i></b>	N/A
<b><i>Clean-up actions taken.</i></b>	Deployed absorbents
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Insure Operators are trained properly on hose training
<b><i>Total storage capacity of the tank(s) or impoundment(s) from which the material discharged.</i></b>	N/A
<b><i>Enforcement actions.</i></b>	
<b><i>Effectiveness of monitoring equipment.</i></b>	N/A
<b><i>Description of how spill was detected.</i></b>	Operator Observation

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	9-29-2000
<b><i>Location of discharge.</i></b>	Dock/barge/HSC
<b><i>Discharge cause(s).</i></b>	Failed gasket
<b><i>Material(s) discharged.</i></b>	#2 Oil
<b><i>Amount discharged.</i></b>	4 gal
<b><i>Amount of discharge that reached navigable waters.</i></b>	4 gal
<b><i>Amount recovered.</i></b>	4 gal
<b><i>Effectiveness and capacity of secondary containment.</i></b>	N/A
<b><i>Clean-up actions taken.</i></b>	Deployed absorbents
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Replace gasket
<b><i>Total storage capacity of the tank(s) or impoundment(s) from which the material discharged.</i></b>	N/A
<b><i>Enforcement actions.</i></b>	
<b><i>Effectiveness of monitoring equipment.</i></b>	N/A
<b><i>Description of how spill was detected.</i></b>	Operator Observation

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	1-16-2001
<b><i>Location of discharge.</i></b>	Outfall 002
<b><i>Discharge cause(s).</i></b>	Sheen on discharge
<b><i>Material(s) discharged.</i></b>	Oil Sheen
<b><i>Amount discharged.</i></b>	< 1 gal
<b><i>Amount of discharge that reached navigable waters.</i></b>	< 1 gal
<b><i>Amount recovered.</i></b>	< 1 gal
<b><i>Effectiveness and capacity of secondary containment.</i></b>	N/A
<b><i>Clean-up actions taken.</i></b>	Deployed absorbents
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Inspect discharge water
<b><i>Total storage capacity of the tank(s) or impoundment(s) from which the material discharged.</i></b>	N/A
<b><i>Enforcement actions.</i></b>	
<b><i>Effectiveness of monitoring equipment.</i></b>	N/A
<b><i>Description of how spill was detected.</i></b>	Operator Observation

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	6-5-2001
<b><i>Location of discharge.</i></b>	Surge Tank
<b><i>Discharge cause(s).</i></b>	Heavy rain
<b><i>Material(s) discharged.</i></b>	Oil Sheen
<b><i>Amount discharged.</i></b>	< 100 gal
<b><i>Amount of discharge that reached navigable waters.</i></b>	< 100 gal
<b><i>Amount recovered.</i></b>	< 100 gal
<b><i>Effectiveness and capacity of secondary containment.</i></b>	N/A
<b><i>Clean-up actions taken.</i></b>	Deployed absorbents
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	N/A
<b><i>Total storage capacity of the tank(s) or impoundment(s) from which the material discharged.</i></b>	N/A
<b><i>Enforcement actions.</i></b>	
<b><i>Effectiveness of monitoring equipment.</i></b>	N/A
<b><i>Description of how spill was detected.</i></b>	Operator Observation

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	6-10-2001
<b><i>Location of discharge.</i></b>	Surge Tank
<b><i>Discharge cause(s).</i></b>	Heavy Rain
<b><i>Material(s) discharged.</i></b>	Oil
<b><i>Amount discharged.</i></b>	~ 100 gal
<b><i>Amount of discharge that reached navigable waters.</i></b>	~ 100 gal
<b><i>Amount recovered.</i></b>	~ 100 gal
<b><i>Effectiveness and capacity of secondary containment.</i></b>	N/A
<b><i>Clean-up actions taken.</i></b>	Deployed absorbents
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	N/A
<b><i>Total storage capacity of the tank(s) or impoundment(s) from which the material discharged.</i></b>	N/A
<b><i>Enforcement actions.</i></b>	
<b><i>Effectiveness of monitoring equipment.</i></b>	N/A
<b><i>Description of how spill was detected.</i></b>	Operator Observation

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	2-12-2002
<b><i>Location of discharge.</i></b>	Dock
<b><i>Discharge cause(s).</i></b>	Hose leak
<b><i>Material(s) discharged.</i></b>	#2 Oil
<b><i>Amount discharged.</i></b>	14 gal
<b><i>Amount of discharge that reached navigable waters.</i></b>	14 gal
<b><i>Amount recovered.</i></b>	14 gal
<b><i>Effectiveness and capacity of secondary containment.</i></b>	N/A
<b><i>Clean-up actions taken.</i></b>	Deployed absorbents
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Insure Operators are trained properly on hose draining
<b><i>Total storage capacity of the tank(s) or impoundment(s) from which the material discharged.</i></b>	N/A
<b><i>Enforcement actions.</i></b>	
<b><i>Effectiveness of monitoring equipment.</i></b>	N/A
<b><i>Description of how spill was detected.</i></b>	Operator Observation

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	3-27-2002
<b><i>Location of discharge.</i></b>	Dock
<b><i>Discharge cause(s).</i></b>	Sump leak
<b><i>Material(s) discharged.</i></b>	Furnace Oil
<b><i>Amount discharged.</i></b>	< 1 gal
<b><i>Amount of discharge that reached navigable waters.</i></b>	< 1 gal
<b><i>Amount recovered.</i></b>	< 1 gal
<b><i>Effectiveness and capacity of secondary containment.</i></b>	N/A
<b><i>Clean-up actions taken.</i></b>	Deployed absorbents
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Repair sump
<b><i>Total storage capacity of the tank(s) or impoundment(s) from which the material discharged.</i></b>	N/A
<b><i>Enforcement actions.</i></b>	
<b><i>Effectiveness of monitoring equipment.</i></b>	N/A
<b><i>Description of how spill was detected.</i></b>	Operator Observation

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	7-15-2002
<b><i>Location of discharge.</i></b>	Dock
<b><i>Discharge cause(s).</i></b>	Flange leak
<b><i>Material(s) discharged.</i></b>	Furnace Oil
<b><i>Amount discharged.</i></b>	21 gal
<b><i>Amount of discharge that reached navigable waters.</i></b>	21 gal
<b><i>Amount recovered.</i></b>	21 gal
<b><i>Effectiveness and capacity of secondary containment.</i></b>	N/A
<b><i>Clean-up actions taken.</i></b>	Boom / containment and sorbents
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Training
<b><i>Total storage capacity of the tank(s) or impoundment(s) from which the material discharged.</i></b>	N/A
<b><i>Enforcement actions.</i></b>	
<b><i>Effectiveness of monitoring equipment.</i></b>	N/A
<b><i>Description of how spill was detected.</i></b>	Operator Observation

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	1-5-2003
<b><i>Location of discharge.</i></b>	Pipeline manifold
<b><i>Discharge cause(s).</i></b>	Flange leak
<b><i>Material(s) discharged.</i></b>	Furnace Oil
<b><i>Amount discharged.</i></b>	21 gal
<b><i>Amount of discharge that reached navigable waters.</i></b>	21 gal
<b><i>Amount recovered.</i></b>	21 gal
<b><i>Effectiveness and capacity of secondary containment.</i></b>	N/A
<b><i>Clean-up actions taken.</i></b>	Boom / containment and sorbents
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Training
<b><i>Total storage capacity of the tank(s) or impoundment(s) from which the material discharged.</i></b>	N/A
<b><i>Enforcement actions.</i></b>	
<b><i>Effectiveness of monitoring equipment.</i></b>	N/A
<b><i>Description of how spill was detected.</i></b>	Operator Observation

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	12-11-2005
<b><i>Location of discharge.</i></b>	Dock
<b><i>Discharge cause(s).</i></b>	Incomplete connection to barge
<b><i>Material(s) discharged.</i></b>	Naphtha
<b><i>Amount discharged.</i></b>	Approximately 5 gallons
<b><i>Amount of discharge that reached navigable waters.</i></b>	Approximately 5 gallons
<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>	Retrained employees on dock procedures
<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>	By Operator

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	2-16-2007
<b><i>Location of discharge.</i></b>	Coker Dock
<b><i>Discharge cause(s).</i></b>	Oil in dike leaked into Ship Channel
<b><i>Material(s) discharged.</i></b>	Coke fine water contaminated with oil
<b><i>Amount discharged.</i></b>	1 barrel
<b><i>Amount of discharge that reached navigable waters.</i></b>	1 barrel
<b><i>Amount recovered.</i></b>	None
<b><i>Effectiveness and capacity of secondary containment.</i></b>	
<b><i>Clean-up actions taken.</i></b>	Oil spill cleaned up by OSRO
<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>	Operator noticed oil in Ship Channel

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	3-22-2007
<b><i>Location of discharge.</i></b>	Coker Dock
<b><i>Discharge cause(s).</i></b>	Oil seeped through seam in concrete
<b><i>Material(s) discharged.</i></b>	Oil
<b><i>Amount discharged.</i></b>	Sheen
<b><i>Amount of discharge that reached navigable waters.</i></b>	Sheen
<b><i>Amount recovered.</i></b>	Sheen
<b><i>Effectiveness and capacity of secondary containment.</i></b>	
<b><i>Clean-up actions taken.</i></b>	Boom deployed, vacuum trucks sucked up sheen
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Repaired seams in concrete
<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>	Operator noticed sheen in Ship Channel

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	8-16-2007
<b><i>Location of discharge.</i></b>	Coker Dock
<b><i>Discharge cause(s).</i></b>	Heavy rain caused trap to overflow to Ship Channel
<b><i>Material(s) discharged.</i></b>	Oil / coke fires
<b><i>Amount discharged.</i></b>	Sheen
<b><i>Amount of discharge that reached navigable waters.</i></b>	Sheen
<b><i>Amount recovered.</i></b>	None
<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>	Operator noticed sheen in Ship Channel

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	11-05-2007
<b><i>Location of discharge.</i></b>	Dock
<b><i>Discharge cause(s).</i></b>	Hydraulic line on dock crane not drained prior to work
<b><i>Material(s) discharged.</i></b>	Hydraulic oil
<b><i>Amount discharged.</i></b>	0.5 gallons
<b><i>Amount of discharge that reached navigable waters.</i></b>	0.5 gallons
<b><i>Amount recovered.</i></b>	None
<b><i>Effectiveness and capacity of secondary containment.</i></b>	
<b><i>Clean-up actions taken.</i></b>	Leak stopped and cleaned up
<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>	Operator noticed hydraulic oil leak when starting crane

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	5-2-2008
<b><i>Location of discharge.</i></b>	Dock
<b><i>Discharge cause(s).</i></b>	Sump pump failed causing overflow to Ship Channel
<b><i>Material(s) discharged.</i></b>	Naptha
<b><i>Amount discharged.</i></b>	0.25 gallons
<b><i>Amount of discharge that reached navigable waters.</i></b>	0.25 gallons
<b><i>Amount recovered.</i></b>	All
<b><i>Effectiveness and capacity of secondary containment.</i></b>	
<b><i>Clean-up actions taken.</i></b>	Boom deployed and oil sheen soaked up
<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>	Operator found material backing up from sump on to the dock

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	9-13-2008
<b><i>Location of discharge.</i></b>	Tank 400
<b><i>Discharge cause(s).</i></b>	Excessive rain – Hurricane Ike
<b><i>Material(s) discharged.</i></b>	Recovered oil / stormwater
<b><i>Amount discharged.</i></b>	1200 barrels
<b><i>Amount of discharge that reached navigable waters.</i></b>	None
<b><i>Amount recovered.</i></b>	1200 barrels
<b><i>Effectiveness and capacity of secondary containment.</i></b>	Contained in lined firewall with no off site impact
<b><i>Clean-up actions taken.</i></b>	Boom deployed. Vacuumed oil and placed in recovered oil system
<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>	Saw tank overflow due to heavy rain

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	1-17-2009
<b><i>Location of discharge.</i></b>	PRSI Dock
<b><i>Discharge cause(s).</i></b>	Hydraulic Crane – Hose rupture
<b><i>Material(s) discharged.</i></b>	Hydraulic Fluid
<b><i>Amount discharged.</i></b>	5 gallons
<b><i>Amount of discharge that reached navigable waters.</i></b>	5 gallons
<b><i>Amount recovered.</i></b>	2 gallons
<b><i>Effectiveness and capacity of secondary containment.</i></b>	
<b><i>Clean-up actions taken.</i></b>	Boom deployed. Sheen soaked up with sorbents.
<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>	N/A
<b><i>Enforcement actions.</i></b>	N/A
<b><i>Effectiveness of monitoring equipment.</i></b>	N/A
<b><i>Description of how spill was detected.</i></b>	Observation of Dock Operator

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	1-31-2009
<b><i>Location of discharge.</i></b>	RBTF
<b><i>Discharge cause(s).</i></b>	Sun pressure – gasket leak
<b><i>Material(s) discharged.</i></b>	VGO/Diesel
<b><i>Amount discharged.</i></b>	150 Bbls
<b><i>Amount of discharge that reached navigable waters.</i></b>	N/A
<b><i>Amount recovered.</i></b>	Unknown
<b><i>Effectiveness and capacity of secondary containment.</i></b>	N/A
<b><i>Clean-up actions taken.</i></b>	Remediated soils
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Changed gasket
<b><i>Total storage capacity of the tank(s) or impoundment(s) from which the material discharged.</i></b>	N/A
<b><i>Enforcement actions.</i></b>	None
<b><i>Effectiveness of monitoring equipment.</i></b>	N/A
<b><i>Description of how spill was detected.</i></b>	Operator

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	5-5-2009
<b><i>Location of discharge.</i></b>	813 tank roof drains
<b><i>Discharge cause(s).</i></b>	
<b><i>Material(s) discharged.</i></b>	VGO
<b><i>Amount discharged.</i></b>	40 Bbls
<b><i>Amount of discharge that reached navigable waters.</i></b>	N/A
<b><i>Amount recovered.</i></b>	
<b><i>Effectiveness and capacity of secondary containment.</i></b>	100%
<b><i>Clean-up actions taken.</i></b>	Remediated soils
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Install catch basin for roof drains
<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>	None
<b><i>Effectiveness of monitoring equipment.</i></b>	
<b><i>Description of how spill was detected.</i></b>	Contractor

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	10-15-2009
<b><i>Location of discharge.</i></b>	RBTF
<b><i>Discharge cause(s).</i></b>	Tank bottom failure
<b><i>Material(s) discharged.</i></b>	VGO
<b><i>Amount discharged.</i></b>	70 Bbls
<b><i>Amount of discharge that reached navigable waters.</i></b>	N/A
<b><i>Amount recovered.</i></b>	
<b><i>Effectiveness and capacity of secondary containment.</i></b>	100%
<b><i>Clean-up actions taken.</i></b>	Remediated soils
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Demolished tank
<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>	None
<b><i>Effectiveness of monitoring equipment.</i></b>	
<b><i>Description of how spill was detected.</i></b>	Operator

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	8-13-2010
<b><i>Location of discharge.</i></b>	RBTF 113 Tank
<b><i>Discharge cause(s).</i></b>	Tank overfill
<b><i>Material(s) discharged.</i></b>	VGO
<b><i>Amount discharged.</i></b>	10 Bbls
<b><i>Amount of discharge that reached navigable waters.</i></b>	N/A
<b><i>Amount recovered.</i></b>	9 Bbls
<b><i>Effectiveness and capacity of secondary containment.</i></b>	100%
<b><i>Clean-up actions taken.</i></b>	Remediated soils
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Replace valve
<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>	None
<b><i>Effectiveness of monitoring equipment.</i></b>	
<b><i>Description of how spill was detected.</i></b>	Operator

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	11-28-2010
<b><i>Location of discharge.</i></b>	204 Tank
<b><i>Discharge cause(s).</i></b>	Bad line weld
<b><i>Material(s) discharged.</i></b>	Resid/Tar
<b><i>Amount discharged.</i></b>	120 Bbls
<b><i>Amount of discharge that reached navigable waters.</i></b>	N/A
<b><i>Amount recovered.</i></b>	Unknown
<b><i>Effectiveness and capacity of secondary containment.</i></b>	100%
<b><i>Clean-up actions taken.</i></b>	Remediate Area
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Repair line
<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>	None
<b><i>Effectiveness of monitoring equipment.</i></b>	
<b><i>Description of how spill was detected.</i></b>	Operator

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	1-24-2011
<b><i>Location of discharge.</i></b>	RBTF
<b><i>Discharge cause(s).</i></b>	Pump failure
<b><i>Material(s) discharged.</i></b>	Crude Oil
<b><i>Amount discharged.</i></b>	6.7 Bbls
<b><i>Amount of discharge that reached navigable waters.</i></b>	N/A
<b><i>Amount recovered.</i></b>	Unknown
<b><i>Effectiveness and capacity of secondary containment.</i></b>	N/A
<b><i>Clean-up actions taken.</i></b>	Remediated Soils
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Repaired pump
<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>	None
<b><i>Effectiveness of monitoring equipment.</i></b>	
<b><i>Description of how spill was detected.</i></b>	Operator

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	3-28-2011
<b><i>Location of discharge.</i></b>	SRU
<b><i>Discharge cause(s).</i></b>	Lack of secondary containment
<b><i>Material(s) discharged.</i></b>	Exchanger solids
<b><i>Amount discharged.</i></b>	0.2 Bbls
<b><i>Amount of discharge that reached navigable waters.</i></b>	N/A
<b><i>Amount recovered.</i></b>	Unknown
<b><i>Effectiveness and capacity of secondary containment.</i></b>	
<b><i>Clean-up actions taken.</i></b>	Remediate Area
<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>	None
<b><i>Effectiveness of monitoring equipment.</i></b>	
<b><i>Description of how spill was detected.</i></b>	Operator

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	6-21-2012
<b><i>Location of discharge.</i></b>	Colonial Pipe Line
<b><i>Discharge cause(s).</i></b>	Pin Hole Leak
<b><i>Material(s) discharged.</i></b>	Diesel
<b><i>Amount discharged.</i></b>	13 Bbls
<b><i>Amount of discharge that reached navigable waters.</i></b>	N/A
<b><i>Amount recovered.</i></b>	0
<b><i>Effectiveness and capacity of secondary containment.</i></b>	
<b><i>Clean-up actions taken.</i></b>	Remediate Soils
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Repaired Line
<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>	NA
<b><i>Effectiveness of monitoring equipment.</i></b>	
<b><i>Description of how spill was detected.</i></b>	Operators

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	4-19-2012
<b><i>Location of discharge.</i></b>	Duratherm
<b><i>Discharge cause(s).</i></b>	Spill from roll-off box
<b><i>Material(s) discharged.</i></b>	F037 Sludge
<b><i>Amount discharged.</i></b>	100 Gallons
<b><i>Amount of discharge that reached navigable waters.</i></b>	N/A
<b><i>Amount recovered.</i></b>	All material
<b><i>Effectiveness and capacity of secondary containment.</i></b>	
<b><i>Clean-up actions taken.</i></b>	Material excavated
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Added spill guards to roll-off
<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>	NA
<b><i>Effectiveness of monitoring equipment.</i></b>	
<b><i>Description of how spill was detected.</i></b>	Duratherm Operations

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	7-18-2012
<b><i>Location of discharge.</i></b>	RBTF P277
<b><i>Discharge cause(s).</i></b>	Flange Leak
<b><i>Material(s) discharged.</i></b>	Crude
<b><i>Amount discharged.</i></b>	16.6 Bbls
<b><i>Amount of discharge that reached navigable waters.</i></b>	N/A
<b><i>Amount recovered.</i></b>	All material
<b><i>Effectiveness and capacity of secondary containment.</i></b>	
<b><i>Clean-up actions taken.</i></b>	All soils excavated
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Repaired flange
<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>	NA
<b><i>Effectiveness of monitoring equipment.</i></b>	
<b><i>Description of how spill was detected.</i></b>	Operator

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	10-8-2013
<b><i>Location of discharge.</i></b>	Refinery Tank Farm T-85
<b><i>Discharge cause(s).</i></b>	Material in Frac tank discharged to ground
<b><i>Material(s) discharged.</i></b>	Diesel
<b><i>Amount discharged.</i></b>	9.7 Bbls
<b><i>Amount of discharge that reached navigable waters.</i></b>	Zero
<b><i>Amount recovered.</i></b>	5 Bbls
<b><i>Effectiveness and capacity of secondary containment.</i></b>	
<b><i>Clean-up actions taken.</i></b>	Spill contained in tank FW – excess liquid was vacuumed, soil remediated
<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>	Frac tank – 21,000 gallons
<b><i>Enforcement actions.</i></b>	NA
<b><i>Effectiveness of monitoring equipment.</i></b>	
<b><i>Description of how spill was detected.</i></b>	Heaters turned on in Frac caused diesel cutting stock to blow out top of Frac tank - Contractor operator immediately shut down heaters.

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	12-14-2013
<b><i>Location of discharge.</i></b>	Refinery Dock
<b><i>Discharge cause(s).</i></b>	Leaking Valve
<b><i>Material(s) discharged.</i></b>	Diesel
<b><i>Amount discharged.</i></b>	0.1 Gallon
<b><i>Amount of discharge that reached navigable waters.</i></b>	0.1 Gallon
<b><i>Amount recovered.</i></b>	0.0
<b><i>Effectiveness and capacity of secondary containment.</i></b>	
<b><i>Clean-up actions taken.</i></b>	Put out sorbents
<b><i>Steps taken to reduce possibility of recurrence.</i></b>	Tighten flange on valve
<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>	TGLO / USCG TBD - Response
<b><i>Effectiveness of monitoring equipment.</i></b>	
<b><i>Description of how spill was detected.</i></b>	Sheen on HSC

## Reportable Oil Spill History

<b><i>Date of discharge.</i></b>	10-13-14
<b><i>Location of discharge.</i></b>	#2 outfall to HSC
<b><i>Discharge cause(s).</i></b>	2.5 rain caused backup of oil to #2 outfall
<b><i>Material(s) discharged.</i></b>	
<b><i>Amount discharged.</i></b>	9.6 Bbls backed up to #2 outfall
<b><i>Amount of discharge that reached navigable waters.</i></b>	Sheen and 5 gallons
<b><i>Amount recovered.</i></b>	9.2 Bbls - w/15 gallons to ground
<b><i>Effectiveness and capacity of secondary containment.</i></b>	
<b><i>Clean-up actions taken.</i></b>	Vacuum product
<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>	\$250 TGLO / USCG TBD – Response
<b><i>Effectiveness of monitoring equipment.</i></b>	
<b><i>Description of how spill was detected.</i></b>	Oil was noted floating on top of flood water by #2 trap and E. Flare

## **APPENDIX I**

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**[RESERVED]**

## APPENDIX J

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### NATIONAL RESPONSE SYSTEM

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## **NATIONAL RESPONSE SYSTEM**

### **National Response Plan**

The National Response Plan (NRP) is an all-discipline, all-hazards plan that establishes a single, comprehensive framework for the management of domestic incidents. It provides the structure and mechanisms for the coordination of Federal support to State, local and tribal incident managers and for exercising direct Federal authorities and responsibilities.

