U.S. Department
of Transportation
**Pipeline and Hazardous
Materials Safety Administration**

1200 New Jersey Avenue, S.E.
Washington, D.C. 20590

The following Oil Spill Response Plan has been submitted to the Department of Transportation (DOT) Pipeline Hazardous Materials Safety Administration (PHMSA) in HyperText Markup Language (HTML) format, and has since been converted to Portable Document Format (PDF) form. Any hyperlink included in the PDF file is NOT functional, and materials referenced in the links have been attached as an addendum at the end of the document.

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ALL AMERICAN
PIPELINE, L.P.
Martinez Terminal
Spill Response Plan
Developed by:

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PLAINS ALL AMERICAN PIPELINE, L.P.

Martinez Terminal,
Spill Response Plan
2801 Waterfront Road
Martinez, 94553

Developed by:

TECHNICAL RESPONSE PLANNING CORPORATION

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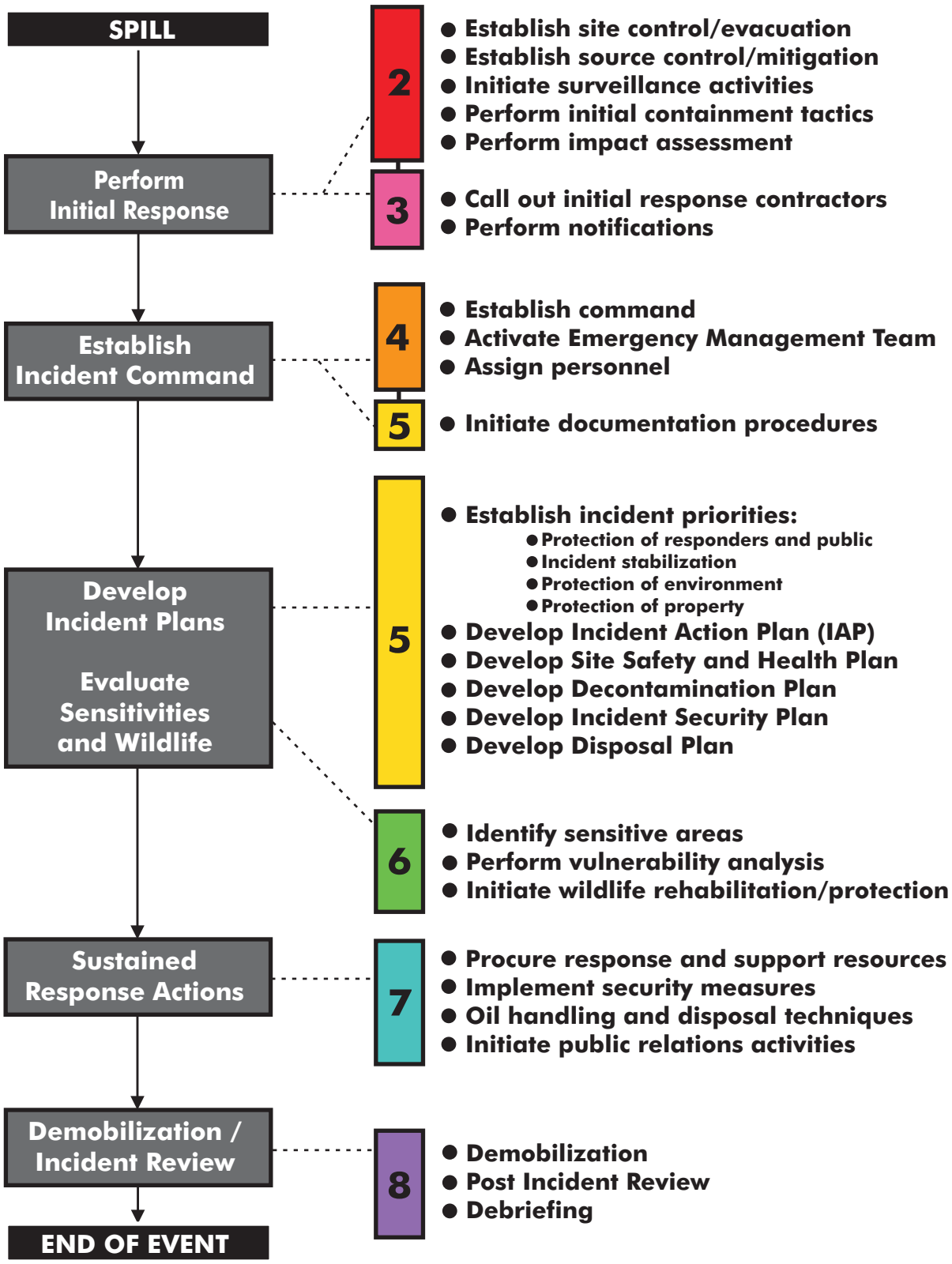
Response Procedures Flow Chart



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RECORD OF CHANGES

Changes to this Plan will be documented on this page. Plan review and modifications will be

initiated and coordinated with Terminal Management.