### **Emphasis on Local Response**

All incidents are handled at the lowest possible organizational and jurisdictional level. Police, fire, public health and medical, emergency management, and other personnel are responsible for incident management at the local level. For those events that rise to the level of an Incident of National Significance, the Department of Homeland Security provides operational and/or resource coordination for Federal support to on-scene incident command structures.

### **Proactive Federal Response to Catastrophic Events**

The National Response Plan provides mechanisms for expedited and proactive Federal support to ensure critical life-saving assistance and incident containment capabilities are in place to respond quickly and efficiently to catastrophic incidents. These are high-impact, low-probability incidents, including natural disasters and terrorist attacks that result in extraordinary levels of mass casualties, damage, or disruption severely affecting the population, infrastructure, environment, economy, national morale, and/or government functions.

### **Multi-Agency Coordination Structures**

The National Response Plan establishes multi-agency coordinating structures at the field, regional and headquarters levels. These structures:

- Enable the execution of the responsibilities of the President through the appropriate Federal department and agencies;
- Integrate Federal, State, local, tribal, nongovernmental Organization, and private-sector efforts; and
- Provide a national capability that addresses both site-specific incident management activities and broader regional or national issues, such as impacts to the rest of the country, immediate regional or national actions required to avert or prepare for potential subsequent events, and the management of multiple incidents.

### **New Coordinating Mechanisms Include**

#### **Homeland Security Operations Center (HSOC)**

The HSOC serves as the primary national-level multi-agency situational awareness and operational coordination center. The HSOC includes elements of the Department of Homeland Security and other Federal departments and agencies.

## **NATIONAL RESPONSE SYSTEM (Cont'd)**

### **Homeland Security Operations Center (HSOC) (Cont'd)**

- *National Response Coordination Center (NRCC)*

The NRCC, a functional component of the HSOC, is a multi-agency center that provides overall Federal response coordination.

- *Regional Response Coordination Center (RRCC)*

At the regional level, the RRCC coordinates regional response efforts and implements local Federal program support until a Joint Field Office is established.

### **Interagency Incident Management Group (IIMG)**

A tailored group of senior level Federal interagency representatives who provide strategic advice to the Secretary of Homeland Security during an actual or potential Incident of National Significance.

### **Joint Field Office (JFO)**

A temporary Federal facility established locally to provide a central point for Federal, State, local, and tribal representatives with responsibility for incident support and coordination.

### **Principal Federal Official (PFO)**

A PFO may be designated by the Secretary of Homeland Security during a potential or actual Incident of National Significance. While individual Federal officials retain their authorities pertaining to specific aspects of incident management, the PFO works in conjunction with these officials to coordinate overall Federal incident management efforts.

### **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. The NRP requires modification to the NCP to ensure proper alignment with NRP coordinating structures, processes and protocols.\*

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.

## **NATIONAL RESPONSE SYSTEM (Cont'd)**

### **National Response Team (NRT) (Cont'd)**

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.

\* Since the NCP is a regulation subject to notice and comment requirements, modifications will require future rulemaking not available at this time.

FIGURE J-1.1

NATIONAL RESPONSE PLAN COORDINATION

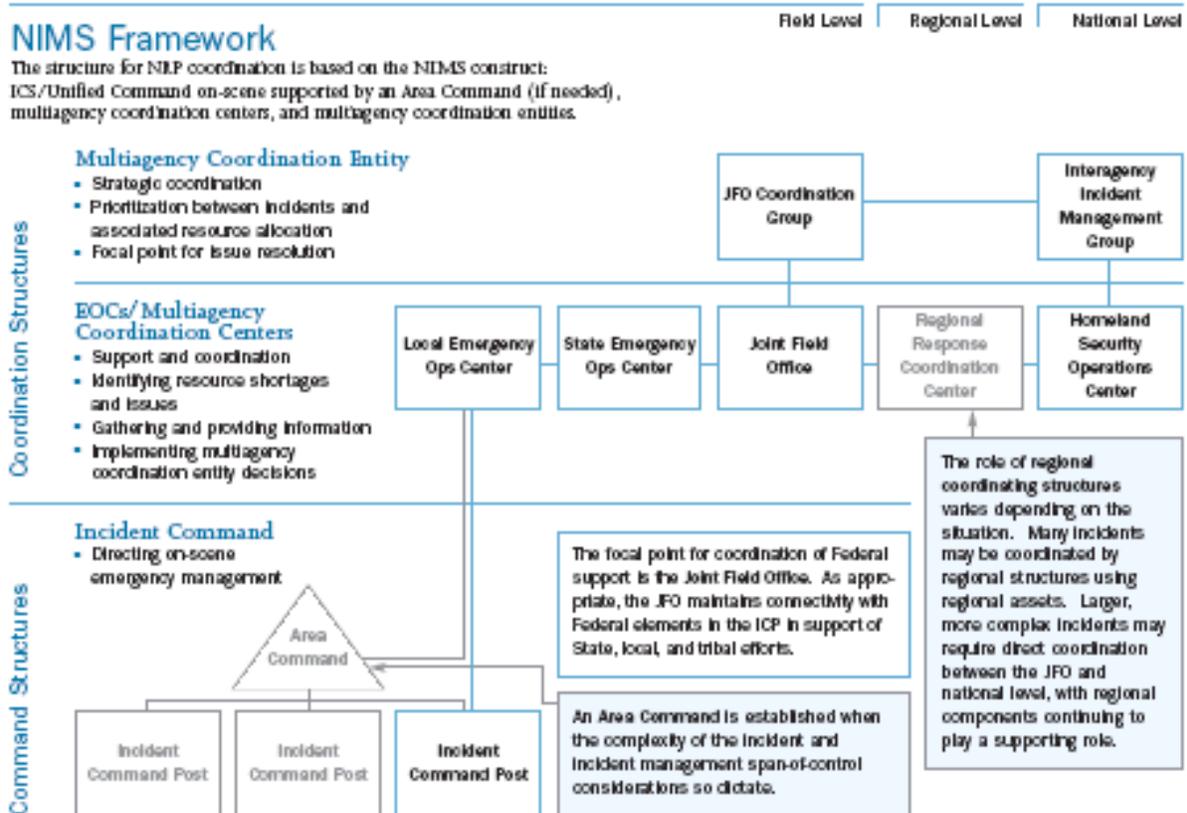
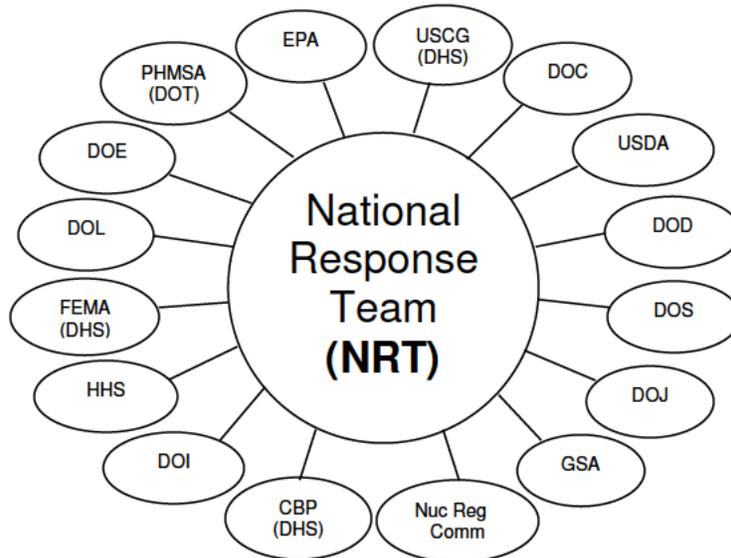


FIGURE J-1.2

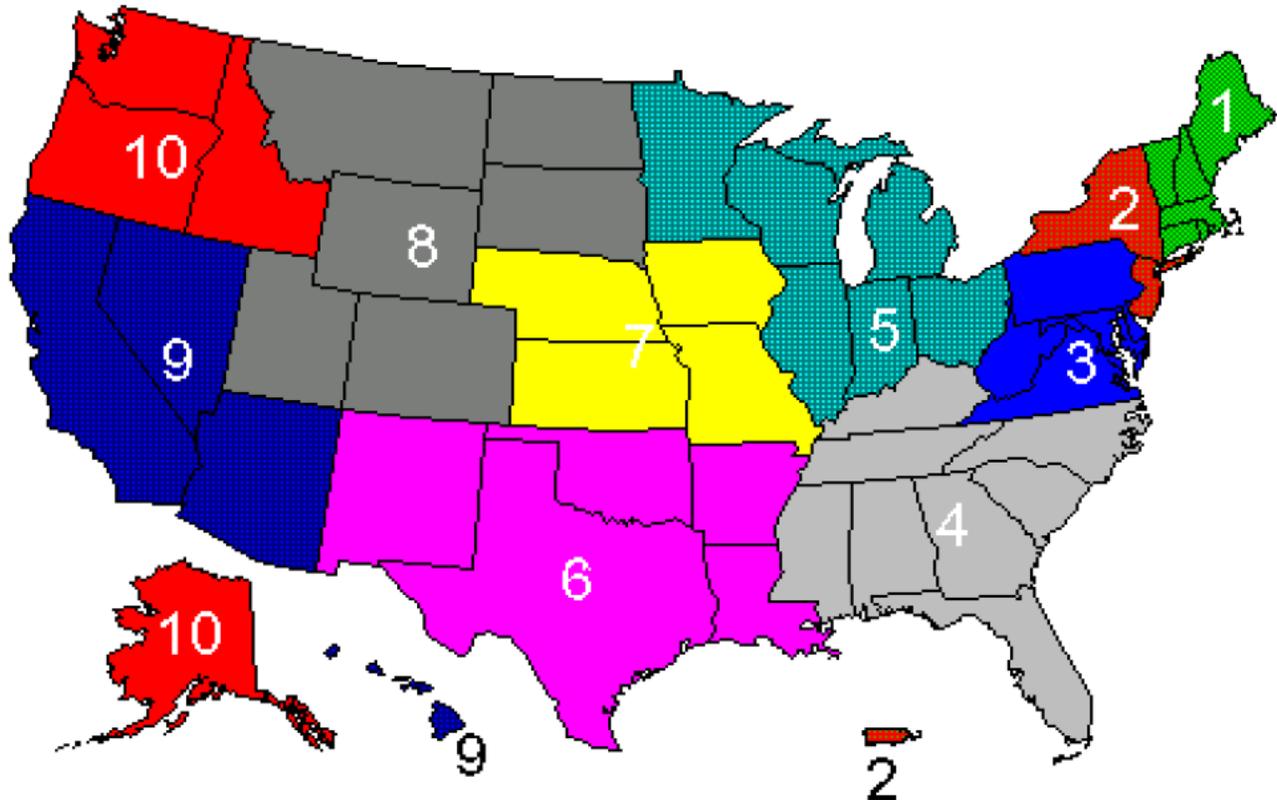
## FEDERAL REPRESENTATION ON NATIONAL RESPONSE TEAM



<b>CBP (DHS)</b>	<b>Customs and Border Protection</b> Assists with the safe and swift movement of equipment and personnel across the U.S. border	<b>EPA</b>	<b>Environmental Protection Agency</b> Information on environmental impact of spills & provide scientific support coordination
<b>DHS</b>	<b>Department of Homeland Security</b> Lead, manage and coordinate the national response to acts of terrorism, natural disasters or other emergencies	<b>FEMA</b>	<b>Federal Emergency Management Agency</b> Coordinate civil emergency planning & mitigation efforts
<b>DOC</b>	<b>Department of Commerce</b> Scientific expertise from NOAA for marine mammals & oil spill response	<b>GSA</b>	<b>General Services Administration</b> Provides logistical and telecommunications support to federal agencies
<b>DOD</b>	<b>Department of Defense</b> Oil spill response equipment, ship salvage, and boarding & diving	<b>HHS</b>	<b>Department of Health and Human Services</b> Assists with the assessment, preservation, and protection of human health and helps ensure the availability of essential human services
<b>DOE</b>	<b>Department of Energy</b> Removal & disposal of radioactive contamination	<b>PHMSA</b>	<b>Pipeline and Hazardous Materials Safety Administration</b> Expertise on all modes of transporting oil & hazardous substances
<b>DOI</b>	<b>Department of Interior</b> Expertise on fish & wildlife	<b>USCG</b>	<b>United States Coast Guard</b> Establishes spill contingency planning requirements for vessels and facilities, and OSC responsibilities for wasteful zone
<b>DOJ</b>	<b>Department of Justice</b> Answer legal questions on spills & response actions	<b>USDA</b>	<b>United States Department of Agriculture</b> Input on the effect of soil contamination by hazardous and oil spills
<b>DOL</b>	<b>Department of Labor</b> Expertise needed to minimize exposure to hazardous material during response operation		

FIGURE J-1.3

## U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA) REGIONAL OFFICES

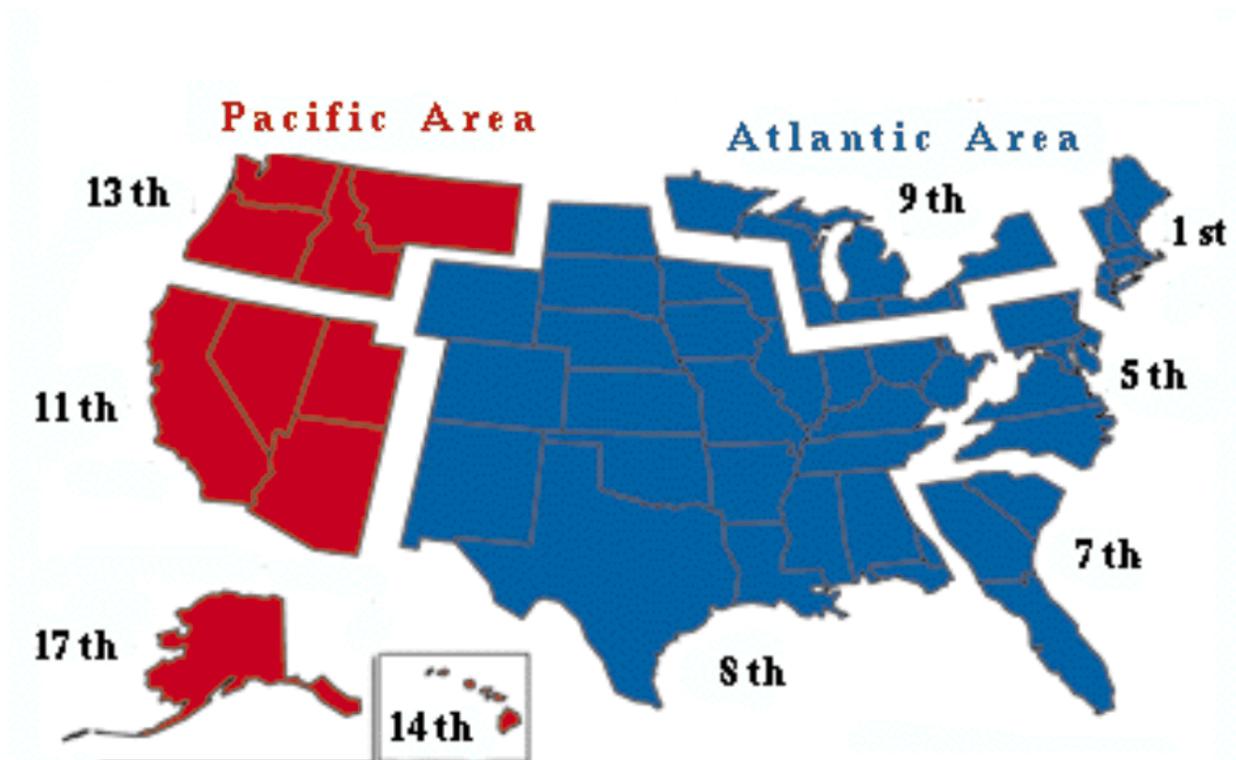


EPA Region 1 Office 1 Congress Street, Suite 1100 Boston, MA 02114-2023	EPA Region 2 Office 290 Broadway, 19 <sup>th</sup> Floor New York, NY 10007-1866	EPA Region 3 Office 1650 Arch Street Philadelphia, PA 19103-2029
EPA Region 4 Office 61 Forsythe Street, SW, 11 <sup>th</sup> Floor Atlanta, GA 30303-3104	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

### MISCELLANEOUS FORMS

	<u>Page</u>
Revision Record.....	K-2
Qualified Individual (QI) Notification Exercise - Internal Exercise Documentation .....	K-3
Response Team Tabletop Exercise - Internal Exercise Documentation .....	K-4
Equipment Deployment Exercise - Internal Exercise Documentation.....	K-6
Notification Data Sheet .....	K-8
Facility Response Equipment Inspection and Deployment Log.....	K-9
Tank Inspection Checklist.....	K-11
Secondary Containment Inspection Checklist.....	K-12
Pasadena Refinery Monthly Tank Gauge Check Schedule .....	K-13
Pasadena Refining System, Inc. Sign-In Sheet for Training / Safety Documentation .....	K-16
Weekly Inspection Checklist.....	K-17
Weekly Separator / #2 Trap Report.....	K-18
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API 653 – Tank In-Service Inspection Checklist .....	K-20
API 653 – Tank Out-Of-Service Inspection Checklist .....	K-26
External Floating Roof Seal Inspection Data Report.....	K-36
Incident Report.....	K-37
Accident Report – Hazardous Liquid Pipeline Systems (PHMSA F 7000-1) .....	K-44
Railroad Commission of Texas Form H-8 .....	K-61
Incident Action Plan .....	K-63

Initial Incident Briefing	(ICS 201-CG)
Incident Action Plan Cover Sheet	CG IAP Cover Sheet
Incident Objectives	(ICS 202-CG)
Organization Assignment List	(ICS 203-CG)
Assignment List	(ICS 204-CG)
Incident Radio Communications Plan	(ICS 205-CG)
Medical Plan	(ICS 206-CG)
Site Safety Plan	
Incident Status Summary	(ICS-209-CG)
Demobilization Checkout	(ICS 221)
Daily Meeting Schedule	(ICS-230-CG)
Resources at Risk Summary	(ICS-232-CG)
Shoreline Assessment Form	
General Plan	

#### Forms and Exercise Documentation File Maintenance Procedures

- These forms and exercise documentation records (or similar forms) 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.



# Qualified Individual (QI) Notification Exercise

## Internal Exercise Documentation

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:

### Organizational Design

- Notifications
- Staff mobilization
- Ability to operate within the response management system described in the plan

### Operational Response

- Discharge control
- Assessment of discharge
- Containment of discharge
- Recovery of spilled material
- Protection of economically and environmentally sensitive areas
- Disposal of recovered product

### Response Support

- Communications
- Transportation
- Personnel support
- Equipment maintenance and support
- Procurement
- Documentation

Certifying Signature: \_\_\_\_\_ Name (Printed): \_\_\_\_\_

Date: \_\_\_\_\_

# 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

1. Date(s) performed: \_\_\_\_\_
  2. Exercise or actual response? \_\_\_\_\_  
If an exercise, announced or unannounced? \_\_\_\_\_
  3. Deployment location(s):  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  4. Time started: \_\_\_\_\_  
Time completed: \_\_\_\_\_
  5. Equipment deployed was:  
Facility - owned \_\_\_\_\_  
Oil spill removal organization - owned if so, which OSRO? \_\_\_\_\_  
Both \_\_\_\_\_
  6. List type and amount of all equipment (e.g., boom and skimmers) deployed and number of support personnel employed:  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  7. Describe goals of the equipment deployment and list any Area Contingency Plan strategies tested (Attach a sketch of equipment deployments and booming strategies):  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
  8. For deployment of facility-owned equipment, was the amount of equipment deployed at least the amount necessary to respond to your facility's average most probable spill?  
\_\_\_\_\_  
\_\_\_\_\_
- Was the equipment deployed in its intended operating environment?  
\_\_\_\_\_  
\_\_\_\_\_

## 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? \_\_\_\_\_

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

FIGURE 2.3

<b>NOTIFICATION DATA SHEET</b>					
<b>Date of Incident:</b> _____		<b>Time of Incident:</b> _____			
<b>INCIDENT DESCRIPTION</b>					
<b>Reporter's Full Name:</b> _____			<b>Position:</b> _____		
<b>Day Phone Number:</b> _____			<b>Evening Phone Number:</b> _____		
<b>Company:</b> <u>Pasadena Refining System, Inc.</u>			<b>Organization Type:</b> _____		
<b>Facility Address:</b> <u>Houston Refinery</u>			<b>Owner's Address:</b> <u>Pasadena Refining System, Inc.</u>		
<u>111 Red Bluff Road</u>			<u>111 Red Bluff Road</u>		
<u>Pasadena, TX 77506</u>			<u>Pasadena, TX 77506</u>		
<b>Facility Latitude:</b> <u>(b) (7)(F), (b) (7)(F)</u>			<b>Facility Longitude:</b> <u>(b) (7)(F), (b) (7)(F)</u>		
<b>Incident Address/Location:</b> _____					
<b>(if not at Facility):</b> _____					
<b>On-Scene Weather Conditions:</b> _____					
<b>Responsible Party's Name:</b> _____			<b>Phone Number:</b> _____		
<b>Responsible Party's Address:</b> _____					
<b>Source and/or cause of incident:</b> _____					
<b>Nearest City:</b> <u>Pasadena</u>					
<b>County:</b> <u>Harris</u>		<b>State:</b> <u>Texas</u>		<b>Zip code:</b> <u>77506</u>	
<b>Section:</b> _____		<b>Township:</b> _____		<b>Range:</b> _____	
<b>Distance from City:</b> _____		<b>Unit of Measure:</b> _____		<b>Direction from City:</b> _____	
<b>Container Type:</b> _____		<b>Container Storage Capacity:</b> _____		<b>Unit of Measure:</b> _____	
<b>Facility Oil Storage Capacity:</b> <u>(b) (3), (b) (7)(F)</u>		<b>Unit of Measure:</b> <u>Gallons</u>			
<b>Were Materials Discharged?</b> _____ <b>(Y/N)</b> <b>Confidential?</b> _____ <b>(Y/N)</b>					
CHRIS Code	Total Quantity Released	Unit of Measure	Water Impact (YES or NO)	Quantity into Water	Unit of Measure
<b>RESPONSE ACTION(S)</b>					
<b>Action(s) taken to Correct, Control, or Mitigate Incident:</b> _____					
<b>Number of Injuries:</b> _____			<b>Number of Deaths:</b> _____		
<b>Evacuation(s):</b> _____ <b>(Y/N)</b> <b>Number Evacuated:</b> _____					
<b>Was there any damage?</b> _____ <b>(Y/N)</b> <b>Medium Affected:</b> _____					
<b>Description:</b> _____					
<b>More Information about Medium:</b> _____					
<b>CALLER NOTIFICATIONS</b>					
<b>National Response Center (NRC):</b> <u>1-800-424-8802</u>					
<b>Additional Notifications (Circle all applicable):</b> <u>USCG</u> <u>EPA</u> <u>State</u> <u>Other</u>					
<b>Describe:</b> _____					
<b>NRC Incident Assigned No:</b> _____					
<b>ADDITIONAL INFORMATION</b>					
<b>Any information about the incident not recorded elsewhere in this report:</b> _____					
<b>Meeting Federal Obligations to Report?</b> _____ <b>(Y/N)</b> <b>Date Called:</b> _____					
<b>Calling for Responsible Party?</b> _____ <b>(Y/N)</b> <b>Time Called:</b> _____					
<b>NOTE: DO NOT DELAY NOTIFICATION PENDING COLLECTION OF ALL INFORMATION.</b>					

## FACILITY RESPONSE EQUIPMENT INSPECTION AND DEPLOYMENT LOG

ANNUAL EQUIPMENT INSPECTION					SEMI-ANNUAL DEPLOYMENT LOG	
Description	Type	Quantity	Location	Date Inspected/ Deployed	Required?	Comments
<b>RESPONSE EQUIPMENT</b>						
Boom, 18" skirt, Acmel 1991	Acmel	1500'	Dock			
Open Top Trailer, Eagle /1991	Eagle	1	Dock			
Absorbent Pads, 18" x 18"	18" x 18"	20 Bales	Warehouse			
Absorbent Sausage	8'	20	Warehouse			
<b>FIRE EXTINGUISHING EQUIPMENT</b>						
1200 GPM Foam Pumper	1200 GPM	1	Refinery Fire House			
1500 GPM Foam Pumper	1500 GPM	1	Refinery Fire House			
5" Fire Hose	5"	1000	Refinery Fire House			
3" Fire Hose	3"	1600	Refinery Fire House			
1.75" Fire Hose	1.75"	400'	Refinery Fire House			
3500 w/Generator	3500 W	1	Refinery Fire House			
500 w/Ext-a-lites	500	2	Refinery Fire House			
Foam	---	6	Refinery Fire House			
SCBA	---	6	Refinery Fire House			
Landing Zone Kit	---	1	Refinery Fire House			
AFFF/ATC Foam	AFFF/ATC	1000 gal	Refinery Fire House			
1000 Portable Monitors	1000	2	Refinery Fire House			
1250 GPM Portable Multiversal Monitor Reserve Foam/Dry Chemical	1250 GPM	1	Refinery Fire House			
500 Gallon Foam Trailer AFF/ATC	500 Gal.	2	Refinery Fire House			
5" Stortz x (4) 2 ½ NST. Gate Manifold	5" Stortz	1	Refinery Fire House			
5" Stortz x (3) 2 ½ NST. Gate Manifold	5" Stortz	1	Refinery Fire House			
5" Stortz Connections	5"	Multiple	Refinery Fire House			
Portable Light Plant	---	1	Refinery Fire House			
Portable 1000 gpm Monitors	1000 GPM	2	Refinery Fire House			
Type 111 Ambulance (BlS) Combination EMS & Rescue	Type III	1	Refinery Fire House			
12 Man High: High Angle and Confined Space	12 Man	1	Refinery Fire House			

Pasadena Refining System, Inc.  
Pasadena Refinery

K-9

Integrated Contingency Plan  
April 2006

ANNUAL EQUIPMENT INSPECTION					SEMI-ANNUAL DEPLOYMENT LOG	
Description	Type	Quantity	Location	Date Inspected/ Deployed	Required?	Comments
Breathing Air Cascade trailer (4 Bottle) with 8 spare SCBA Bottles	4 Bottle	1	Refinery Fire House			
6 passenger Suburban	6 Pas.	1	Refinery Fire House			
½ ton pickup	½ ton	1	Refinery Fire House			
Level A Suits (2-PVC, 1 Fire Proximity Suit, and 2-Limited use suits)	Level A	5	Refinery Fire House			
Self Continued Breathing Apparatuses and Emergency Escape Breathing Devices	---	100+	Various			
1-Chlorine Repair Kit BC	---	1	Refinery Fire House			
Fire Extinguishers	---	200+	Refinery Fire House			
Safety Utility Pickups (After Hours)	---	2	Various			
Basic Life Support First Aid Kits	---	10	(4) Health Services Treatment Office, (5) Refinery Firehouse, and (1) Safety Office			
COMMUNICATION EQUIPMENT						
Motorola HT6CC, 466.9875 Freq.	HTC6CC	2	Each Fire Truck			
Motorola HT6CC, 466.9875 Freq.	HTC6CC	1	Main Gate			
Motorola HT6CC, 466.9875 Freq.	HTC6CC	2	Shift Foreman			
Motorola HT6CC, 466.9875 Freq.	HTC6CC	2	EOC			
Motorola HT6CC, 466.9875 Freq.	HTC6CC	6	Safety Control			
Nokia PT612 Cell Phone	Cellular	1	Security Control			
Nokia PT612 Cell Phone	Cellular	2	EOC			
Nokia PT612 Cell Phone	Cellular	4	Incident Commander			
Motorola TRE 1263A, 466.2125 Freq.	TRE1263 A	1	Laboratory			
Various Beepers	---	106+	Response Personnel			

Date of Inspection/Deployment: \_\_\_\_\_

Signature of Inspector: \_\_\_\_\_

**NOTE:** Maintain these inspection/deployment logs in the Plant File and retain for five (5) years.

## Tank Inspection Checklist

---

Facility Tanks are visually inspected periodically during daily rounds and are thoroughly inspected in accordance with API 653 as detailed in the Facility's SPCC Plan. The tanks are inspected against the following checklist guide:

- Check tanks for leaks, specifically looking for:
  - Drip marks
  - Discoloration of tanks
  - Puddles containing spilled or leaked material
  - Corrosion
  - Cracks
  - Localized dead vegetation
  - Check seals are in tack
  - Ladder walkway is free of damage
  
- 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

Discrepancies are noted in the operator's log. These records are maintained for a minimum of three years and are available for review at any time at the Facility.

## Secondary Containment Inspection Checklist

---

Facility Secondary Containment systems are visually inspected periodically during daily rounds. The Secondary Containment systems are inspected against the following checklist guide:

- 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
  
- Retention and drainage ponds (as applicable)
  - Erosion
  - Available capacity
  - Presence of spilled or leaked material
  - Debris
  - Stressed vegetation

Discrepancies are noted in the operator's log. These records are maintained for a minimum of three years and are available for review at any time at the Facility.

**PASADENA REFINERY**

**UNIT/AREA:** Oil Movements - All Areas      **PROCEDURE No.** OM3212  
**TITLE:** Monthly Tank Gauge Check Schedule

**PURPOSE:** To outline steps in monthly tank gauge check

**PRECAUTIONS:** Tanks are to be gauged during daylight hours

**PREREQUISITES:** Use attached schedule and check list

**SPECIAL EQUIPMENT:** Hand Line Tape, Water Paste

**PROCEDURE:** Monthly Tank Gauge Check Schedule

Once a month the tanks on the attached list need to be hand lined and compared to the Varec auto gauge. Follow the schedule whenever possible. If you miss the scheduled date, do the check as near to the date as possible.

1. On the appropriate date, fill out the attached Monthly Tank Gauge Check sheet.
2. Fill in Tank Number and Date.
3. Fill in the following in Feet-In./8ths
  - a. Gauge Height
  - b. Ullage
  - c. Actual Gauge
  - d. Local Gauge Reading
  - e. Digital Reading (if applicable)
  - f. Difference in Actual and Local
  - g. Difference in Actual and Digital
  - h. Water Cut (if applicable)
4. Sign the form.
5. Tank gauges that are off more than 6" are to be reported to the shift supervisor on duty for follow-up.
6. A work order priority "E" should be written by the gauger for tank gauges that are off more than 6". Fill in the work order number on the check sheet.
7. A work order priority "2" should be written by the gauger for tank gauges that are off between 2" and 5 7/8". Fill in the work order number on the check sheet.
8. Turn the Monthly Tank Gauge Check sheet in to the Oil Movements Manager.

Issue Date: 05/05/98

Page 1 of 3

Validated By: \_\_\_\_\_

Approved By: \_\_\_\_\_

Emp. Rep: \_\_\_\_\_ Date: \_\_\_\_\_

Mfg. Mgr: \_\_\_\_\_ Date: \_\_\_\_\_

Rev. #: 1 Date: 08/20/98

O.M. Mgr. \_\_\_\_\_ Date: \_\_\_\_\_

## PASADENA REFINERY

UNIT/AREA: Oil Movements - All AreasPROCEDURE No. OM3212TITLE: Monthly Tank Gauge Check Schedule

## MONTHLY TANK GAUGE CHECK SCHEDULE

	RBTF	DOCK	BLENDER	#1 PH	ENV. SVCS
DAY OF MONTH	TANK #	TANK #	TANK #	TANK #	TANK #
1		814	309	204	205
2	102	1			
3	103				
4		337	330		
5	111			203	65
6	112	336			
7					
8	113	206	307		
9				186	
10	118	85			202
11			331		
12		50			
13					
14	109	66	332		
15					
16	807	353			97
17			342		
18	815	340			
19					316
20	816	341			
21			310		
22	817	343			317
23					
24	822	339			
25			308		326
26	830	349			
27					
28	831	350			327
29					
30					
31					

Tank gauges will be recorded on the monthly tank gauge check sheet.

If required, a work order to repair a bad gauge will be written.

Varec gauges that are off 0'-6" or more will have a work order priority of "E". Others are Priority "2".

Issue Date: 05/05/98

Page 2 of 3

Validated By: \_\_\_\_\_

Approved By: \_\_\_\_\_

Emp. Rep: \_\_\_\_\_ Date: \_\_\_\_\_

Mfg. Mgr: \_\_\_\_\_ Date: \_\_\_\_\_

Rev. #: 1 Date: 08/20/98

O.M. Mgr: \_\_\_\_\_ Date: \_\_\_\_\_

PASADENA REFINERY

UNIT/AREA: Oil Movements - All Areas      PROCEDURE No. OM3212  
 TITLE: Monthly Tank Gauge Check Schedule

<b>PASADENA REFINERY</b>		
<b>MONTHLY TANK GAUGE CHECK</b>		
TANK NO. _____		DATE: _____
		FEET - IN./8THS
1	Gauge Height	
2	Ullage	
3	Actual Gauge	
4	Local Gauge Reading	
5	Digital Reading (if applicable)	
6	Difference of Actual & Local	
7	Difference of Actual & Digital	
8	Water Cut (if applicable)	
GAUGED BY: _____		

- Tanks are to be gauged during daylight hours only.
- Tank gauges that are off more than 6" are to be reported to the shift supervisor on duty for follow-up.
- If a Work Order is written, record the WO# here. \_\_\_\_\_

Issue Date: <u>05/05/98</u>	Page 3 of 3
Validated By: _____	Approved By: _____
Emp. Rep: _____ Date: _____	Mfg. Mgr: _____ Date: _____
Rev. #: <u>1</u> Date: <u>08/20/98</u>	O.M. Mgr. _____ Date: _____

**PASADENA REFINING SYSTEM, INC.**  
SIGN-IN SHEET for TRAINING/SAFETY DOCUMENTATION

**Instructor** (print) \_\_\_\_\_ (signature) \_\_\_\_\_

**Courses** \_\_\_\_\_ **No of hours** \_\_\_\_\_ **Date** \_\_\_\_\_

<b>Name PRINT</b>	<b>Time In/out</b>	<b>Dept or Zone</b>	<b>Contractor Company</b>	<b>Signature</b>
1.				
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3.				
4.				
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15.				

**UNDERSTANDING** checked by  
 verbal questions , written questions , demonstration , discussion  
, other (please identify) , key points \_\_\_\_\_

\_\_\_\_\_  
 \_\_\_\_\_

**COMMENTS Return to Training Department, Tel 3925**  
S:\FORMS\SIGNINDOCUMENT

### WEEKLY INSPECTION CHECKLIST

DATE \_\_\_\_\_ TIME \_\_\_\_\_ INCHES OF RAIN \_\_\_\_\_  
INSPECTOR \_\_\_\_\_

**PROBLEMS TO LOOK FOR, SURFACE IMPOUNDMENTS ( SI ):**

- 1. Less than 2 feet of Freeboard.
- 2. Unexplained drop in water level.
- 3. Breach in Dike integrity
- 4. Pump or Valve failure associated with Surface Impoundment level control.

Stormwater Pond:    OK \_\_\_\_\_    N/A \_\_\_\_\_    PROBLEM # \_\_\_\_\_  
 Moat:                    OK \_\_\_\_\_    N/A \_\_\_\_\_    PROBLEM # \_\_\_\_\_  
 Bauxite Pond:        OK \_\_\_\_\_    N/A \_\_\_\_\_    PROBLEM # \_\_\_\_\_

**PROBLEMS TO LOOK FOR – CONTAINER STORAGE AREA:**

- 1. Spills or leaks from containers.
- 2. Drum tops not secured.
- 3. Unlabeled or improperly labeled containers.
- 4. Less than 2 feet of aisle space.
- 5. Corroded or otherwise unacceptable containers.
- 6. Liquids in containment area.

Container Storage Area:                    OK \_\_\_\_\_                    PROBLEM # \_\_\_\_\_

**PROBLEMS TO LOOK FOR, SECURITY EQUIPMENT, COMMUNICATIONS/ALARMS, SPILL CONTROL EQUIPMENT AND FIRE CONTROL EQUIPMENT:**

- 1. Fence, gates or locks in bad order.
- 2. Signs in bad order.
- 3. Alarms, telephones or radios not working.
- 4. Spill control equipment unavailable or not operational.
- 5. Fire control equipment unavailable or not operational.

Emergency Response:                    OK \_\_\_\_\_                    PROBLEM # \_\_\_\_\_

If any problems are noted a PROBLEM DEFINITION AND FOLLOW-UP REPORT must be filed with this Weekly Inspection Checklist.

OBSERVATIONS \_\_\_\_\_  
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# WEEKLY SEPARATOR / #2 TRAP REPORT

Week Ending Date: \_\_\_\_\_

Separator	OK	Remarks
Safety Shower & Eye Wash		
30 min. Air Pack (2 ea.)		
Fire Extinguisher (4 ea.)		
H2S Monitor & sensors		
Water Jel Blanket		
Respirators (organic)		

#2 Trap	OK	Remarks
H2S Portable Monitors (2 ea.)		
Fire Extinguisher (1 ea.)		
Safety Shower & Eye Wash		

DATE	MBA CALLED	TIME	001	002	003	WHO CALLED	SPOKE TO

COMMENTS #2 TRAP: \_\_\_\_\_

COMMENTS #3 TRAP: \_\_\_\_\_

COMMENTS OUTFALL 001 & MOAT: \_\_\_\_\_

COMMENTS DRUM STORAGE AREA: \_\_\_\_\_

**SPECIAL INSPECTION CHECKLIST**  
**After Significant Rainfall Events**

DATE \_\_\_\_\_ TIME \_\_\_\_\_ INCHES OF RAIN \_\_\_\_\_

INSPECTOR \_\_\_\_\_

**PROBLEMS TO LOOK FOR, SURFACE IMPOUNDMENTS:**

1. Erosion or structural deterioration of containment dike or cap.
2. Less than 2 feet of Freeboard.
3. Unexplained drop in water level.
4. Pump or Valve failure associated with Surface Impoundment level control.

Stormwater Pond:	OK _____	N/A _____	PROBLEM # _____
Moat:	OK _____	N/A _____	PROBLEM # _____
Bauxite Pond:	OK _____	N/A _____	PROBLEM # _____

**PROBLEMS TO LOOK FOR, CONTAINER STORAGE AREA:**

1. Overfilling of sump and containment area.
2. Standing liquids on drum tops.

Container Storage Area: OK \_\_\_\_\_ PROBLEM # \_\_\_\_\_

If any problems are noted a PROBLEM DEFINITION AND FOLLOW-UP REPORT must be filed with the Special Inspection Checklist.

OBSERVATIONS \_\_\_\_\_

\_\_\_\_\_  
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 \_\_\_\_\_  
 \_\_\_\_\_

## TANK INSPECTION, REPAIR, ALTERATION, AND RECONSTRUCTION

C-3

TANK IN-SERVICE INSPECTION CHECKLIST		
Item	Completed ✓	Comments
<b>C.1.1 FOUNDATION</b>		
Measure foundation levelness and bottom elevations (see Appendix B for extent of measurements).		
<b>C.1.1.1 Concrete Ring</b>		
a. Inspect for broken concrete, spalling, and cracks, particularly under backup bars used in welding butt welded annular rings under the shell.		
b. Inspect drain openings in ring, back of waterdraw basins and top surface of ring for indications of bottom leakage.		
c. Inspect for cavities under foundation and vegetation against bottom of tank.		
d. Check that runoff rainwater from the shell drains away from tank.		
e. Check for settlement around perimeter of tank.		
<b>C.1.1.2 Asphalt</b>		
a. Check for settling of tank into asphalt base which would direct runoff rain water under the tank instead of away from it.		
b. Look for areas where leaching of oil has left rock filler exposed, which indicates hydrocarbon leakage.		
<b>C.1.1.3 Oiled Dirt or Sand</b>		
Check for settlement into the base which would direct runoff rain water under the tank rather than away from it.		
<b>C.1.1.4 Rock</b>		
Presence of crushed rock under the steel bottom usually results in severe underside corrosion. Make a note to do additional bottom plate examination (ultrasonic, hammer testing, or turning of coupons) when the tank is out of service.		
<b>C.1.1.5 Site Drainage</b>		
a. Check site for drainage away from the tank and associated piping and manifolds.		
b. Check operating condition of the dike drains.		
<b>C.1.1.6 Housekeeping</b>		
Inspect the area for buildup of trash, vegetation, and other inflammables buildup.		
<b>C.1.2 SHELLS</b>		
<b>C.1.2.1 External Visual Inspection</b>		
a. Visually inspect for paint failures, pitting, and corrosion.		
b. Clean off the bottom angle area and inspect for corrosion and thinning on plate and weld.		
c. Inspect the bottom-to-foundation seal, if any.		
<b>C.1.2.2 Internal (Floating Roof Tank)</b>		
Visually inspect for grooving, corrosion, pitting, and coating failures.		
<b>C.1.2.3 Riveted Shell Inspection</b>		
a. Inspect external surface for rivet and seam leaks.		
b. Locate leaks by sketch or photo (location will be lost when shell is abrasive cleaned for painting).		
c. Inspect rivets for corrosion loss and wear.		
d. Inspect vertical seams to see if they have been full fillet lap welded to increase joint efficiency.		

TANK IN-SERVICE INSPECTION CHECKLIST—Continued		
Item	Completed ✓	Comments
e. If no record exists of vertical riveted seams, dimension and sketch (or photograph) the rivet pattern: number of rows, rivet size, pitch length, and note whether the joint is butt riveted or lap riveted.		
<b>C.1.2.4 Wind Girder (Floating Roof Tanks)</b>		
a. Inspect wind girder and handrail for corrosion damage (paint failure, pitting, corrosion product buildup), especially where it occurs at tack welded junction, and for broken welds.		
b. Check support welds to shell for pitting, especially on shell plates.		
c. Note whether supports have reinforcing pads welded to shell.		
<b>C.1.3 SHELL APPURTENANCES</b>		
<b>C.1.3.1 Manways and Nozzles</b>		
a. Inspect for cracks or signs of leakage on weld joint at nozzles, manways, and reinforcing plates.		
b. Inspect for shell plate dimpling around nozzles, caused by excessive pipe deflection.		
c. Inspect for flange leaks and leaks around bolting.		
d. Inspect sealing of insulation around manways and nozzles.		
e. Check for inadequate manway flange and cover thickness on mixer manways.		
<b>C.1.3.2 Tank Piping Manifolds</b>		
a. Inspect manifold piping, flanges, and valves for leaks.		
b. Inspect fire fighting system components.		
c. Check for anchored piping which would be hazardous to the tank shell or bottom connections during earth movement.		
d. Check for adequate thermal pressure relief of piping to the tank.		
e. Check operation of regulators for tanks with purge gas systems.		
f. Check sample connections for leaks and for proper valve operation.		
g. Check for damage and test the accuracy of temperature indicators.		
h. Check welds on shell-mounted davit clips above valves 6 inches and larger.		
<b>C.1.3.3 Autogauge System</b>		
a. Inspect autogauge tape guide and lower sheave housing (floating swings) for leaks.		
b. Inspect autogauge head for damage.		
c. Bump the checker on autogauge head for proper movement of tape.		
d. Identify size and construction material of autogauge tape guide (floating roof tanks).		
e. Ask operator if tape tends to hang up during tank roof movement (floating roof tanks).		
f. Compare actual product level to the reading on the autogauge (maximum variation is 2 inches).		
g. On floating roof tanks, when the roof is in the lowest position, check that no more than two feet of tape are exposed at the end of the tape guide.		
h. Inspect condition of board and legibility of board-type autogauges.		
i. Test freedom of movement of marker and float.		
<b>C.1.3.4 Shell-Mounted Sample Station</b>		
a. Inspect sample lines for function of valves and plugging of lines, including drain or return-to-tank line.		
b. Check circulation pump for leaks and operating problems.		