DATE OF CHANGE	DESCRIPTION OF CHANGE	PAGE NUMBER
8/12/2011	ERAP | Emergency Response Action Plan (ERAP) | 3.0 Notifications | Figure 3-4 - External Notifications and Telephone Numbers	
12/1/2011	EPA USCG PHMSA CA FRP/SPCC | 1 - Introduction | 1.3 Agency Submittal / Approval Letters / Certification Statement	
12/5/2011	EPA USCG PHMSA CA FRP/SPCC | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-5 - External Notifications and Telephone Numbers | USCG Classified OSROÂ´s / Non-Classified OSROÂ´s	
12/5/2011	EPA USCG PHMSA CA FRP/SPCC | 7 - Sustained Response Actions | 7.1 Response Resources | Figure 7.1-1 - Regional Company and Response Contractor’s Equipment List / Response Time	
12/5/2011	EPA USCG PHMSA CA FRP/SPCC | B - Contractor Response Equipment | B.1 Cooperatives and Contractors | B.1.1 OSRO Classification	
12/5/2011	EPA USCG PHMSA CA FRP/SPCC | B - Contractor Response Equipment | B.1 Cooperatives and Contractors | Figure B.1-1 - Evidence of Contracts and Equipment Lists	
12/5/2011	ERAP | Emergency Response Action Plan (ERAP) | 3.0 Notifications | Figure 3-4 - External Notifications and Telephone Numbers	
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1/4/2012	EPA USCG PHMSA CA FRP/SPCC | 6 - Sensitive Areas / Response Tactics | 6.4 Wildlife Protection and Rehabilitation | Figure 6.4-1 - Wildlife Rehabilitation Contract	
2/27/2012	EPA USCG PHMSA CA FRP/SPCC | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-4 - Internal Notifications and Telephone Numbers | Facility Response Team	
2/27/2012	EPA USCG PHMSA CA FRP | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-5 - External Notifications and Telephone Numbers | USCG Classified OSROÂ´s / Non-Classified OSROÂ´s	
2/27/2012	EPA USCG PHMSA CA FRP | 7 - Sustained Response Actions | 7.1 Response Resources | Figure 7.1-1 - Regional Company and Response Contractor’s Equipment List /	

	Response Time	

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DATE OF CHANGE	DESCRIPTION OF CHANGE	PAGE NUMBER
2/27/2012	EPA USCG PHMSA CA FRP | B - Contractor Response Equipment | B.1 Cooperatives and Contractors | B.1.1 OSRO Classification	
2/27/2012	EPA USCG PHMSA CA FRP | B - Contractor Response Equipment | B.1 Cooperatives and Contractors | Figure B.1-1 - Evidence of Contracts and Equipment Lists	
3/6/2012	EPA USCG PHMSA CA FRP | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-5 - External Notifications and Telephone Numbers | USCG Classified OSROÂ´s / Non-Classified OSROÂ´s	
3/6/2012	EPA USCG PHMSA CA FRP | 7 - Sustained Response Actions | 7.1 Response Resources | Figure 7.1-1 - Regional Company and Response Contractor’s Equipment List / Response Time	
3/6/2012	EPA USCG PHMSA CA FRP | B - Contractor Response Equipment | B.1 Cooperatives and Contractors | B.1.1 OSRO Classification	
3/6/2012	EPA USCG PHMSA CA FRP | B - Contractor Response Equipment | B.1 Cooperatives and Contractors | Figure B.1-1 - Evidence of Contracts and Equipment Lists	
3/6/2012	EPA USCG PHMSA CA FRP | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-5 - External Notifications and Telephone Numbers | USCG Classified OSROÂ´s / Non-Classified OSROÂ´s	
3/6/2012	EPA USCG PHMSA CA FRP | 7 - Sustained Response Actions | 7.1 Response Resources | Figure 7.1-1 - Regional Company and Response Contractor’s Equipment List / Response Time	
3/6/2012	EPA USCG PHMSA CA FRP | B - Contractor Response Equipment | B.1 Cooperatives and Contractors | B.1.1 OSRO Classification	
3/6/2012	EPA USCG PHMSA CA FRP | B - Contractor Response Equipment | B.1 Cooperatives and Contractors | Figure B.1-1 - Evidence of Contracts and Equipment Lists	
12/5/2012	EPA USCG PHMSA CA FRP | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and	