## TANK INSPECTION, REPAIR, ALTERATION, AND RECONSTRUCTION

C-5

TANK IN-SERVICE INSPECTION CHECKLIST—Continued		
Item	Completed ✓	Comments
c. Test bracing and supports for sample lines and equipment.		
<b>C.1.3.5 Heater (Shell Manway Mounted)</b>		
Inspect condensate drain for presence of oil indicating leakage.		
<b>C.1.3.6 Mixer</b>		
a. Inspect for proper mounting flange and support.		
b. Inspect for leakage.		
c. Inspect condition of power lines and connections to mixer.		
<b>C.1.3.7 Swing Lines: Winch Operation</b>		
a. Nonfloating. Raise, then lower the swing line with the winch, and check for cable tightness to confirm that swing line lowered properly.		
b. Floating. With tank half full or more, lower the swing line, then let out cable and check if swing has pulled cable tight, indicating that the winch is operating properly.		
c. Indicator. Check that the indicator moves in the proper direction: Floating swing line indicators show a lower level as cable is wound up on the winch. Non-floating swing line indicators show the opposite.		
<b>C.1.3.8 Swing Lines: External Guide System</b>		
Check for leaks at threaded and flanged joints.		
<b>C.1.3.9 Swing Lines: Identify Ballast Varying Need</b>		
Check for significant difference in stock specific gravity.		
<b>C.1.3.10 Swing Lines: Cable Material and Condition</b>		
a. For non-stainless steel cable, check for corrosion over entire length.		
b. All cable: check for wear or fraying.		
<b>C.1.3.11 Swing lines: Product Sample Comparison</b>		
Check for water or gravity differences that would indicate a leaking swing joint.		
<b>C.1.3.12 Swing Lines: Target</b>		
Target should indicate direction of swing opening (up or down) and height above bottom where suction will be lost with swing on bottom support.		
<b>C.1.4 ROOFS</b>		
<b>C.1.4.1 Deck Plate Internal Corrosion</b>		
For safety, before accessing the roof, check with ultrasonic instrument or lightly use a ball peen hammer to test the deck plate near the edge of the roof for thinning. (Corrosion normally attacks the deck plate at the edge of a fixed roof and at the rafters in the center of the roof first.)		
<b>C.1.4.2 Deck Plate External Corrosion</b>		
Visually inspect for paint failure, holes, pitting, and corrosion product on the roof deck.		
<b>C.1.4.3 Roof Deck Drainage</b>		
Look for indication of standing water. (Significant sagging of fixed roof deck indicates potential rafter failure. Large standing water areas on a floating roof indicate inadequate drainage design or, if to one side, a nonlevel roof with possible leaking pontoons.)		
<b>C.1.4.4 Level of Floating Roof</b>		
At several locations, measure distance from roof rim to a horizontal weld seam above the roof. A variance in the readings indicates a nonlevel roof with possible shell out-of-round, out-of-plumb, leaking pontoons, or hang-up. On small diameter tanks, an unlevel condition can indicate unequal loading at that level.		

<b>TANK IN-SERVICE INSPECTION CHECKLIST—Continued</b>		
Item	Completed ✓	Comments
<b>C.1.4.5 Gas Test Internal Floating Roof</b>		
Test for explosive gas on top of the internal floating roof. Readings could indicate a leaking roof, leaking seal system, or inadequate ventilation of the area above the internal floating roof.		
<b>C.1.4.6 Roof Insulation</b>		
a. Visually inspect for cracks or leaks in the insulation weather coat where runoff rain water could penetrate the insulation.		
b. Inspect for wet insulation under the weather coat.		
c. Remove small test sections of insulation and check roof deck for corrosion and holes near the edge of the insulated area.		
<b>C.1.4.7 Floating Roof Seal Systems</b>		
a. Measure and record maximum seal-to-shell gaps at:		
1. Low pump out.		
2. Mid-shell.		
3. High liquid level.		
b. Measure and record annular space at 30 foot spacing (minimum of four quadrants) around roof and record. Measurements should be taken in directly opposite pairs.		
1. _____ Opposite pair 1.		
2. _____ Opposite pair 2.		
c. Check if seal fabric on primary shoe seals is pulling shoes away from shell (fabric not wide enough).		
d. Inspect fabric for deterioration, holes, tears, and cracks.		
e. Inspect visible metallic parts for corrosion and wear.		
f. Inspect for openings in seals that would permit vapor emissions.		
g. Inspect for protruding bolt or rivet heads against the shell.		
h. Pull both primary and secondary seal systems back all around the shell to check their operation.		
i. Inspect secondary seals for signs of buckling or indications that their angle with the shell is too shallow.		
j. Inspect wedge-type wiper seals for flexibility, resilience, cracks, and tears.		
<b>C.1.5 ROOF APPURTENANCES</b>		
<b>C.1.5.1 Sample Hatch</b>		
a. Inspect condition and functioning of sample hatch cover.		
b. On tanks governed by Air Quality Monitoring District rules, check for the condition of seal inside hatch cover.		
c. Check for corrosion and plugging on thief and gauge hatch cover.		
d. Where sample hatch is used to reel gauge stock level, check for marker and tab stating hold off distance.		
e. Check for reinforcing pad where sample hatch pipe penetrates the roof deck.		
f. On floating roof sample hatch and recoil systems, inspect operation of recoil reel and condition of rope.		
g. Test operation of system.		
h. On ultra clean stocks such as JP4, check for presence and condition of protective coating or liner inside sample hatch (preventing rust from pipe getting into sample).		

## TANK INSPECTION, REPAIR, ALTERATION, AND RECONSTRUCTION

C-7

TANK IN-SERVICE INSPECTION CHECKLIST—Continued		
Item	Completed ✓	Comments
<b>C.1.5.2 Gauge Well</b>		
a. Inspect visible portion of the gauge well for thinning, size of slots, and cover condition.		
b. Check for a hold off distance marker and tab with hold off distance (legible).		
c. On floating roofs, inspect condition of roof guide for gauge well, particularly the condition of the rollers for grooving.		
d. If accessible, check the distance from the gauge well pipe to the tank shell at different levels.		
e. If tank has a gauge well washer, check valve for leakage and for presence of a bull plug or blind flange.		
<b>C.1.5.3 Fixed Roof Scaffold Support</b>		
Inspect scaffold support for corrosion, wear, and structural soundness.		
<b>C.1.5.4 Autogauge: Inspection Hatch and Guides (Fixed Roof)</b>		
a. Check the hatch for corrosion and missing bolts.		
b. Look for corrosion on the tape guide's and float guide's wire anchors.		
<b>C.1.5.5 Autogauge: Float Well Cover</b>		
a. Inspect for corrosion.		
b. Check tape cable for wear or fraying caused by rubbing on the cover.		
<b>C.1.5.6 Sample Hatch (Internal Floating Roof)</b>		
a. Check overall conditions.		
b. When equipped with a fabric seal, check for automatic sealing after sampling.		
c. When equipped with a recoil reel opening device, check for proper operations.		
<b>C.1.5.7 Roof-Mounted Vents (Internal Floating Roof)</b>		
Check condition of screens, locking and pivot pins.		
<b>C.1.5.8 Gauging Platform Drip Ring</b>		
On fixed roof tanks with drip rings under the gauging platform or sampling area, inspect for plugged drain return to the tank.		
<b>C.1.5.9 Emergency Roof Drains</b>		
Inspect vapor plugs for emergency drain: that seal fabric discs are slightly smaller than the pipe ID and that fabric seal is above the liquid level.		
<b>C.1.5.10 Removable Roof Leg Racks</b>		
Check for leg racks on roof.		
<b>C.1.5.11 Vacuum Breakers</b>		
Report size, number, and type of vacuum breakers. Inspect vacuum breakers. If high legs are set, check for setting of mechanical breaker in high leg position.		
<b>C.1.5.12 Rim Vents</b>		
a. Check condition of the screen on the rim vent cover.		
b. Check for plating off or removal of rim vents where jurisdictional rules do not permit removal.		
<b>C.1.5.13 Pontoon Inspection Hatches</b>		
a. Open pontoon inspection hatch covers and visually check inside for pontoon leakage.		
b. Test for explosive gas (an indicator of vapor space leaks).		

<b>TANK IN-SERVICE INSPECTION CHECKLIST—Continued</b>		
Item	Completed ✓	Comments
c. If pontoon hatches are equipped with locked down covers, check for vent tubes. Check that vent tubes are not plugged up. Inspect lock down devices for condition and operation.		
<b>C.1.6 Accessways</b>		
See Tank Out-of-Service Inspection Checklist, Item C.2.12.		
<b>Notes:</b>		

## TANK INSPECTION, REPAIR, ALTERATION, AND RECONSTRUCTION

C-9

TANK OUT-OF-SERVICE INSPECTION CHECKLIST		
Item	Completed ✓	Comments
<b>C.2.1 OVERVIEW</b>		
a. Check that tank has been cleaned, is gas free, and safe for entry.		
b. Check that the tank is completely isolated from product lines, all electrical power, and steam lines.		
c. Check that roof is adequately supported, including fixed roof structure and floating roof legs.		
d. Check for presence of falling object hazards, such as corroded-through roof rafters, asphalt stalactites, and trapped hydrocarbons in unopened or plugged equipment or appurtenances, ledges, etc.		
e. Inspect for slipping hazards on the bottom and roof decks.		
f. Inspect structural welds on accessways and clips.		
g. Check surfaces needing inspection for a heavy-scale buildup and check weld seams and oily surfaces where welding is to be done. Note areas needing more cleaning, including blasting.		
<b>C.2.2 TANK EXTERIOR</b>		
a. Inspect appurtenances opened during cleaning such as lower floating swing sheave assemblies, nozzle interiors (after removal of valves).		
b. Hammer test or ultrasonically test the roof.		
c. Enter and inspect the floating roof pontoon compartments.		
<b>C.2.3 BOTTOM INTERIOR SURFACE</b>		
a. Using a flashlight held close to and parallel to the bottom plates, and using the bottom plate layout as a guide, visually inspect and hammer test the entire bottom.		
b. Measure the depth of pitting and describe the pitting appearance (sharp edged, lake type, dense, scattered, etc.)		
c. Mark areas requiring patching or further inspection.		
d. Mark locations for turning coupons for inspection.		
e. Inspect all welds for corrosion and leaks, particularly the shell-to-bottom weld.		
f. Inspect sketch plates for corrosion.		
g. Locate and mark voids under the bottom.		
h. Record bottom data on a layout sketch using the existing bottom plates as a grid. List the number and sizes of patches required.		
i. Vacuum test the bottom lap welds.		
j. Hammer test or ultrasonically examine any slightly discolored spots or damp areas.		
k. Check for reinforcing pads under all bottom attached clips, brackets, and supports.		
l. Inspect floating roof leg pads for pitting or cutting, and excessive dimpling (indicating excessive loading).		
m. Check the column bases of fixed roof supports for adequate pads and restraining clips.		
n. In earthquake zones 3 and 4, check that roof supports are not welded down to the tank bottom, but are only restrained from horizontal movement.		
o. Check area beneath swing line cable for indications of cable cutting or dragging.		
p. Mark old oil and air test connection for removal and patching.		
q. Identify and report low areas on the bottom that do not drain adequately.		
r. Inspect coating for holes, disbonding, deterioration, and discolorization.		

TANK OUT-OF-SERVICE INSPECTION CHECKLIST—Continued		
Item	Completed ✓	Comments
<b>C.2.4 SHELL SEAMS AND PLATE</b>		
a. On cone up bottoms, closely inspect and gauge the depth of metal loss on the lower 2 to 4 inches of the shell (area of standing water).		
b. Measure the depth of pitting on each course.		
c. Inspect and estimate the amount of metal loss on the heads of rivets and bolts.		
d. Inspect shell-to-bottom riveted lap joints.		
e. Inspect for vertical grooving damage from seal assembly protrusions.		
f. Inspect existing protective coatings for damage, deterioration, and disbonding.		
g. Check for areas of rubbing (indicating too much pressure by the seal assembly shoes or inadequate annular space).		
h. Visually inspect the shell plates and seams for indications of leakage.		
i. If the shell has riveted or bolted seams, record the leak locations by film or chart in case the locations are lost during surface preparation for painting.		
j. Measure annular space at 40-foot intervals.		
k. Survey the shell to check for roundness and plumb.		
<b>C.2.5 SHELL-MOUNTED OVERFLOWS</b>		
a. Inspect overflow for corrosion and adequate screening.		
b. Check location of overflow that it is not above any tank valves or equipment.		
<b>C.2.5 ROOF INTERIOR SURFACE</b>		
<b>C.2.5.1 General</b>		
a. Visually inspect the underside surface of the roof plates for holes, scale buildup, and pitting.		
b. Hammer test or ultrasonically examine to check for thin areas, particularly in the vapor space of floating roofs and at edge of roof on cone roof tank.		
c. Check all clips, brackets, braces, etc., welded to the roof deck plate for welded reinforcing pads and see that they have not broken free.		
d. If no pad is present, penetrant test for cracking of the weld or deck plate.		
e. Inspect for protective coating for breaks, disbondment, and deterioration.		
f. Spark test the interior surface coating if recoating is not planned.		
<b>C.2.5.2 Fixed Roof Support Structure</b>		
a. Inspect the support columns for thinning in the upper two feet.		
b. On API columns (two channels welded together) check for corrosion scale breaking the tack welds, unless the joint between the channels is completely seal welded.		
c. Check that the reinforcing pad on the bottom is seal welded to the tank bottom with horizontal movement restraining clips welded to the pad.		
d. Determine if pipe column supports are concrete filled or open pipe. If open pipe, check for a drain opening in the bottom of the pipe.		
e. Inspect and gauge rafters for thinning, particularly near the center of the roof. Report metal loss.		
f. Check for loose or twisted rafters.		
g. Inspect girders for thinning and check that they are attached securely to the top of the columns.		

## TANK INSPECTION, REPAIR, ALTERATION, AND RECONSTRUCTION

C-11

TANK OUT-OF-SERVICE INSPECTION CHECKLIST—Continued		
Item	Completed ✓	Comments
h. Report if the columns have cross bracing in the area between the low pump out of the top of the shell (for future internal floating roof installation).		
i. Inspect and report presence of any roof-mounted swing line bumpers.		
j. Photograph the roof structure if no rafter layout drawing exists.		
<b>C.2.7 FIXED ROOF APPURTENANCES</b>		
<b>C.2.7.1 Inspection and Light Hatches</b>		
a. Inspect the hatches for corrosion, paint and coating failures, holes, and cover sealing.		
b. On loose covers, check for a safety chain in good condition.		
c. On light hatches over 30 inches across, check for safety rods.		
d. Inspect the condition of the gaskets on bolted or latched down hatch covers.		
<b>C.2.7.2 Staging Support Connection</b>		
Inspect the condition of the staging support for corrosion.		
<b>C.2.7.3 Breathers and Vents</b>		
a. Inspect and service the breather.		
b. Inspect screens on vents and breathers.		
<b>C.2.7.4 Emergency P/V Hatches</b>		
a. Inspect and service pressure/vacuum hatches. (Setting should be high enough to prevent chattering of breather during normal operation. See breather manufacturer's guide.)		
b. Inspect liquid seal hatches for corrosion and proper liquid level in the seal.		
<b>C.2.7.5 Sample Hatch</b>		
a. Inspect sample hatch for corrosion.		
b. Check that the cover operates properly.		
c. If the tank has no gauge well, check for a hold off distance marker and check measurement.		
<b>C.2.8 FLOATING ROOF</b>		
<b>C.2.8.1 Roof Deck</b>		
a. Hammer test the area between roof rim and shell. (If access for hammer testing is inadequate, measure the distance from the bottom edge of the roof to the corroded area and then hammer test from inside the pontoon.)		
b. In sour water service, clean and test all deck plate weld seams for cracking unless the lower laps have been seal welded.		
c. Check that either the roof drain is open or the drain plug in the roof is open in case of unexpected rain.		
d. On flat bottomed and cone bottom roof decks, check for a vapor dam around the periphery of the roof. The dam should be continuous without break to prevent escape of vapors to the seal area from under the center of the roof.		
<b>C.2.8.2 Floating Roof Pontoons</b>		
a. Visually inspect each pontoon for liquid leakage.		
b. Run a light wire through the gooseneck vents on locked down inspection hatch covers to make sure they are open.		
c. Inspect lockdown latches on each cover.		

TANK OUT-OF-SERVICE INSPECTION CHECKLIST—Continued		
Item	Completed ✓	Comments
d. Check and report if each pontoon is:		
1. Vapor tight (bulkhead seal welded on one side on bottom, sides, and top),		
2. Liquid tight seal welded on bottom and sides only), or		
3. Unacceptable (minimum acceptable condition is liquid tight).		
<b>C.2.8.3 Floating Roof Cutouts</b>		
a. Inspect underside of cutouts for mechanical damage.		
b. Inspect welds for cracks.		
c. Inspect plate for thinning, pitting, and erosion.		
d. Measure mixer cutouts and record plate thickness for future mixer installation or replacement. Plate thickness _____.		
<b>C.2.8.4 Floating Roof Supports</b>		
a. Inspect fixed low and removable high floating roof legs for thinning.		
b. Inspect for notching at bottom of legs for drainage.		
c. Inspect for leg buckling or felling at bottom.		
d. Inspect pin hole in roof guide for tears.		
e. Check plumb of all legs.		
f. Inspect for adequate reinforcing gussets on all legs through a single portion of the roof.		
g. Inspect the area around the roof legs for cracking if there is no internal reinforcing pad or if the topside pad is not welded to the deck plate on the underside.		
h. Inspect the sealing system on the two-position legs and the vapor plugs in the fixed low leg for deterioration of the gaskets.		
i. On shell mounted roof supports, check for adequate clearance based on the maximum floating roof movement as determined by the position of the roof relative to the gauge well and/or counter rotational device.		
<b>C.2.9 FLOATING ROOF SEAL ASSEMBLIES</b>		
<b>C.2.9.1 Primary Shoe Assembly</b>		
a. Remove four sections of foam log (foam filled seals) for inspection on 90° locations.		
b. Inspect hanger attachment to roof rim for thinning, bending, broken welds, and wear of pin holes.		
c. Inspect clips welded to roof rim for thinning.		
d. Shoes—inspect for thinning and holes in shoes.		
e. Inspect for bit-metal bolts, clips, and attachments.		
f. Seal fabric—inspect for deterioration, stiffening, holes, and tears in fabric.		
g. Measure length of fabric from top of shoe to roof rim, and check against maximum anticipated annular space as roof operates.		
h. Inspect any modification of shoes over shell nozzles, mixers, etc., for clearance.		
i. Inspect shoes for damage caused by striking shell nozzles, mixers, etc.		
<b>C.2.9.2 Primary Toroidal Assembly</b>		
a. Inspect seal fabric for wear, deterioration, holes, and tears.		

## TANK INSPECTION, REPAIR, ALTERATION, AND RECONSTRUCTION

C-13

TANK OUT-OF-SERVICE INSPECTION CHECKLIST—Continued		
Item	Completed ✓	Comments
b. Inspect hold down system for buckling or bending.		
c. Inspect foam for liquid absorption and deterioration.		
<b>C.2.9.3 Rim Mounted Secondaries</b>		
a. Inspect the rim-mounted bolting bar for corrosion and broken welds.		
b. Measure and chart seal-to-shell gaps.		
c. Visually inspect seam from below, looking for holes as evident by light.		
d. Inspect fabric for deterioration and stiffness.		
e. Inspect for mechanical damage, corrosion, and wear on tip in contact with shell.		
f. Inspect for contact with obstructions above top of shell.		
<b>C.2.10 FLOATING ROOF APPURTENANCES</b>		
<b>C.2.10.1 Roof Manways</b>		
a. Inspect walls of manways for pitting and thinning.		
b. On tanks with interface autogauges, check seal around gauge tape cable and guide wires through manway cover.		
c. Inspect cover gasket and bolts.		
<b>C.2.10.2 Rim Vent</b>		
a. Check rim vent for pitting and holes.		
b. Check vent for condition of screen.		
c. On floating roof tanks where the environmental rules require closing off the vent, check the vent pipe for corrosion at the pipe-to-rim joint and check that the blinding is adequate.		
<b>C.2.10.3 Vacuum Breaker, Breather Type</b>		
a. Service and check operation of breather valve.		
b. Check that nozzle pipe projects no more than 1/2 inch below roof deck.		
<b>C.2.10.4 Vacuum Breaker, Mechanical Type</b>		
Inspect the stem for thinning. Measure how far the vacuum breaker cover is raised off the pipe when the roof is resting on high or low legs.		
a. On high legs: _____.		
b. On low legs: _____.		
<b>C.2.10.5 Roof Drains: Open Systems, Including Emergency Drains</b>		
a. Check liquid level inside open roof drains for adequate freeboard. Report if there is insufficient distance between liquid level and top of drain.		
b. If tank comes under Air Quality Monitoring District rules, inspect the roof drain vapor plug.		
c. If emergency drain is not at the center of the roof, check that there are at least three emergency drains.		
<b>C.2.10.6 Closed Drain Systems: Drain Basins</b>		
a. Inspect for thinning and pitting.		
b. Inspect protective coating (topside).		
c. Inspect basin cover or screen for corrosion.		
d. Test operation of check valve.		

TANK OUT-OF-SERVICE INSPECTION CHECKLIST—Continued		
Item	Completed ✓	Comments
e. Check for presence of check valve where bottom of basin is below product level.		
f. Inspect drain basin(s) to roof deck welds for cracking.		
g. Check drain basin(s) outlet pipe for adequate reinforcement to roof deck (including reinforcing pad).		
<b>C.2.10.7 Closed Drain Systems: Fixed Drain Line on Tank Bottom</b>		
a. Hammer test fixed drain line on tank bottom for thinning and scale/debris plugging.		
b. Inspect supports and reinforcing pads for weld failures and corrosion.		
c. Check that pipe is guided, not rigidly locked to support, to avoid tearing of tank bottom plate.		
<b>C.2.10.8 Closed Drain Systems: Flexible Pipe Drain</b>		
a. Inspect for damage to exterior of pipe.		
b. Check for obstructions that pipe could catch on.		
c. Inspect shields to protect pipe from snagging.		
d. Inspect results of hydrotest on flexible roof drain system.		
<b>C.2.10.9 Closed Drain Systems: Articulated Joint Drain</b>		
a. Hammer test rigid pipe in flexible joint systems for thinning and scale/debris plugging.		
b. Inspect system for signs of bending or strain.		
c. Inspect results of system hydrotest.		
d. Inspect landing leg and pad.		
<b>C.2.10.10 Autogauge System and Alarms</b>		
a. Check freedom of movement of tape through autogauge tape guide.		
b. Inspect sheaves for freedom of movement.		
c. Test operation checker.		
d. Inspect tape and tape cable for twisting and fraying.		
e. Test the tape's freedom of movement through guide sheaves and tape guide pipe.		
f. On open-top tanks, check that gate tapes with cables have no more than one foot of tape exposed with float at lowest point.		
g. Check float for leakage.		
h. Test float guide wire anchors for spring action by pulling on wire and releasing.		
i. Inspect floatwells in floating roofs for thinning and pitting of walls just above the liquid level.		
j. Check that the autogauge tape is firmly attached to the float.		
k. Inspect the tape cable and float guide wire fabric seals through the float well cover.		
l. Inspect the bottom guide wire attachment clip: inspect for a temporary weighted bar instead of a permanent welded down clip.		
m. Inspect board-type autogauge indicators for legibility and freedom of movement of indicator.		
n. Measure and record these distances to determine if seal damage will occur if tank is run over from:		
1. Shell top angle to underside of tape guide system.		
2. Liquid level on floating top to top of secondary seal.		

## TANK INSPECTION, REPAIR, ALTERATION, AND RECONSTRUCTION

C-15

TANK OUT-OF-SERVICE INSPECTION CHECKLIST—Continued		
Item	Completed ✓	Comments
o. Identify floating roofs where the tape is connected directly to the roof.		
p. Overfill alarm: Inspect tank overfill prevention alarm switches for proper operation.		
<b>C.2.11 COMMON TANK APPURTENANCES</b>		
<b>C.2.11.1 Gauge Well</b>		
a. Inspect gauge well pipe for thinning at about two-thirds distance above the bottom: look for thinning at the edge of the slots.		
b. Check for corrosion on the pipe joint. Check that sample cords, weights, thermometers, etc., have been removed from the pipe.		
c. Check for cone at bottom end of pipe about one foot above the bottom.		
d. Check condition of well washer pipe and that its flared end is directed at the near side of the hold off pad.		
e. Check that supports for gauge well are welded to pad or to shell and not directly to bottom plate.		
f. Check operation of gauge well cover.		
g. Check presence of a hold-off distance marker in well pipe and record hold-off distance. Hold-off distance _____.		
h. Identify and report size and pipe schedule, and whether pipe is solid or slotted. Report slot size.		
i. Check that the hold-off distance plate is seal welded to the bottom and that any gauge well supports are welded to the plate and not directly to the bottom.		
j. Inspect vapor control float and cable.		
k. Check for presence and condition of gauge well washer.		
l. Check for bull plug or plate blind on gauge well washer valve.		
m. Inspect gauge well guide in floating roof for pitting and thinning.		
n. Inspect the guide rollers and sliding plates for freedom of movement.		
o. Inspect condition of gauge well pipe seal system.		
p. On black oil and diesel services: if gauge well is also used for sampling, check for presence of a thief- and gauge-type hatch to avoid spillage.		
q. Visually inspect inside of pipe for pipe weld protrusions which could catch or damage vapor control float.		
<b>C.2.11.2 Sampling Systems: Roof Sample Hatches</b>		
a. Inspect roof mounted sample hatches for reinforcing pads and cracking.		
b. Inspect cover for operation.		
c. For tanks complying with Air Quality Monitoring District rules, inspect sample hatch covers for adequate sealing.		
d. Check horizontal alignment of internal floating roof sample hatches under fixed roof hatches.		
e. Inspect the sealing system on the internal floating roof sample hatch cover.		
f. Inspect floating roof sample hatch cover recoil reel and rope.		
<b>C.2.11.3 Shell Nozzles</b>		
a. Inspect shell nozzles for thinning and pitting.		
b. Inspect hot tap nozzles for trimming of holes.		

TANK OUT-OF-SERVICE INSPECTION CHECKLIST—Continued		
Item	Completed ✓	Comments
c. Identify type of shell nozzles.		
d. Identify and describe internal piping, including elbow up and elbow down types.		
<b>C.2.11.4 For Nozzles Extended Into the Tank</b>		
a. Inspect pipe support pads welded to tank bottom.		
b. Inspect to see that pipe is free to move along support without strain or tearing action on bottom plate.		
c. Inspect nozzle valves for packing leaks and damaged flange faces.		
d. Inspect heater stream nozzle flanges and valves for wire cutting.		
e. Report which nozzles have thermal pressure relief bosses and valves.		
f. In internal elbow-down fill line nozzles, inspect the wear plate on the tank bottom.		
g. On elbow-up fill lines in floating roof tanks, check that opening is directed against underside of roof, not against vapor space. Inspect impact area for erosion.		
<b>C.2.11.5 Diffusers and Air Rolling Systems</b>		
a. Inspect diffuser pipe for erosion and thinning.		
b. Check holes in diffuser for excessive wear and enlargement.		
c. Inspect diffuser supports for damage and corrosion.		
d. Check that diffuser supports restrain, not anchor, longitudinal line movement.		
e. Inspect air spiders on bottom of lube oil tanks for plugging and damaged or broken threaded joints.		
<b>C.2.11.6 Swing Lines</b>		
a. Inspect flexible joint for cracks and leaks.		
b. Scribe the flexible joint across the two moving faces and raise end of swing line to check the joint's freedom of movement, indicated by separation of scribe marks.		
c. Check that flexible joints over six inches are supported.		
d. Inspect the swing pipe for deep pitting and weld corrosion.		
e. Loosen the vent plugs in the pontoons and listen for a vacuum. Lack of a vacuum indicates a leaking pontoon.		
f. Check the results of air test on pontoons during repairs.		
g. Inspect the pontoons for pitting.		
h. Inspect the pull-down cable connections to the swing.		
i. Inspect the condition of the bottom-mounted support, fixed roof limiting bumper, or shell mounted limiting bumper for wood condition, weld and bolt corrosion, and seal welding to bottom or shell.		
j. Inspect safety hold-down chain for corrosion and weak links.		
k. Check that there is a welded reinforcing pad where the chain connects to the bottom.		
l. If the floating swing in a floating or internal floating roof tank does not have a limiting device preventing the swing from exceeding 60 degrees, measure and calculate the maximum angle possible with the roof on overflow. Max. angle on overflow _____ (If the calculated angle exceeds 65 degrees, recommended installation of a limiting bracket.)		
m. Inspect pull down cable for fraying.		

## TANK INSPECTION, REPAIR, ALTERATION, AND RECONSTRUCTION

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TANK OUT-OF-SERVICE INSPECTION CHECKLIST—Continued		
Item	Completed ✓	Comments
n. Inspect for three cable clamps where cable attaches to end of swing line (single-reeved) or to roof assembly (double-reeved). Inspect sheaves for freedom of movement.		
o. Inspect winch operation and check the height indicator for legibility and accuracy.		
p. Inspect bottom-mounted sheave assembly at end of pontoon for freedom of rotation of sheave.		
q. Inspect shell-mounted lower sheave assembly for freedom of rotation of sheave, corrosion thinning, and pitting of sheave housing.		
r. Inspect upper sheave assembly for freedom of movement of sheave.		
s. Inspect the cable counterbalance assembly for corrosion and freedom of operation.		
<b>C.2.11.7 Manway Heater Racks</b>		
a. Inspect the manway heater racks for broken welds and bending of the sliding rails.		
b. Measure and record the length of the heater and length of the track.		
<b>C.2.11.8 Mixer Wear Plates and Deflector Stands</b>		
a. Inspect bottom and shell plates and deflector stands.		
b. Inspect for erosion and corrosion on the wear plates. Inspect for rigidity, structural soundness, corrosion, and erosion of deck plates and reinforcing pads that are seal welded to the bottom under the deflector stand legs.		
c. Measure for propeller clearance between the bottom of deflector stand and roof when the roof is on low legs.		
<b>C.2.12 ACCESS STRUCTURES</b>		
<b>C.2.12.1 Handrails</b>		
a. Identify and report type (steel pipe, galvanized pipe, square tube, angle) and size of handrails.		
b. Inspect for pitting and holes, paint failure.		
c. Inspect attachment welds.		
d. Identify cold joints and sharp edges. Inspect the handrails and midrails.		
e. Inspect safety drop bar (or safety chain) for corrosion, functioning, and length.		
f. Inspect the handrail between the rolling ladder and the gaging platform for a hazardous opening when the floating roof is at its lowest level.		
<b>C.2.12.2 Platform Frame</b>		
a. Inspect frame for corrosion and paint failure.		
b. Inspect the attachment of frame to supports and supports to tank for corrosion and weld failure.		
c. Check reinforcing pads where supports are attached to shell or roof.		
d. Inspect the surface that deck plate or grating rests on, for thinning and holes.		
e. Check that flat-surface to flat-surface junctures reseal welded.		
<b>C.2.12.3 Deck Plate and Grating</b>		
a. Inspect deck plate for corrosion-caused thinning or holes (not drain holes) and paint failure.		
b. Inspect plate-to-frame weld for rust scale buildup.		
c. Inspect grating for corrosion-caused thinning of bars and failure of welds.		

TANK OUT-OF-SERVICE INSPECTION CHECKLIST—Continued		
Item	Completed ✓	Comments
d. Check grating tie down clips. Where grating has been retrofitted to replace plate, measure the rise of the step below and above the grating surface and compare with other risers on the stairway.		
<b>C.2.12.4 Stairway Stringers</b>		
a. Inspect spiral stairway stringers for corrosion, paint failure, and weld failure. Inspect attachment of stairway treads to stringer.		
b. Inspect stairway supports to shell welds and reinforcing pads.		
c. Inspect steel support attachment to concrete base for corrosion.		
<b>C.2.12.5 Rolling Ladder</b>		
a. Inspect rolling ladder stringers for corrosion.		
b. Identify and inspect ladder fixed rungs (square bar, round bar, angles) for weld attachment to stringers and corrosion, particularly where angle rungs are welded to stringers.		
c. Check for wear and corrosion where rolling ladder attaches to gaging platform.		
d. Inspect pivot bar for wear and secureness.		
e. Inspect operation of self-leveling stairway treads.		
f. Inspect for corrosion and wear on moving parts.		
g. Inspect rolling ladder wheels for freedom of movement, flat spots, and wear on axle.		
h. Inspect alignment of rolling ladder with roof rack.		
i. Inspect top surface of rolling ladder track for wear by wheels to assure at least 18 inches of unworn track (track long enough).		
j. Inspect rolling ladder track welds for corrosion.		
k. Inspect track supports on roof for reinforcing pads seal welded to deck plate.		
l. Check by dimensioning, the maximum angle of the rolling ladder when the roof is on low legs. Max. angle _____		
m. If rolling ladder track extends to within five feet of the edge of the roof on the far side, check for a handrail on the top of the shell on that side.		
<b>Notes:</b>		

## EXTERNAL FLOATING ROOF SEAL INSPECTION DATA REPORT

STORAGE TANK LOCATION \_\_\_\_\_ PRODUCT: \_\_\_\_\_

TANK NO. \_\_\_\_\_ DIA. \_\_\_\_\_ ft. HEIGHT \_\_\_\_\_

ROOF HEIGHT AT INSP. \_\_\_\_\_

### SECONDARY SEAL INSPECTION DATA

SEAL MANUFACTURER AND TYPE: \_\_\_\_\_

VISUAL INSPECTION: FABRIC CONDITION:  GOOD  POORSEAL TIP CONDITION:  GOOD  POORCOMPRESSION PLATE  
CONDITION:  GOOD  POOR

YES IN COMPLIANCE- ONLY IF ALL ITEMS UNDER VISUAL INSPECTION ARE  
 NO RECORDED AS GOOD AND THE GAP RATIO DOES NOT EXCEED 1.0 in./ft.

GAP AREA: \_\_\_\_\_ GAP RATIO:  $\frac{\text{GAP AREA (in.)}}{\text{TANK DIA. (ft.)}} =$  \_\_\_\_\_

CONSTRUCTION OF THE TANK COMMENCED AFTER MAY 18, 1978, AND THERE  
 ARE GAPS EXCEEDING 1/2" BETWEEN THE TANK SHELL AND SECONDARY  
 SEAL  YES  NO MANUFACTURED: \_\_\_\_\_ 19 \_\_\_\_\_

(COMMENT ON THE PERFORMANCE OF THE SECONDARY SEAL, SUCH AS SEAL TIP AND COMPRESSION PLATE DURABILITY,  
 MAINTENANCE, OVERALL SEAL EFFECTIVENESS, ESTIMATED LIFE REMAINING, AND COMPARISON TO OTHER SEAL DESIGNS.)

REMARKS: \_\_\_\_\_

### PRIMARY SEAL INSPECTION

SEAL TYPE:  METALLIC SHOE  LIQUID-MOUNTED  VAPOR-MOUNTED

SEAL MANUFACTURER: \_\_\_\_\_

### VISUAL INSPECTION:

GAPS EXCEEDING 1.5" BETWEEN THE TANK SHELL AND METALLIC SHOE SEAL  
OR LIQUID MOUNTED SEAL:  YES  NOGAPS EXCEEDING 0.5" BETWEEN THE TANK SHELL AND THE VAPOR-MOUNTED SEAL:  
 YES  NOGAP AREA: \_\_\_\_\_ GAP RATIO:  $\frac{\text{GAP AREA (in.)}}{\text{TANK DIA. (ft.)}} =$  \_\_\_\_\_

(REQUIRED ONLY WHEN CONSTRUCTION OF THE TANK COMMENCED AFTER MAY 18, 1978, THE TANK  
 HAS A STORAGE CAPACITY GREATER THAN 952 BARRELS AND CONTAINS LIQUIDS WITH A TRUE VAPOR  
 PRESSURE GREATER THAN 1.5 psia.)

COMPLIANCE STATUS:  IN COMPLIANCE- ONLY IF THE VISUAL INSPECTION  
 IS RECORDED AS A NO AND THE GAP RATIO DOES NOT EXCEED 10.0 sq in./ft FOR  
 A METALLIC SHOE OR LIQUID-MOUNTED SEAL (1.0 sq in./ft. FOR A VAPOR-MOUNTED  
 SEAL).

OUT OF COMPLIANCE:  \_\_\_\_\_

INSPECTED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

PREPARED BY: \_\_\_\_\_ DATE: \_\_\_\_\_

**INCIDENT REPORT**

**EMERGENCY RESPONSE: TACTICAL WORKSHEET 1**

**INCIDENT No. \_\_\_\_\_**

DATE: (MO./DAY /YEAR)	TIME:	REPORTER'S NAME:	MAIN GATE DISPATCHER:	LOCATION
UNIT/AREA:	ALL CLEAR INITIATED ___  INCIDENT COMPLETE ___	TYPE OF INCIDENT:	___ ELECTRICAL	___ RADIATION
TYPE OF EQUIP INVOLVED:		___ SPILL	___ FIRE	MONITORING
NAME OF EQUIP INVOLVED		___ EMS	___ GAS RELEASE	___ AIR
		___ EMS/RESCUE	___ LEAK	MONITORING ___ OTHER ___
	___ TRAFFIC ACCIDENT	___ SECURITY RELATED	_____	
ACCOUNTABILITY:	EVACUATION;	TIME:	RALLY POINTS:	
PERSONNEL ACCOUNTED FOR	INITIATED ___		1.	3.
___ PRIMARY SEARCH TIME	COMPLETED ___		2.	4.
___ SECONDARY SEARCH TIME				
DIVISION ASSIGNMENTS:	___ FIRE:	___ DRAINAGE:	___ DITCH	
___ NORTH ___ INTERIOR			___ CREW RELIEF/RATIO	
___ SOUTH ___ RESOURCE	___ EXPOSURES PROTECTED	___ PLUMES	___ REHABILITATION	
___ EAST ___ STAGING	___ PROCESS ISOLATED		___ SUMPS	
___ WEST ___ SAFETY	___ FIRE UNDER CONTROL:			
___ HAZ-MAT ___ EMS/RESCUE	___ TANK LEVELS	FOAM: APPLICATION RATE ___	TIME ___	
	___ BREATHING AIR (SCBA's)	AMOUNT ON HAND	___	
	___ LIGHTS	AMOUNT REQUIRED	___	
MEDICAL;	___ LIFEFLIGHT:	___ OXYGEN	___ TIME	
CONFIRM: TIME	___ STANDBY	___ TRAUMA SUPPLIES	___ TRANSPORTATION COMPLETE	
___ RESCUE 1	___ RESPONSE	___ AMBULANCES	___ INCIDENT COMPLETE	
___ RESCUE 2	___ LANDING AREA	___ HEAVY EQUIPMENT		

**INCIDENT REPORT**

**EMERGENCY RESPONSE: TACTICAL WORKSHEET 1**      **INCIDENT NO. \_\_\_\_\_**

**SCENE OVERVIEW**

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<b>WEATHER CONDITIONS:</b>	
<b>SPEED:</b>	_____
<b>HUMIDITY:</b>	_____
<b>VISIBILITY:</b>	_____

**EMERGENCY RESPONSE: TACTICAL WORKSHEET 2**

**INCIDENT REPORT**  
**INCIDENT NO. \_\_\_\_\_**

**NARRATIVE REPORT**

**SITUATION FOUND:**

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**ACTION TAKEN:**

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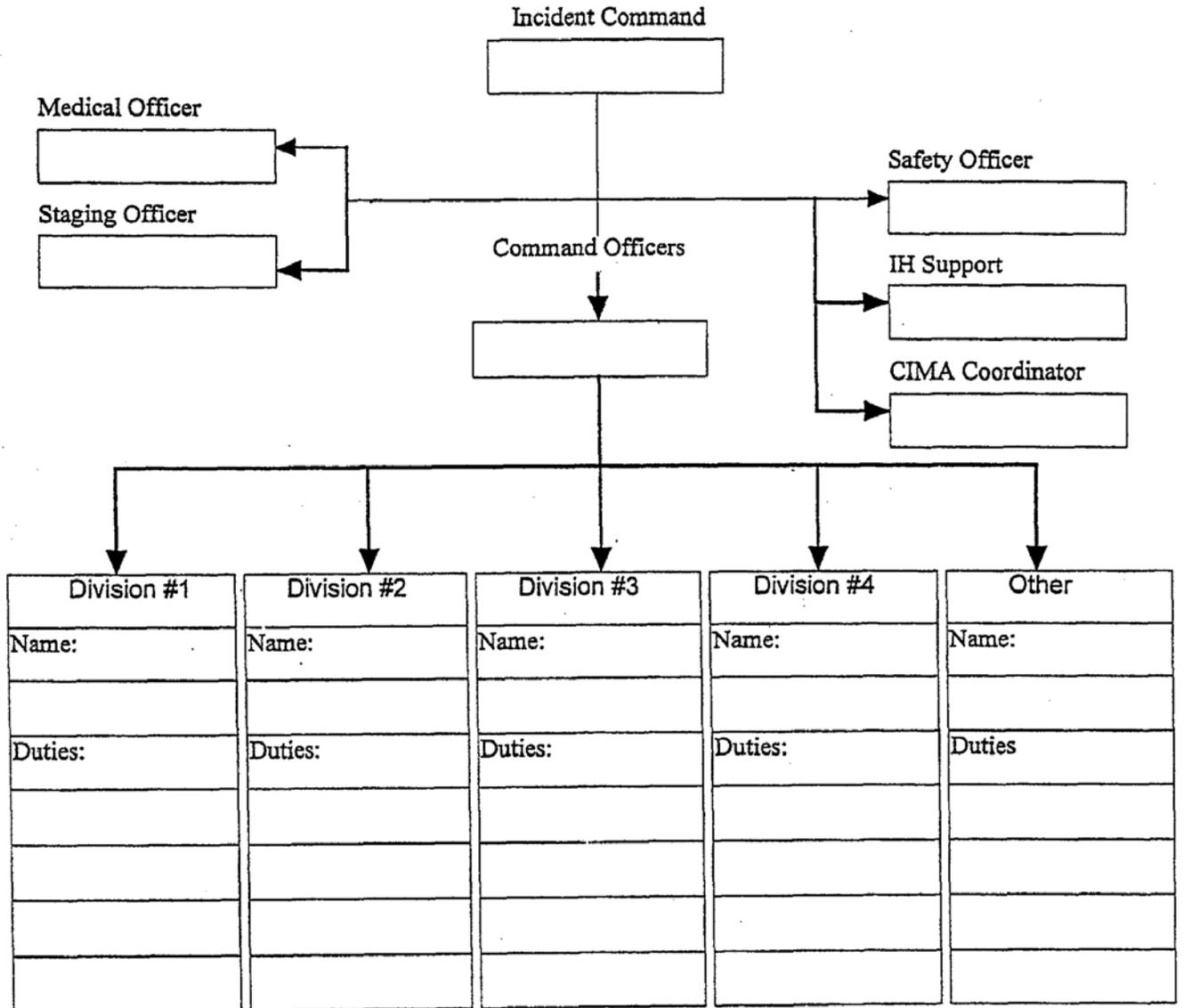
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**INCIDENT REPORT**  
**EMERGENCY RESPONSE: TACTICAL WORKSHEET 3**

**INCIDENT NO.** \_\_\_\_\_

**EMERGENCY RESPONSE TEAM  
 COMMAND STRUCTURE**



**INCIDENT REPORT**

**EMS/RESCUE - OUTSIDE AGENCY ASSISTANCE REPORT INCIDENT NO \_\_\_\_\_**

**CASUALTY REPORT**

PATIENT'S NAME	DEPT.	ID#	INJURY/ILLNESS DESCRIPTION	INITIAL TREATMENT	TRANSPORTED TO/VIA
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					

**\*REFER TO EMS REPORT(S) FOR DETAILED INJURY DESCRIPTION.**

**INCIDENT REPORT****EMS/RESCUE - OUTSIDE AGENCY ASSISTANCE REPORT INCIDENT NO \_\_\_\_\_****OUTSIDE MEDICAL ASSISTANCE**

AGENCY NAME	TYPE OF ASSISTANCE	# UNITS	MANPOWER DESCRIPTION	PERTINENT ID
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12.				
13.				
14.				
15.				
16.				
17.				
18.				
19.				
20.				
21.				
22.				
23.				
24.				











\*5. Material involved in Accident: (select only one)  
 Carbon Steel  
 Material other than Carbon Steel ⇨ Specify: \_\_\_\_\_

\*6. Type of Accident involved: (select only one)  
 Mechanical Puncture ⇨ Approx. size: / / / / / / / / in. (axial) by / / / / / / / / in. (circumferential)  
 Leak ⇨ Select Type:  Pinhole  Crack  Connection Failure  Seal or Packing  Other  
 Rupture ⇨ Select Orientation:  Circumferential  Longitudinal  Other \_\_\_\_\_  
 Approx. size: / / / / / / / / in. (widest opening) by / / / / / / / / in. (length circumferentially or axially)  
 Overfill or Overflow  
 Other ⇨ Describe: \_\_\_\_\_

**PART D – ADDITIONAL CONSEQUENCE INFORMATION**

1. Wildlife impact:  Yes  No  
 1.a If Yes, specify all that apply:  
 Fish/aquatic  
 Birds  
 Terrestrial

\*2. Soil contamination:  Yes  No

3. Long term impact assessment performed or planned:  Yes  No

4. Anticipated remediation:  Yes  No (not needed)  
 4.a If Yes, specify all that apply:  
 Surface water  Groundwater  Soil  Vegetation  Wildlife

\*5. Water contamination:  Yes ⇨ (Complete 5.a – 5.c below)  No  
 \*5.a Specify all that apply:  
 Ocean/Seawater  
 Surface  
 Groundwater  
 Drinking water ⇨ (Select one or both)  Private Well  Public Water Intake  
 \*5.b Estimated amount released in or reaching water: / / / / / / / / / / Barrels  
 \*5.c Name of body of water, if commonly known: \_\_\_\_\_

\*6. At the location of this Accident, had the pipeline segment or facility been identified as one that "could affect" a High Consequence Area (HCA) as determined in the Operator's Integrity Management Program?  Yes  No

\*7. Did the released commodity reach or occur in one or more High Consequence Area (HCA)?  Yes  No  
 7.a If Yes, specify HCA type(s): (select all that apply)  
 Commercially Navigable Waterway  
 Was this HCA identified in the "could affect" determination for this Accident site in the Operator's Integrity Management Program?  
 Yes  No  
 High Population Area  
 Was this HCA identified in the "could affect" determination for this Accident site in the Operator's Integrity Management Program?  
 Yes  No  
 Other Populated Area  
 Was this HCA identified in the "could affect" determination for this Accident site in the Operator's Integrity Management Program?  
 Yes  No  
 Unusually Sensitive Area (USA) – Drinking Water  
 Was this HCA identified in the "could affect" determination for this Accident site in the Operator's Integrity Management Program?  
 Yes  No  
 Unusually Sensitive Area (USA) – Ecological  
 Was this HCA identified in the "could affect" determination for this Accident site in the Operator's Integrity Management Program?  
 Yes  No



\*6. Was a Supervisory Control and Data Acquisition (SCADA)-based system in place on the pipeline or facility involved in the Accident?

No

Yes ⇨

6.a Was it operating at the time of the Accident?  Yes  No

6.b Was it fully functional at the time of the Accident?  Yes  No

6.c Did SCADA-based information (such as alarm(s), alert(s), event(s), and/or volume calculations) assist with the detection of the Accident?  Yes  No

6.d Did SCADA-based information (such as alarm(s), alert(s), event(s), and/or volume calculations) assist with the confirmation of the Accident?  Yes  No

\*7. Was a CPM leak detection system in place on the pipeline or facility involved in the Accident?

No

Yes ⇨

7.a Was it operating at the time of the Accident?  Yes  No

7.b Was it fully functional at the time of the Accident?  Yes  No

7.c Did CPM leak detection system information (such as alarm(s), alert(s), event(s), and/or volume calculations) assist with the detection of the Accident?  Yes  No

7.d Did CPM leak detection system information (such as alarm(s), alert(s), event(s), and/or volume calculations) assist with the confirmation of the Accident?  Yes  No

\*8. How was the Accident initially identified for the Operator? *(select only one)*

CPM leak detection system or SCADA-based information (such as alarm(s), alert(s), event(s), and/or volume calculations)

Static Shut-in Test or Other Pressure or Leak Test

Contoller

Air Patrol

Notification from Public

Notification from Third Party that caused the Accident

Local Operating Personnel, including contractors

Ground Patrol by Operator or its contractor

Notification from Emergency Responder

Other \_\_\_\_\_

\*8.a If "Contoller", "Local Operating Personnel, including contractors", "Air Patrol", or "Ground Patrol by Operator or its contractor" is selected in Question 8, specify the following: *(select only one)*

Operator employee  Contractor working for the Operator

\*9. Was an investigation initiated into whether or not the controller(s) or control room issues were the cause of or a contributing factor to the Accident? *(select only one)*

Yes, but the investigation of the control room and/or controller actions has not yet been completed by the Operator *(Supplemental Report required)*

No, the facility was not monitored by a controller(s) at the time of the Accident

No, the Operator did not find that an investigation of the controller(s) actions or control room issues was necessary due to: *(provide an explanation for why the Operator did not investigate)*

\_\_\_\_\_

\_\_\_\_\_

Yes, specify investigation result(s): *(select all that apply)*

Investigation reviewed work schedule rotations, continuous hours of service (while working for the Operator) and other factors associated with fatigue

Investigation did NOT review work schedule rotations, continuous hours of service (while working for the Operator) and other factors associated with fatigue *(provide an explanation for why not)*

\_\_\_\_\_

\_\_\_\_\_

Investigation identified no control room issues

Investigation identified no controller issues

Investigation identified incorrect controller action or controller error

Investigation identified that fatigue may have affected the controller(s) involved or impacted the involved controller(s) response

Investigation identified incorrect procedures

Investigation identified incorrect control room equipment operation

Investigation identified maintenance activities that affected control room operations, procedures, and/or controller response

Investigation identified areas other than those above ⇨ Describe: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

PART F – DRUG & ALCOHOL TESTING INFORMATION	
<p>*1. As a result of this Accident, were any Operator employees tested under the post-accident drug and alcohol testing requirements of DOT's Drug &amp; Alcohol Testing regulations?</p> <p><input type="radio"/> No</p> <p><input type="radio"/> Yes ⇨ *1.a Specify how many were tested: <u>  /  /  /  </u></p> <p style="padding-left: 40px;">*1.b Specify how many failed: <u>  /  /  /  </u></p>	
<p>*2. As a result of this Accident, were any Operator contractor employees tested under the post-accident drug and alcohol testing requirements of DOT's Drug &amp; Alcohol Testing regulations?</p> <p><input type="radio"/> No</p> <p><input type="radio"/> Yes ⇨ *2.a Specify how many were tested: <u>  /  /  /  </u></p> <p style="padding-left: 40px;">*2.b Specify how many failed: <u>  /  /  /  </u></p>	

PART G – APPARENT CAUSE	Select only one box from PART G in the shaded column on the left representing the APPARENT Cause of the Accident, and answer the questions on the right. Describe secondary, contributing, or root causes of the Accident in the narrative (PART H).
<p><b>G1 - Corrosion Failure</b> – *only one sub-cause can be picked from shaded left-hand column</p>	
<p><input type="checkbox"/> External Corrosion</p>	<p>*1. Results of visual examination:</p> <p><input type="radio"/> Localized Pitting    <input type="radio"/> General Corrosion</p> <p><input type="radio"/> Other _____</p> <p>*2. Type of corrosion: (select all that apply)</p> <p><input type="radio"/> Galvanic    <input type="radio"/> Atmospheric    <input type="radio"/> Stray Current    <input type="radio"/> Microbiological    <input type="radio"/> Selective Seam</p> <p><input type="radio"/> Other _____</p> <p>*3. The type(s) of corrosion selected in Question 2 is based on the following: (select all that apply)</p> <p><input type="radio"/> Field examination    <input type="radio"/> Determined by metallurgical analysis</p> <p><input type="radio"/> Other _____</p> <p>*4. Was the failed item buried under the ground?</p> <p><input type="radio"/> Yes ⇨ *4.a Was failed item considered to be under cathodic protection at the time of the Accident?</p> <p style="padding-left: 40px;"><input type="radio"/> Yes ⇨ Year protection started: <u>  /  /  /  /  /  </u></p> <p style="padding-left: 40px;"><input type="radio"/> No</p> <p style="padding-left: 40px;">*4.b Was shielding, tenting, or disbonding of coating evident at the point of the Accident?</p> <p style="padding-left: 80px;"><input type="radio"/> Yes    <input type="radio"/> No</p> <p style="padding-left: 40px;">*4.c Has one or more Cathodic Protection Survey been conducted at the point of the Accident?</p> <p style="padding-left: 40px;"><input type="radio"/> Yes, CP Annual Survey ⇨ Most recent year conducted: <u>  /  /  /  /  /  </u></p> <p style="padding-left: 40px;"><input type="radio"/> Yes, Close Interval Survey ⇨ Most recent year conducted: <u>  /  /  /  /  /  </u></p> <p style="padding-left: 40px;"><input type="radio"/> Yes, Other CP Survey ⇨ Most recent year conducted: <u>  /  /  /  /  /  </u></p> <p style="padding-left: 40px;"><input type="radio"/> No</p> <p><input type="radio"/> No ⇨ 4.d Was the failed item externally coated or painted?    <input type="radio"/> Yes    <input type="radio"/> No</p> <p>*5. Was there observable damage to the coating or paint in the vicinity of the corrosion?</p> <p><input type="radio"/> Yes    <input type="radio"/> No</p>

<input type="checkbox"/> <b>Internal Corrosion</b>	<p>*6. Results of visual examination:  <input type="radio"/> Localized Pitting    <input type="radio"/> General Corrosion    <input type="radio"/> Not cut open  <input type="radio"/> Other _____</p> <p>*7. Cause of corrosion: <i>(select all that apply)</i>  <input type="radio"/> Corrosive Commodity    <input type="radio"/> Water drop-out/Acid    <input type="radio"/> Microbiological    <input type="radio"/> Erosion  <input type="radio"/> Other _____</p> <p>*8. The cause(s) of corrosion selected in Question 7 is based on the following: <i>(select all that apply)</i>  <input type="radio"/> Field examination    <input type="radio"/> Determined by metallurgical analysis  <input type="radio"/> Other _____</p> <p>*9. Location of corrosion: <i>(select all that apply)</i>  <input type="radio"/> Low point in pipe    <input type="radio"/> Elbow    <input type="radio"/> Other _____</p> <p>*10. Was the commodity treated with corrosion inhibitors or biocides?    <input type="radio"/> Yes    <input type="radio"/> No</p> <p>11. Was the interior coated or lined with protective coating?    <input type="radio"/> Yes    <input type="radio"/> No</p> <p>12. Were cleaning/dewatering pigs (or other operations) routinely utilized?  <input type="radio"/> Not applicable - Not mainline pipe    <input type="radio"/> Yes    <input type="radio"/> No</p> <p>13. Were corrosion coupons routinely utilized?  <input type="radio"/> Not applicable - Not mainline pipe    <input type="radio"/> Yes    <input type="radio"/> No</p>
<p><b>Complete the following if any Corrosion Failure sub-cause is selected AND the "Item Involved in Accident" (from PART C, Question 3) is Tank/Vessel.</b></p> <p>14. List the year of the most recent inspections:</p> <p>14.a API Std 653 Out-of-Service Inspection    <u>    </u>/<u>    </u>/<u>    </u>/<u>    </u>/<u>    </u>    <input type="radio"/> No Out-of-Service Inspection completed</p> <p>14.b API Std 653 In-Service Inspection    <u>    </u>/<u>    </u>/<u>    </u>/<u>    </u>/<u>    </u>    <input type="radio"/> No In-Service Inspection completed</p>	
<p><b>Complete the following if any Corrosion Failure sub-cause is selected AND the "Item Involved in Accident" (from PART C, Question 3) is Pipe or Weld.</b></p> <p>15. Has one or more internal inspection tool collected data at the point of the Accident?  <input type="radio"/> Yes    <input type="radio"/> No</p> <p>15.a. If Yes, for each tool used, select type of internal inspection tool and indicate most recent year run:</p> <p><input type="radio"/> Magnetic Flux Leakage Tool    <u>    </u>/<u>    </u>/<u>    </u>/<u>    </u>/<u>    </u></p> <p><input type="radio"/> Ultrasonic    <u>    </u>/<u>    </u>/<u>    </u>/<u>    </u>/<u>    </u></p> <p><input type="radio"/> Geometry    <u>    </u>/<u>    </u>/<u>    </u>/<u>    </u>/<u>    </u></p> <p><input type="radio"/> Caliper    <u>    </u>/<u>    </u>/<u>    </u>/<u>    </u>/<u>    </u></p> <p><input type="radio"/> Crack    <u>    </u>/<u>    </u>/<u>    </u>/<u>    </u>/<u>    </u></p> <p><input type="radio"/> Hard Spot    <u>    </u>/<u>    </u>/<u>    </u>/<u>    </u>/<u>    </u></p> <p><input type="radio"/> Combination Tool    <u>    </u>/<u>    </u>/<u>    </u>/<u>    </u>/<u>    </u></p> <p><input type="radio"/> Transverse Field/Triaxial    <u>    </u>/<u>    </u>/<u>    </u>/<u>    </u>/<u>    </u></p> <p><input type="radio"/> Other _____    <u>    </u>/<u>    </u>/<u>    </u>/<u>    </u>/<u>    </u></p> <p>16. Has one or more hydrotest or other pressure test been conducted since original construction at the point of the Accident?  <input type="radio"/> Yes ⇒ Most recent year tested: <u>    </u>/<u>    </u>/<u>    </u>/<u>    </u>/<u>    </u>    Test pressure (psig): <u>    </u>/<u>    </u>/<u>    </u>/<u>    </u>/<u>    </u></p> <p><input type="radio"/> No</p> <p>17. Has one or more Direct Assessment been conducted on this segment?  <input type="radio"/> Yes, and an investigative dig was conducted at the point of the Accident ⇒ Most recent year conducted: <u>    </u>/<u>    </u>/<u>    </u>/<u>    </u>/<u>    </u></p> <p><input type="radio"/> Yes, but the point of the Accident was not identified as a dig site    ⇒ Most recent year conducted: <u>    </u>/<u>    </u>/<u>    </u>/<u>    </u>/<u>    </u></p> <p><input type="radio"/> No</p> <p>18. Has one or more non-destructive examination been conducted at the point of the Accident since January 1, 2002?  <input type="radio"/> Yes    <input type="radio"/> No</p> <p>18.a If Yes, for each examination conducted since January 1, 2002, select type of non-destructive examination and indicate most recent year the examination was conducted:</p> <p><input type="radio"/> Radiography    <u>    </u>/<u>    </u>/<u>    </u>/<u>    </u>/<u>    </u></p> <p><input type="radio"/> Guided Wave Ultrasonic    <u>    </u>/<u>    </u>/<u>    </u>/<u>    </u>/<u>    </u></p> <p><input type="radio"/> Handheld Ultrasonic Tool    <u>    </u>/<u>    </u>/<u>    </u>/<u>    </u>/<u>    </u></p> <p><input type="radio"/> Wet Magnetic Particle Test    <u>    </u>/<u>    </u>/<u>    </u>/<u>    </u>/<u>    </u></p> <p><input type="radio"/> Dry Magnetic Particle Test    <u>    </u>/<u>    </u>/<u>    </u>/<u>    </u>/<u>    </u></p> <p><input type="radio"/> Other _____    <u>    </u>/<u>    </u>/<u>    </u>/<u>    </u>/<u>    </u></p>	

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\*17. Description of the CGA-DIRT Root Cause (*select only the one predominant first level CGA-DIRT Root Cause and then, where available as a choice, the one predominant second level CGA-DIRT Root Cause as well*):

- One-Call Notification Practices Not Sufficient: (*select only one*)
- No notification made to the One-Call Center
  - Notification to One-Call Center made, but not sufficient
  - Wrong information provided
- Locating Practices Not Sufficient: (*select only one*)
- Facility could not be found/located
  - Facility marking or location not sufficient
  - Facility was not located or marked
  - Incorrect facility records/maps
- Excavation Practices Not Sufficient: (*select only one*)
- Excavation practices not sufficient (other)
  - Failure to maintain clearance
  - Failure to maintain the marks
  - Failure to support exposed facilities
  - Failure to use hand tools where required
  - Failure to verify location by test-hole (pot-holing)
  - Improper backfilling

One-Call Notification Center Error

Abandoned Facility

Deteriorated Facility

Previous Damage

Data Not Collected

Other / None of the Above (*explain*)

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	<p>7. Has one or more non-destructive examination been conducted at the point of the Accident since January 1, 2002?  <input type="radio"/> Yes <input type="radio"/> No</p> <p>7.a If Yes, for each examination conducted since January 1, 2002, select type of non-destructive examination and indicate most recent year the examination was conducted:</p> <table style="width: 100%;"> <tr> <td><input type="radio"/> Radiography</td> <td>/ / / / /</td> </tr> <tr> <td><input type="radio"/> Guided Wave Ultrasonic</td> <td>/ / / / /</td> </tr> <tr> <td><input type="radio"/> Handheld Ultrasonic Tool</td> <td>/ / / / /</td> </tr> <tr> <td><input type="radio"/> Wet Magnetic Particle Test</td> <td>/ / / / /</td> </tr> <tr> <td><input type="radio"/> Dry Magnetic Particle Test</td> <td>/ / / / /</td> </tr> <tr> <td><input type="radio"/> Other _____</td> <td>/ / / / /</td> </tr> </table>	<input type="radio"/> Radiography	/ / / / /	<input type="radio"/> Guided Wave Ultrasonic	/ / / / /	<input type="radio"/> Handheld Ultrasonic Tool	/ / / / /	<input type="radio"/> Wet Magnetic Particle Test	/ / / / /	<input type="radio"/> Dry Magnetic Particle Test	/ / / / /	<input type="radio"/> Other _____	/ / / / /
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<input type="radio"/> Wet Magnetic Particle Test	/ / / / /												
<input type="radio"/> Dry Magnetic Particle Test	/ / / / /												
<input type="radio"/> Other _____	/ / / / /												
<input type="checkbox"/> Intentional Damage	<p>*8. Specify:</p> <table style="width: 100%;"> <tr> <td><input type="radio"/> Vandalism</td> <td><input type="radio"/> Terrorism</td> </tr> <tr> <td><input type="radio"/> Theft of transported commodity</td> <td><input type="radio"/> Theft of equipment</td> </tr> <tr> <td><input type="radio"/> Other _____</td> <td></td> </tr> </table>	<input type="radio"/> Vandalism	<input type="radio"/> Terrorism	<input type="radio"/> Theft of transported commodity	<input type="radio"/> Theft of equipment	<input type="radio"/> Other _____							
<input type="radio"/> Vandalism	<input type="radio"/> Terrorism												
<input type="radio"/> Theft of transported commodity	<input type="radio"/> Theft of equipment												
<input type="radio"/> Other _____													
<input type="checkbox"/> Other Outside Force Damage	*9. Describe: _____												

<b>G5 - Material Failure of Pipe or Weld</b>	<p>Use this section to report material failures ONLY IF the "Item Involved in Accident" (from PART C, Question 3) is "Pipe" or "Weld."</p> <p>*Only one sub-cause can be picked from shaded left-hand column</p>																														
<p>1. The sub-cause selected below is based on the following: <i>(select all that apply)</i></p> <p><input type="checkbox"/> Field Examination    <input type="checkbox"/> Determined by Metallurgical Analysis    <input type="checkbox"/> Other Analysis _____</p> <p><input type="checkbox"/> Sub-cause is Tentative or Suspected; Still Under Investigation <i>(Supplemental Report required)</i></p>																															
<input type="checkbox"/> Construction-, Installation-, or Fabrication-related	<p>2. List contributing factors: <i>(select all that apply)</i></p> <p><input type="checkbox"/> Fatigue- or Vibration-related:</p> <ul style="list-style-type: none"> <li><input type="radio"/> Mechanically-induced prior to installation (such as during transport of pipe)</li> <li><input type="radio"/> Mechanical Vibration</li> <li><input type="radio"/> Pressure-related</li> <li><input type="radio"/> Thermal</li> <li><input type="radio"/> Other _____</li> </ul> <p><input type="checkbox"/> Mechanical Stress</p> <p><input type="checkbox"/> Other _____</p>																														
<input type="checkbox"/> Original Manufacturing-related (NOT girth weld or other welds formed in the field)																															
<input type="checkbox"/> Environmental Cracking-related	<p>3. Specify:    <input type="radio"/> Stress Corrosion Cracking    <input type="radio"/> Sulfide Stress Cracking</p> <p><input type="radio"/> Hydrogen Stress Cracking    <input type="radio"/> Other _____</p>																														
<p><b>Complete the following if any Material Failure of Pipe or Weld sub-cause is selected.</b></p> <p>*4. Additional factors: <i>(select all that apply)</i>    <input type="radio"/> Dent    <input type="radio"/> Gouge    <input type="radio"/> Pipe Bend    <input type="radio"/> Arc Burn    <input type="radio"/> Crack    <input type="radio"/> Lack of Fusion</p> <p><input type="radio"/> Lamination    <input type="radio"/> Buckle    <input type="radio"/> Wrinkle    <input type="radio"/> Misalignment    <input type="radio"/> Burnt Steel</p> <p><input type="radio"/> Other _____</p> <p>*5. Has one or more internal inspection tool collected data at the point of the Accident?    <input type="radio"/> Yes    <input type="radio"/> No</p> <p>*5.a If Yes, for each tool used, select type of internal inspection tool and indicate most recent year run:</p> <table style="width: 100%;"> <tr> <td><input type="radio"/> Magnetic Flux Leakage Tool</td> <td>/ / / / /</td> </tr> <tr> <td><input type="radio"/> Ultrasonic</td> <td>/ / / / /</td> </tr> <tr> <td><input type="radio"/> Geometry</td> <td>/ / / / /</td> </tr> <tr> <td><input type="radio"/> Caliper</td> <td>/ / / / /</td> </tr> <tr> <td><input type="radio"/> Crack</td> <td>/ / / / /</td> </tr> <tr> <td><input type="radio"/> Hard Spot</td> <td>/ / / / /</td> </tr> <tr> <td><input type="radio"/> Combination Tool</td> <td>/ / / / /</td> </tr> <tr> <td><input type="radio"/> Transverse Field/Triaxial</td> <td>/ / / / /</td> </tr> <tr> <td><input type="radio"/> Other _____</td> <td>/ / / / /</td> </tr> </table> <p>*6. Has one or more hydrotest or other pressure test been conducted since original construction at the point of the Accident?  <input type="radio"/> Yes    ⇨ Most recent year tested: / / / / /    Test pressure (psig): / / / / /  <input type="radio"/> No</p> <p>*7. Has one or more Direct Assessment been conducted on the pipeline segment?  <input type="radio"/> Yes, and an investigative dig was conducted at the point of the Accident    ⇨ Most recent year conducted: / / / / /  <input type="radio"/> Yes, but the point of the Accident was not identified as a dig site    ⇨ Most recent year conducted: / / / / /  <input type="radio"/> No</p> <p>*8. Has one or more non-destructive examination(s) been conducted at the point of the Accident since January 1, 2002?  <input type="radio"/> Yes    <input type="radio"/> No</p> <p>*8.a If Yes, for each examination conducted since January 1, 2002, select type of non-destructive examination and indicate most recent year the examination was conducted:</p> <table style="width: 100%;"> <tr> <td><input type="radio"/> Radiography</td> <td>/ / / / /</td> </tr> <tr> <td><input type="radio"/> Guided Wave Ultrasonic</td> <td>/ / / / /</td> </tr> <tr> <td><input type="radio"/> Handheld Ultrasonic Tool</td> <td>/ / / / /</td> </tr> <tr> <td><input type="radio"/> Wet Magnetic Particle Test</td> <td>/ / / / /</td> </tr> <tr> <td><input type="radio"/> Dry Magnetic Particle Test</td> <td>/ / / / /</td> </tr> <tr> <td><input type="radio"/> Other _____</td> <td>/ / / / /</td> </tr> </table>		<input type="radio"/> Magnetic Flux Leakage Tool	/ / / / /	<input type="radio"/> Ultrasonic	/ / / / /	<input type="radio"/> Geometry	/ / / / /	<input type="radio"/> Caliper	/ / / / /	<input type="radio"/> Crack	/ / / / /	<input type="radio"/> Hard Spot	/ / / / /	<input type="radio"/> Combination Tool	/ / / / /	<input type="radio"/> Transverse Field/Triaxial	/ / / / /	<input type="radio"/> Other _____	/ / / / /	<input type="radio"/> Radiography	/ / / / /	<input type="radio"/> Guided Wave Ultrasonic	/ / / / /	<input type="radio"/> Handheld Ultrasonic Tool	/ / / / /	<input type="radio"/> Wet Magnetic Particle Test	/ / / / /	<input type="radio"/> Dry Magnetic Particle Test	/ / / / /	<input type="radio"/> Other _____	/ / / / /
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<input type="radio"/> Dry Magnetic Particle Test	/ / / / /																														
<input type="radio"/> Other _____	/ / / / /																														

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<b>G6 - Equipment Failure</b> - *only one sub-cause can be picked from shaded left-hand column	
<input type="checkbox"/> <b>Malfunction of Control/Relief Equipment</b>	*1. Specify: <i>(select all that apply)</i> <input type="radio"/> Control Valve <input type="radio"/> Instrumentation <input type="radio"/> SCADA <input type="radio"/> Communications <input type="radio"/> Block Valve <input type="radio"/> Check Valve <input type="radio"/> Relief Valve <input type="radio"/> Power Failure <input type="radio"/> Stopple/Control Fitting <input type="radio"/> ESD System Failure <input type="radio"/> Other _____
<input type="checkbox"/> <b>Pump or Pump-related Equipment</b>	*2. Specify: <input type="radio"/> Seal/Packing Failure <input type="radio"/> Body Failure <input type="radio"/> Crack in Body <input type="radio"/> Appurtenance Failure <input type="radio"/> Other _____
<input type="checkbox"/> <b>Threaded Connection/Coupling Failure</b>	3. Specify: <input type="radio"/> Pipe Nipple <input type="radio"/> Valve Threads <input type="radio"/> Mechanical Coupling <input type="radio"/> Threaded Pipe Collar <input type="radio"/> Threaded Fitting <input type="radio"/> Other _____
<input type="checkbox"/> <b>Non-threaded Connection Failure</b>	*4. Specify: <input type="radio"/> O-Ring <input type="radio"/> Gasket <input type="radio"/> Seal (NOT pump seal) or Packing <input type="radio"/> Other _____
<input type="checkbox"/> <b>Defective or Loose Tubing or Fitting</b>	
<input type="checkbox"/> <b>Failure of Equipment Body (except Pump), Tank Plate, or other Material</b>	
<input type="checkbox"/> <b>Other Equipment Failure</b>	*5. Describe: _____ _____
<p><b>Complete the following if any Equipment Failure sub-cause is selected.</b></p> <p>*6. Additional factors that contributed to the equipment failure: <i>(select all that apply)</i></p> <ul style="list-style-type: none"> <li><input type="radio"/> Excessive vibration</li> <li><input type="radio"/> Overpressurization</li> <li><input type="radio"/> No support or loss of support</li> <li><input type="radio"/> Manufacturing defect</li> <li><input type="radio"/> Loss of electricity</li> <li><input type="radio"/> Improper installation</li> <li><input type="radio"/> Mismatched items (different manufacturer for tubing and tubing fittings)</li> <li><input type="radio"/> Dissimilar metals</li> <li><input type="radio"/> Breakdown of soft goods due to compatibility issues with transported commodity</li> <li><input type="radio"/> Valve vault or valve can contributed to the release</li> <li><input type="radio"/> Alarm/status failure</li> <li><input type="radio"/> Misalignment</li> <li><input type="radio"/> Thermal stress</li> <li><input type="radio"/> Other _____</li> </ul>	

<b>G7 - Incorrect Operation</b> - *only one sub-cause can be picked from shaded left-hand column	
<input type="checkbox"/> Damage by Operator or Operator's Contractor NOT Related to Excavation and NOT due to Motorized Vehicle/Equipment Damage	
<input type="checkbox"/> Tank, Vessel, or Sump/Separator Allowed or Caused to Overflow or Overflow	*1. Specify: <input type="radio"/> Valve misalignment <input type="radio"/> Incorrect reference data/calculation <input type="radio"/> Miscommunication <input type="radio"/> Inadequate monitoring <input type="radio"/> Other _____
<input type="checkbox"/> Valve Left or Placed in Wrong Position, but NOT Resulting in a Tank, Vessel, or Sump/Separator Overflow or Facility Overpressure	
<input type="checkbox"/> Pipeline or Equipment Overpressured	
<input type="checkbox"/> Equipment Not Installed Properly	
<input type="checkbox"/> Wrong Equipment Specified or Installed	
<input type="checkbox"/> Other Incorrect Operation	*2. Describe: _____
<p>Complete the following if any Incorrect Operation sub-cause is selected.</p> <p>*3. Was this Accident related to: <i>(select all that apply)</i></p> <p><input type="radio"/> Inadequate procedure  <input type="radio"/> No procedure established  <input type="radio"/> Failure to follow procedure  <input type="radio"/> Other: _____</p> <p>*4. What category type was the activity that caused the Accident:</p> <p><input type="radio"/> Construction  <input type="radio"/> Commissioning  <input type="radio"/> Decommissioning  <input type="radio"/> Right-of-Way activities  <input type="radio"/> Routine maintenance  <input type="radio"/> Other maintenance  <input type="radio"/> Normal operating conditions  <input type="radio"/> Non-routine operating conditions (abnormal operations or emergencies)</p> <p>*5. Was the task(s) that led to the Accident identified as a covered task in your Operator Qualification Program? <input type="radio"/> Yes <input type="radio"/> No</p> <p>*5.a If Yes, were the individuals performing the task(s) qualified for the task(s)?</p> <p><input type="radio"/> Yes, they were qualified for the task(s)  <input type="radio"/> No, but they were performing the task(s) under the direction and observation of a qualified individual  <input type="radio"/> No, they were not qualified for the task(s) nor were they performing the task(s) under the direction and observation of a qualified individual</p>	
<b>G8 – Other Accident Cause</b> - *only one sub-cause can be picked from shaded left-hand column	
<input type="checkbox"/> Miscellaneous	*1. Describe: _____ _____
<input type="checkbox"/> Unknown	*2. Specify: <input type="radio"/> Investigation complete, cause of Accident unknown <input type="radio"/> Still under investigation, cause of Accident to be determined* (*Supplemental Report required)



**RAILROAD COMMISSION OF TEXAS Form H-8**  
**OIL AND GAS DIVISION (Eff. 6-4-70)**  
**CRUDE OIL, GAS WELL LIQUIDS, OR ASSOCIATED PRODUCTS LOSS REPORT**

1. Field Name (as per current proration schedule, including reservoir, if applicable)		2. RRC District	
3. Company		Check appropriate block(s) <input type="checkbox"/> Producer <input type="checkbox"/> Transporter <input type="checkbox"/> Other	4. County
5. Lease Name(s) and RRC Lease Number(s) (if applicable)			
6. Location where Liquid Hydrocarbon (crude oil, gas well liquids, or associated products) Loss Occurred (Section, Block, & Survey)			
7. Description of Facility from which Liquid Hydrocarbon Loss Occurred			
8. Name of Landowner where Liquid Hydrocarbon Loss Occurred		9. Type of Liquid Hydrocarbon Loss <input type="checkbox"/> Crude Oil <input type="checkbox"/> Gas Well Liquid <input type="checkbox"/> Other	
10. Date Liquid Hydrocarbon Loss Occurred		11. Date Liquid Hydrocarbon Loss Reported to RRC District Office by Telephone or Telegraph	
12. Total Barrels of Liquid Hydrocarbon Lost in Leak or Spill	13. Total Barrels of Liquid Hydrocarbon Recovered	14. Barrels of Liquid Hydrocarbon Unrecovered (Net Loss)	
15. Did Liquid Hydrocarbon Loss Affect Inland or Coastal Water? (if yes, explain.)			
16. Cause of Liquid Hydrocarbon Loss (Explain.) (If additional space is required, attach page(s).)			
17. Remedial Measures Taken and How Successful (Explain.)			
18. Remarks			
I declare under penalties prescribed in Article 6036c, R. C. S., that I am authorized to make this report, that this report was prepared by me or under my supervision and direction, and that data and facts stated therein are true, correct, and complete, to the best of my knowledge.			
Date		Signature	
Company		Name of Person (type or print)	
Street Address or P. O. Box		Title of Person	
City,	State	Zip Code	Telephone: Area Code      Number

(COMPANY MUST COMPLY WITH THE INSTRUCTIONS ON REVERSE SIDE HEREOF.) (OVER)

-INSTRUCTIONS-

1. File the original and one copy of this form in the Railroad Commission District Office.
2. Immediate notification shall be given first by telephone or telegraph to the Commission District Office of a fire, leak, spill, or break in facilities causing a loss of more than five (5) barrels of crude oil, gas well liquids, or associated products and then followed by the filing of this form when appropriate measures have been taken.
3. This form complies with Statewide Rules 20 and 71 which require notification to the Commission of all fires, leaks, spills, or breaks of facilities which cause a loss of more than five (5) barrels of crude oil, gas well liquids, or associated products.
4. This form is for the emergency written notification of all fires, leaks, spills, or breaks in facilities causing a loss of more than five (5) barrels and is not a substitute for the monthly loss report required of common carrier pipelines by Statewide Rule 71.
5. The use of liquid hydrocarbon in this form refers to crude oil, gas well liquids, or associated products.

## INCIDENT ACTION PLAN





NRC Incident No. # \_\_\_\_\_

1. Incident Name	2. Prepared by: (name) Date: _____ Time: _____	INCIDENT BRIEFING ICS 201-CG
------------------	---	---------------------------------

6. Current Organization (fill in additional appropriate organization)

Command \_\_\_\_\_  
\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

— Safety Officer \_\_\_\_\_

— Liaison Officer \_\_\_\_\_

— Information Officer \_\_\_\_\_

Operations Section _____	Planning Section _____	Logistics Section _____	Finance Section _____
-----------------------------	---------------------------	----------------------------	--------------------------



NRC Incident No. # \_\_\_\_\_

<b>1. Incident Name</b>	<b>2. Operational Period to be covered by IAP (Date/Time)</b> From: _____ To: _____	<b>CG IAP COVER SHEET</b>
-------------------------	--	---------------------------

**3. Approved by Incident Commander(s):**

<u>ORG</u>	<u>NAME</u>
_____	_____
_____	_____
_____	_____
_____	_____
_____	_____

## INCIDENT ACTION PLAN

The items checked below are included in this Incident Action Plan:

- ICS 202-CG (Response Objectives)  
\_\_\_\_\_
- ICS 203-CG (Organization List) – OR – ICS 207-CG (Organization Chart)  
\_\_\_\_\_
- ICS 204-CGs (Assignment Lists)  
One Copy each of any ICS 204-CG attachments:  
\_\_\_\_\_
- ICS 205-CG (Communications Plan)  
\_\_\_\_\_
- ICS 206-CG (Medical Plan)
- ICS 208-CG (Site Safety Plan) or Note SSP Location \_\_\_\_\_
- Map/Chart
- Weather forecast / Tides/Currents

**Other Attachments**

- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

<b>4. Prepared by:</b> _____	<b>Date/Time</b> _____
------------------------------	------------------------

NRC Incident No. # \_\_\_\_\_

1. Incident Name	2. Operational Period (Date/Time) From: _____ To: _____	INCIDENT OBJECTIVES ICS 202-CG
3. Objective(s)		
4. Operational Period Command Emphasis (Safety Message, Priorities, Key Decisions/Directions)		
Approved Site Safety Plan Located at: 5. Prepared by: (Planning Section Chief) _____ Date/Time _____		

NRC Incident No. # \_\_\_\_\_

<b>1. Incident Name</b>	<b>2. Operational Period (Date/Time)</b> From: _____ To: _____	<b>ORGANIZATION ASSIGNMENT LIST ICS 203-CG</b>															
<b>3. Incident Commander(s) and Staff</b> Agency      IC                      Deputy <table border="1" style="width:100%; border-collapse: collapse;"> <tr><td style="width:30%; height: 20px;"></td><td style="width:35%;"></td><td style="width:35%;"></td></tr> <tr><td style="height: 20px;"></td><td></td><td></td></tr> <tr><td style="height: 20px;"></td><td></td><td></td></tr> <tr><td style="height: 20px;"></td><td></td><td></td></tr> <tr><td style="height: 20px;"></td><td></td><td></td></tr> </table> Safety Officer: _____ Information Officer: _____ Liaison Officer: _____																<b>7. OPERATION SECTION</b>  Chief _____ Deputy _____ Deputy _____ Staging Area Manager _____ Staging Area Manager _____ Staging Area Manager _____  <b>a. Branch – Division Groups</b> Branch Director _____ Deputy _____ Division Group _____ <input type="checkbox"/> Division Group _____ <input type="checkbox"/> Division Group _____ Division/Group _____ Division/Group _____  <b>b. Branch – Division/Groups</b> Branch Director _____ Deputy _____ Division/Group _____ <input type="checkbox"/> Division/Group _____ <input type="checkbox"/> Division/Group _____ <input type="checkbox"/> Division/Group _____ Division/Group _____  <b>c. Branch – Division/Groups</b> Branch Director _____ Deputy _____ Division/Group _____ Division/Group _____ <input type="checkbox"/> Division/Group _____ Division/Group _____ Division/Group _____  <b>d. Air Operations Branch</b> Air Operations Br. Dir _____ Helicopter Coordinator _____	
<b>4. Agency Representatives</b> <table border="1" style="width:100%; border-collapse: collapse;"> <thead> <tr> <th style="width:15%;">Agency</th> <th style="width:85%;">Name</th> </tr> </thead> <tbody> <tr><td style="height: 20px;"></td><td></td></tr> </tbody> </table>	Agency	Name															
Agency	Name																
<b>5. PLANNING/INTEL SECTION</b> Chief _____ Deputy _____ Resources Unit _____ Situation Unit _____ Environmental Unit _____ Documentation Unit _____ Demobilization Unit _____ Technical Specialists _____																	
<b>6. LOGISTICS SECTION</b> Chief _____ Deputy _____ <b>a. Support Branch</b> Director _____ Supply Unit _____ Facilities Unit _____ Vessel Support Unit _____ Ground Support Unit _____  <b>b. Service Branch</b> Director _____ Communications Unit _____ Medical Unit _____ Food Unit _____	<b>8. FINANCE/ADMINISTRATION SECTION</b> Chief _____ Deputy _____ Time Unit _____ Procurement Unit _____ Compensation/Claims Unit _____ Cost Unit _____																
<b>9. Prepared By: (Resources Unit)</b> _____	<b>Date/Time</b> _____																

NRC Incident No. # \_\_\_\_\_

<b>1. Incident Name</b>		<b>2. Operational Period (Date/Time)</b> From: _____ To: _____		<b>Assignment List</b> <b>ICS 204-CG</b>	
<b>3. Branch</b>		<b>4. Division/Group/Staging</b>			
<b>5. Operations Personnel</b>					
	Name	Affiliation	Contact # (s)		
Operations Section Chief: _____					
Branch Director: _____					
Division/Group Supervisor/STAM: _____					
<b>6. Resources Assigned</b> <span style="float:right;">"X" indicates 204a attachment with additional instructions</span>					
Strike Team/Task Force/Resource Identifier	Leader	Contact Info. #	# Of Persons	Reporting Info/Notes/Remarks	↓
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
					<input type="checkbox"/>
<b>7. Work Assignments</b>					
<b>8. Special Instructions</b>					
<b>9. Communications (radio and/or phone contact numbers needed for this assignment)</b>					
<u>Name/Function</u>	<u>Radio: Freq./System/Channel</u>	<u>Phone</u>	<u>Cell/Pager</u>	_____	
_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	
_____	_____	_____	_____	_____	
<b>Emergency Communications</b>					
Medical	_____	Evacuation	_____	Other	_____
<b>10. Prepared by:</b>	Date/Time	<b>11. Reviewed by (PSC):</b>	Date/Time	<b>12. Reviewed by (OSC):</b>	Date/Time

NRC Incident No. # \_\_\_\_\_

1. Incident Name		2. Operational Period (Date/Time)		ASSIGNMENT LIST ATTACHMENT	
		From: _____ To: _____		ICS 204a-CG	
3. Branch			4. Division/Group		
5. Strike Team/Task Force/Resource (Identifier)		6. Leader		7. Assignment Location	
8. Work Assignment Special Instructions, Special Equipment/Supplies Needed for Assignment, Special Environmental Considerations, Special Site Specific Safety Considerations					
Approved Site Safety Plan Located at: _____					
9. Other Attachments (as needed)					
<input type="checkbox"/> Map/Chart		<input type="checkbox"/> Weather Forecast/Tides/Currents		<input type="checkbox"/> _____	
<input type="checkbox"/> _____		<input type="checkbox"/> _____		<input type="checkbox"/> _____	
10. Prepared by: _____		Date/Time _____		11. Reviewed by (PSC): _____	
				Date/Time _____	
				12. Reviewed by (OSC): _____	
				Date/Time _____	







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>	<input type="checkbox"/>	<input type="checkbox"/>	Oxygen Deficient/Enriched	<b>Y</b>	<b>N</b>	<input type="checkbox"/>	<input type="checkbox"/>	Chemical/MSDS # _____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Flammable Atmosphere	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Physical Site Hazard _____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Toxic Atmosphere: _____	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Traffic _____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Boat Operations	<input type="checkbox"/>	<input type="checkbox"/>	<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 & 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>	<input type="checkbox"/>	<input type="checkbox"/>	Oxygen Level	<b>Continuous</b>	<b>Frequency</b>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	LEL	<input type="checkbox"/> Y <input type="checkbox"/> N	_____ every _____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Hydrogen Sulfide	<input type="checkbox"/> Y <input type="checkbox"/> N	_____ every _____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Benzene	<input type="checkbox"/> Y <input type="checkbox"/> N	_____ every _____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	VOC: _____	<input type="checkbox"/> Y <input type="checkbox"/> N	_____ every _____
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Other: _____	<input type="checkbox"/> Y <input type="checkbox"/> N	_____ every _____

**ACCEPTABLE ENTRY CONDITIONS**

SPECIAL WORK PRACTICES OR PPE REQUIRED    WORK EFFORTS SHOULD BE DIRECTED AT REDUCING CONCENTRATIONS

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)**

Lights     Fall Protection     First Aid Kit     Drinking Water     Fire Extinguisher     Tripod     Other: \_\_\_\_\_  
 Ladder     Retrieval Lines     Defibrillator     Communication Method \_\_\_\_\_

Date: \_\_\_\_\_

NRC Incident No. # \_\_\_\_\_

**IX. Comments or Special Work Procedures**

\_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**X. Report All Injuries Immediately - "Notify Site Safety Officer"**

Radio Channel: \_\_\_\_\_ Radio Frequency: \_\_\_\_\_ Telephone No. \_\_\_\_\_

**Call 911 if life threatening**

XI. Monitoring Results		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																	

Equipment: Type: \_\_\_\_\_ Mnfter: \_\_\_\_\_ Calibration / Expiration: \_\_\_\_\_  
 Type: \_\_\_\_\_ Mnfter: \_\_\_\_\_ Calibration / Expiration: \_\_\_\_\_

Date: \_\_\_\_\_

NRC Incident No. # \_\_\_\_\_

**XII. Work Area Diagram**

*Please include wind direction, exclusion zone, support zone, decon area and significant landmarks.*

A large empty grid for drawing a work area diagram. The grid consists of 20 columns and 20 rows of small squares, forming a large rectangular area for the diagram.



NRC Incident No. # \_\_\_\_\_

<b>1. Incident Name</b>		<b>2. Operational Period (Date / Time)</b> From: To: Time of Report		<b>INCIDENT STATUS SUMMARY ICS 209-CG</b>	
<b>3. Type of Incident</b>					
<input type="checkbox"/>	Oil Spill	<input type="checkbox"/>	HAZMAT	<input type="checkbox"/>	AMIO
<input type="checkbox"/>	SAR/Major SART	<input type="checkbox"/>	SI/Terrorism	<input type="checkbox"/>	Natural Disaster
<input type="checkbox"/>	Marine Disaster	<input type="checkbox"/>	Civil Disturbance	<input type="checkbox"/>	Military Outload
<input type="checkbox"/>	Planned Event	<input type="checkbox"/>	Maritime HLS/Prevention	<input type="checkbox"/>	
<b>4. Situation Summary as of Time of Report:</b>					
<b>5. Future Outlook/Goals/Needs/Issues:</b>					
<b>6. Safety Status/Personnel Casualty Summary</b>					
		Since Last Report	Adjustments To Previous Op Period	Total	
Responder Injury					
Responder Death					
Public Missing (Active Search)					
Public Missing (Presumed Lost)					
Public Uninjured					
Public Injured					
Public Dead					
Total Public Involved					
<b>7. Property Damage Summary</b>					
Vessel				\$	
Cargo				\$	
Facility				\$	
Other				\$	
<b>8. Attachments with clarifying information</b>					
<input type="checkbox"/>	Oil/HAZMAT	<input type="checkbox"/>	SAR/LE	<input type="checkbox"/>	
<input type="checkbox"/>		<input type="checkbox"/>		<input type="checkbox"/>	
<input type="checkbox"/>	Marine Disaster	<input type="checkbox"/>	Civil Disturbance	<input type="checkbox"/>	Military Outload



NRC Incident No. # \_\_\_\_\_

1. Incident Name		2. Operational Period (Date/Time)		DAILY MEETING SCHEDULE ICS 230-CG	
		From:	To:		
3. Meeting Schedule (Commonly-held meetings are included)					
Date/ Time	Meeting Name	Purpose	Attendees	Location	
	Unified Command Objectives Meeting	Review/ identify objectives for the next operational period.	Unified Command members		
	Command & General Staff Meeting	IC/UC gives direction to Command & General staff including incident objectives and priorities	IC/UC, Command & General Staff		
	Tactics Meeting	Develop/Review primary and alternate Strategies to meet Incident Objectives for the next Operational Period.	PSC, OSC, LSC, RESL & SITL		
	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 & General Staff, Branch Directors, Div/Gru Sups., Task Force/Strike Team Leaders and Unit Leaders		
4. Prepared by: (Situation Unit Leader)			Date/Time		
DAILY MEETING SCHEDULE			ICS 230-CG (Rev.07/04)		

<b>1. Incident Name</b>		<b>2. Operational Period (Date/Time)</b> From: _____ To: _____		<b>RESOURCES AT RISK SUMMARY</b> <b>ICS 232-CG</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>	
<b>RESOURCES AT RISK SUMMARY</b>				<b>ICS 232-CG (Rev.07/04)</b>	



**SHORELINE ASSESSMENT FORM**

<b>GENERAL</b>	Segment Name:	Date:	
	Segment ID:	Time From:	To:
	Surveyed from: <input type="checkbox"/> Foot <input type="checkbox"/> Boat <input type="checkbox"/> Helicopter <input type="checkbox"/> Overlook		
	Weather: <input type="checkbox"/> Sun <input type="checkbox"/> Clouds <input type="checkbox"/> Fog <input type="checkbox"/> Rain <input type="checkbox"/> Snow		

<b>TEAM</b>	Team No.			
	Name:	For:	Name:	For:
	Name:	For:	Name:	For:
	Name:	For:	Name:	For:

Shoreline Type(s) Present: Check all that apply. Also, check whether Primary or Secondary shoreline type.

1A Rocky Cliffs	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> P <input type="checkbox"/> S	6B Riprap	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> P <input type="checkbox"/> S
1B Exposed Man-made Struct.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> P <input type="checkbox"/> S	7 Exposed Tidal Flats	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> P <input type="checkbox"/> S
2 Wave-cut Platforms	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> P <input type="checkbox"/> S	8A Sheltered Rocky Shores	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> P <input type="checkbox"/> S
3 Fine-grained Sand Beach	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> P <input type="checkbox"/> S	8B Sheltered Man-made Struct.	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> P <input type="checkbox"/> S
4 Med. to Coarse Sand Beach	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> P <input type="checkbox"/> S	9 Sheltered Tidal Flats	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> P <input type="checkbox"/> S
5 Mixed Sand & Gravel Beach	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> P <input type="checkbox"/> S	10 Wetlands	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> P <input type="checkbox"/> S
6A Gravel Beach	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> P <input type="checkbox"/> S	Other	<input type="checkbox"/> Y <input type="checkbox"/> N <input type="checkbox"/> P <input type="checkbox"/> S

Wave Exposure:  Low  Medium  High

Debris Oiled?  Y  N      Type      Volume

Segment Length:      (m)      (ft)      Percent of Segment Oiled:      %

Oil Present in which Tidal Zone?  Supra  Upper  Mid  Lower  Substrate

Overall Degree of Oiling:  None  Very Light  Light  Moderate  Heavy

Please choose one item under each heading below. Summarize for entire segment or subsegment.

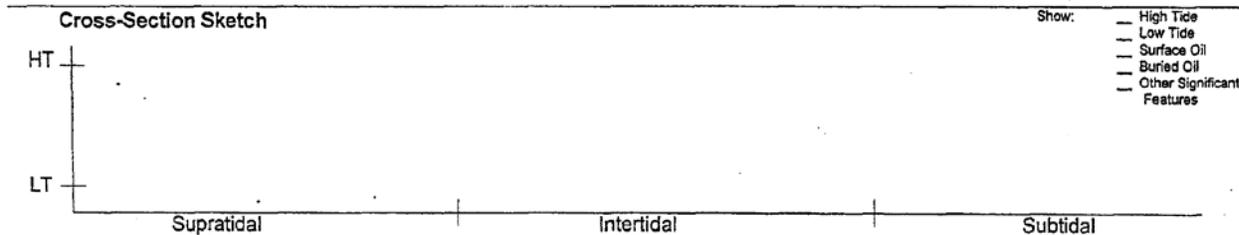
Oil Band Width (m) or (ft)	Surface Oil Cover (within the oiled band)	Surface Oil Thickness	Surface Oil Type	Sediment Penetration	Sediment Burial
<input type="checkbox"/> <0.3 m <input type="checkbox"/> <1 ft	<input type="checkbox"/> <1 %	<input type="checkbox"/> Film	<input type="checkbox"/> Fresh Liquid	<input type="checkbox"/> <1 cm	Clean Layer
<input type="checkbox"/> 0.3-1 m <input type="checkbox"/> 1-3 ft	<input type="checkbox"/> 1-10 %	<input type="checkbox"/> Stain	<input type="checkbox"/> Mousse	<input type="checkbox"/> 1-5 cm	cm
<input type="checkbox"/> 1-3 m <input type="checkbox"/> 3-10 ft	<input type="checkbox"/> 11-50 %	<input type="checkbox"/> Coat	<input type="checkbox"/> Tarballs	<input type="checkbox"/> 5-10 cm	Oiled Layer
<input type="checkbox"/> >3 m <input type="checkbox"/> >10 ft	<input type="checkbox"/> 51-90 %	<input type="checkbox"/> Cover	<input type="checkbox"/> Patties	<input type="checkbox"/> >10 cm	cm
<input type="checkbox"/> Other... <input type="checkbox"/> Other...	<input type="checkbox"/> 91-100 %	<input type="checkbox"/> Pooled	<input type="checkbox"/> Asphalt Pavement		
		<input type="checkbox"/> Other...	<input type="checkbox"/> Other...		

Environmental Issues?  Y  N

Cultural Issues?  Y  N

Recreational Issues?  Y  N

Cleanup Recommendation / Specific Constraints





## APPENDIX L

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### GLOSSARY OF TERMS/ACRONYMS

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## GLOSSARY OF TERMS

This glossary contains definitions of terms that will be used frequently during the course of response operations.

**Activation:** 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:** Measure of space occupied by 42 U.S. gallons at 60 degrees Fahrenheit.

**BART:** The national response team, made up of approximately 300 employees from all of the BUs within North America. All or any part of the BART can be deployed to the field location to provide manpower and expertise, to help respond to an incident and manage it. This team also functions using the Incident Command System.

**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.

## GLOSSARY OF TERMS (Cont'd)

**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.

**Business Support Team (BST):** A small team, made up primarily of US Logistics personnel located in the Cantera Office, that provides business support to the field location, during an incident. This team does not manage the field response; but, it ensures that the field location has the resources and support it needs to successfully deal with the incident. The BST also addresses business related issues that grow out of the incident, which could adversely impact our BU or the company. Facilitation of communication/information sharing is another responsibility of the BST.

**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.

**Coast Guard District Response Group (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.

**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 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.

**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.

## GLOSSARY OF TERMS (Cont'd)

**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 flotation/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.

## GLOSSARY OF TERMS (Cont'd)

**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) 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.

## GLOSSARY OF TERMS (Cont'd)

**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 response operations.

**Heat Stress:** Dangerous physical condition caused by over exposure to extremely high temperatures.

**Hypothermia:** Dangerous physical condition caused by over exposure to freezing temperatures.

**IMT (Incident Management Team):** A regional response team of approximately 30 USL, Pipeline, Retail and GEM personnel, located in a particular geographic area. (There are five of these teams organized across the country.) All or part of an IMT can be deployed to the field location to provide manpower and expertise, to help respond to an incident and manage it. These teams function using the Incident Command System.

**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.

**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.

## GLOSSARY OF TERMS (Cont'd)

**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 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 incidents 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.

## GLOSSARY OF TERMS (Cont'd)

**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.

**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:

- (a) 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;
- (b) Interstate waters, including interstate wetlands;
- (c) 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;
  - (1) That are or could be used by interstate or foreign travelers for recreational or other purposes;

## GLOSSARY OF TERMS (Cont'd)

- (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; and
- (3) That are used or could be used for industrial purposes by industries in interstate commerce.
- (d) All impoundments of waters otherwise defined as navigable waters under this section;
- (e) Tributaries of waters identified in paragraphs (a) through (d) of this definition, including adjacent wetlands; and
- (f) 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.
- (g) 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 by volume, distill at a temperature of 370 degrees C (700 degrees F)

**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.

**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:

## GLOSSARY OF TERMS (Cont'd)

- |    |           |  |
|----|-----------|--|
| 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 to and including 1.0      |
| 4. | Group V   | specific gravity greater than 1.0              |

**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.

**Production Facility:** Onshore oil production facilities may include all wells, flowlines, separation equipment, storage facilities, gathering lines, and auxiliary non-transportation-related equipment and facilities in a single geographical oil or gas field operated by a single operator.

**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 the environment.

**Response Contractors:** Persons/companies contracted to undertake a response action to contain and/or clean up a spill.

**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 insure 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.

## GLOSSARY OF TERMS (Cont'd)

**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.

**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.

**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.

## GLOSSARY OF TERMS (Cont'd)

**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.

**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 preapproved 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.

**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.

## GLOSSARY OF TERMS (Cont'd)

**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.

**Wellhead Protection Area:** The surface and subsurface area surrounding a water well or wellfield, supplying a public water system, through which containments are reasonably likely to move toward and reach such water well or wellfield.

**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 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.

## ACRONYMS

<b>AC</b>	-	Area Committee
<b>ACP</b>	-	Area Contingency Plan
<b>AQI</b>	-	Alternate Qualified Individual
<b>ASTs</b>	-	Aboveground Storage Tanks
<b>ASTM</b>	-	American Society of Testing Materials
<b>BBLs</b>	-	Barrels
<b>BART</b>	-	BP Americas Response Team
<b>BIA</b>	-	Bureau of Indian Affairs
<b>BPD</b>	-	Barrels Per Day
<b>BPH</b>	-	Barrels per Hour
<b>BOM</b>	-	Bureau of Mines
<b>BST</b>	-	Business Support Team
<b>CBP</b>	-	Customs and Border Protection
<b>CFR</b>	-	Code of Federal Regulations
<b>CHEMTREC</b>	-	Chemical Transportation Emergency Center
<b>CHRIS</b>	-	Chemical Hazards Response Information System
<b>CPI</b>	-	Corrugated Plate Interceptor
<b>CPR</b>	-	Cardiopulmonary resuscitation
<b>CRZ</b>	-	Contamination Reduction Zone
<b>CWA</b>	-	Clean Water Act (Federal - Public Law 100-4)
<b>DECON</b>	-	Decontamination
<b>DOC</b>	-	Department of Commerce
<b>DOD</b>	-	Department of Defense
<b>DOE</b>	-	Department of Energy
<b>DOI</b>	-	Department of Interior
<b>DOJ</b>	-	Department of Justice
<b>DOL</b>	-	Department of Labor
<b>DOS</b>	-	Department of State
<b>DRAT</b>	-	District Response Advisory Team
<b>DRG</b>	-	District Response Group
<b>EBS</b>	-	Emergency Broadcast System

**ACRONYMS (Cont'd)**

<b>EMA</b>	-	Emergency Management Agency
<b>EMS</b>	-	Emergency Medical Service
<b>EOC</b>	-	Emergency Operations Center
<b>EPCRA</b>	-	Emergency Planning and Community Right-to-Know Act of 1986 (Title III of SARA)
<b>EQ</b>	-	Environmental Quality
<b>ERAP</b>	-	Emergency Response Action Plan
<b>ERC</b>	-	Emergency Response Coordinator
<b>ERT</b>	-	Environmental Response Team
<b>ETA</b>	-	Estimated Time of Arrival
<b>FAA</b>	-	Federal Aviation Administration
<b>FAX</b>	-	Facsimile Machine
<b>FCC</b>	-	Federal Communications Commission
<b>FEMA</b>	-	Federal Emergency Management Agency
<b>FOSC</b>	-	Federal On-Scene Coordinator
<b>FR</b>	-	Federal Register
<b>FRDA</b>	-	Freshwater Resource Damage Assessment
<b>FRF</b>	-	Federal Revolving Fund
<b>GAL</b>	-	Gallons
<b>GIS</b>	-	Geographic Information System
<b>GPM</b>	-	Gallons per Minute
<b>GSA</b>	-	General Services Administration
<b>HAZMAT</b>	-	Hazardous Materials
<b>HHS</b>	-	Department of Health and Human Services
<b>IBRRC</b>	-	International Bird Rescue Research Center
<b>IC</b>	-	Incident Commander
<b>IMT</b>	-	Incident Management Team
<b>LEPC</b>	-	Local Emergency Planning Committee
<b>LFL</b>	-	Lower Flammable Limit
<b>LOSC</b>	-	Local On-Scene Coordinator
<b>LRT</b>	-	Local Response Team

**ACRONYMS (Cont'd)**

<b>MBL</b>	-	Mobile
<b>MMS</b>	-	Minerals Management Service (part of DOI)
<b>MOU</b>	-	Memorandum of Understanding
<b>MSO</b>	-	Marine Safety Office
<b>NCP</b>	-	National Contingency Plan
<b>NIOSH</b>	-	National Institute for Occupational Safety and Health
<b>NMFS</b>	-	National Marine Fisheries Service
<b>NOAA</b>	-	National Oceanic and Atmospheric Administration (Department of Commerce)
<b>NPFC</b>	-	National Pollution Funds Center
<b>NPS</b>	-	National Park Service
<b>NRC</b>	-	National Response Center
<b>NRDA</b>	-	Natural Resource Damage Assessment
<b>NRS</b>	-	National Response System
<b>NRT</b>	-	National Response Team
<b>NSF</b>	-	National Strike Force
<b>NSFCC</b>	-	National Strike Force Coordination
<b>OPA</b>	-	Oil Pollution Act of 1990
<b>OPS</b>	-	Office of Pipeline Safety (DOT)
<b>OSC</b>	-	On-Scene Coordinator
<b>OSHA</b>	-	Occupational Safety and Health Administration (USDH)
<b>OSLTF</b>	-	Oil Spill Liability Trust Fund
<b>OSRO</b>	-	Oil Spill Response Organization
<b>PFD</b>	-	Personal Flotation Device
<b>PGR</b>	-	Pager
<b>PHMSA</b>		Pipeline and Hazardous Materials Safety Administration (replaces RSPA)
<b>PIAT</b>	-	Public Information Assist Team
<b>POLREP</b>	-	Pollution Report
<b>PPE</b>	-	Personal Protective Equipment
<b>PPM</b>	-	Parts Per Million
<b>PREP</b>	-	National Preparedness for Response Exercise Program

**ACRONYMS (Cont'd)**

<b>QI</b>	-	Qualified Individual
<b>RA</b>	-	Regional Administrator
<b>RCP</b>	-	Regional Contingency Plan
<b>RCRA</b>	-	Resource Conservation and Recovery Act
<b>RECON</b>	-	Reconnaissance
<b>REP</b>	-	Radiological Emergency Preparedness
<b>RERT</b>	-	Radiological Emergency Response Team
<b>RQ</b>	-	Reportable Quantity
<b>RRC</b>	-	Regional Response Centers
<b>RRT</b>	-	Regional Response Team
<b>RSPA</b>	-	Research and Special Programs Administration (replaced by PHMSA)
<b>SARA</b>	-	Superfund Amendments and Reauthorization Act
<b>SCBA</b>	-	Self Contained Breathing Apparatus
<b>SDWA</b>	-	Safe Drinking Water Act of 1986
<b>SERC</b>	-	State Emergency Response Commission
<b>SI</b>	-	Surface Impoundment
<b>SIC</b>	-	Standard Industry Codes
<b>SONS</b>	-	Spill of National Significance
<b>SOP</b>	-	Standard Operating Procedure
<b>SPCC</b>	-	Spill Prevention Control and Countermeasures
<b>SSC</b>	-	Scientific Support Coordinator (NOAA)
<b>STEL</b>	-	Short Term Exposure Limits
<b>SUPSALV</b>	-	United States Navy Supervisor of Salvage
<b>UCS</b>	-	Unified Command System
<b>USACOE</b>	-	U.S. Army Corps of Engineers
<b>USCG</b>	-	U.S. Coast Guard
<b>USDA</b>	-	U.S. Department of Agriculture
<b>USDOT</b>	-	United States Department of Transportation
<b>USEPA</b>	-	United States Environmental Protection Agency
<b>USDL</b>	-	U.S. Department of Labor
<b>USDOD</b>	-	U.S. Department of Defense
<b>USDOE</b>	-	U.S. Department of Energy
<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>	Pasadena Refining System, Inc.
<b>Facility Name:</b>	Pasadena Refinery and Red Bluff Tank Farm
<b>Facility's Physical Address:</b>	111 Red Bluff Road Pasadena, Texas 77506
<b>Facility Phone Number:</b>	(713) 472-2461 (713) 920-4766 FAX
<b>Latitude:</b>	(b) (7)(F), (b) (3)
<b>Longitude:</b>	(b) (7)(F), (b) (3)
<b>Dun &amp; Bradstreet Number:</b>	00-308-2401
<b>Standard Industrial Classification (SIC) Code:</b>	2911
<b>NAICS:</b>	32411
<b>Number of Aboveground Oil Storage Tanks:</b>	54
<b>Capacity of Largest Aboveground Oil Storage Tank:</b>	(b) (3), (b) (7)(F) (Bbls)
<b>Maximum Oil Storage Capacity:</b>	(Bbls)
<b>Worst Case Oil Discharge Amount:</b>	(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: Pasadena Refining System, Inc. – Pasadena Refinery and  
Red Bluff Tank Farm

FACILITY ADDRESS: 111 Red Bluff Road  
Pasadena, TX 77506

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.

Signature \_\_\_\_\_

Phillip F. Hodges

Director – Refinery Support Services

Title

*Phillip F Hodges*  
 Date

2/17/05

<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:** Pasadena Refining System, Inc. – Pasadena Refinery  
and Red Bluff Tank Farm

**FACILITY ADDRESS:** 111 Red Bluff Road  
Pasadena, TX 77506

1. Is the pipeline greater than 6 and 5/8 inches (168 mm) in outside nominal diameter, greater than 10 miles (16 km) in length? and  
 YES \_\_\_\_\_ NO ✓ \_\_\_\_\_
2. Has any line section experienced a release greater than 1,000 barrels (159 cu. Bbl) within the previous five years? or  
 YES \_\_\_\_\_ NO ✓ \_\_\_\_\_
3. Has any line section experienced two or more reportable releases, as defined in Sec. 195.5, within the previous five years? or  
 YES \_\_\_\_\_ NO ✓ \_\_\_\_\_
4. 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 ✓ \_\_\_\_\_
5. 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 ✓ \_\_\_\_\_
6. Is any line located within a 1-mile (8 km) radius of potentially affected environmentally sensitive areas and could reasonably be expected to reach these areas?  
 YES ✓ \_\_\_\_\_ NO \_\_\_\_\_

(Note: If the answer for question 1 is "No", then the Pipeline is NOT a Significant and Substantial Harm Facility. If the answer for question 1 is "Yes" and "Yes" for ANY of questions 2-6, then the Facility IS a Significant and Substantial Harm Facility.)

Phillip F. Hodges  
 Signature

Director Refinery Support Services  
 Title

Phillip F. Hodges  
 Name (please type or print)

2/17/05  
 Date

## **APPENDIX N**

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### **REGULATORY AGENCY CORRESPONDENCE AND DOCUMENTATION**