	Notification Procedures | Figure 3.1-5 - External Notifications and Telephone Numbers | External Notifications	
12/27/2012	EPA USCG PHMSA CA FRP | Table of Contents | California Certificate of Financial Responsibility (COFR)	

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DATE OF CHANGE	DESCRIPTION OF CHANGE	PAGE NUMBER
3/14/2013	EPA USCG PHMSA CA FRP | 1 - Introduction | 1.3 Agency Submittal / Approval Letters / Certification Statement	
3/27/2013	EPA USCG PHMSA CA FRP | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-4 - Internal Notifications and Telephone Numbers | Emergency Response Personnel and Business Unit Notifications	
3/27/2013	EPA USCG PHMSA CA FRP | 1 - Introduction | Figure 1-2 - Information Summary	
3/27/2013	EPA USCG PHMSA CA FRP | 1 - Introduction | Figure 1-2 - Information Summary | Information Summary	
3/27/2013	EPA USCG PHMSA CA FRP | E - Cross-References | Figure E-6 - EPA Response Plan Cover Sheet	

CALIFORNIA CERTIFICATE OF FINANCIAL RESPONSIBILITY (COFR)

Click here for COFR

SECTION 1 Last Revised: March 27, 2013

INTRODUCTION

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Figure 1-1 - Distribution List

Figure 1-2 - **Martinez Terminal** Information Summary

Figure 1-3 - **Facility** Area Map

Figure 1-4 - Facility Photograph

Figure 1-5 - Facility Site Plan

Figure 1-6 - Pipeline Overview

1.1 Purpose / Scope of Plan

1.2 Plan Review and Update Procedure

1.3 Agency Submittal / Approval Letters / Certification Statement

FIGURE 1-1 - DISTRIBUTION LIST

PLAN HOLDER	ADDRESS	NUMBER OF COPIES			
		PAPER	DISTRIBUTION DATE	ELECTRONIC	DISTRIBUTION DATE
Long Beach Office, Attn: Steve Caddell, Division Operations Manager	5900 Cherry Avenue Long Beach, CA 90805	1			
Martinez Terminal, Attn: Jeff Carlton, Martinez Terminal Manager	2801 Waterfront Road Martinez, CA 94553	1			
Martinez Terminal, Attn: John-Paul Nepote, Environmental & Safety Specialist	2801 Waterfront Road Martinez, CA 94553	1			
Long Beach Office, Attn: Richard Hartig, Assistant Division Manager	5900 Cherry Avenue Long Beach, CA 90805	1			
California State Lands Commission, Northern California Field Office, Attn: Response Plan Coordinator	750 Alfred Nobel Drive, Suite 201 Hercules, CA 94547-1897	1			
U. S. Coast Guard, Marine Safety Office - San Francisco, Attn: CAPT Of the Port, Commanding Officer	Coast Guard Island, Bldg 14 Alameda, CA 94501-5100	1			

EPA Region 9, SFD 94, Attn: Mark Samolis, Response Plan Coordinator	75 Hawthorne St. San Francisco, CA 94105	0		1	
Long Beach Office, Attn: Diana Herrick, Compliance Specialist	5900 Cherry Ave. Long Beach, CA 90805	1		0	

FIGURE 1-1 - DISTRIBUTION LIST

PLAN HOLDER	ADDRESS	NUMBER OF COPIES			
		PAPER	DISTRIBUTION DATE	ELECTRONIC	DISTRIBUTION DATE
Martinez Terminal, Terminal Dock Office	2801 Waterfront Road Martinez, CA 94553	1			
Long Beach Office, Attn: Ngiabi Gicuhi, Western Division Environmental & R/C Director	5900 Cherry Ave. Long Beach, CA 90805	1			
Brendan Geraghty, Consultant - O'Brien's Response Management	2929 E. Imperial Hwy, Ste 290 Brea, CA 92821-6729			1	
California State Lands Commission, Marine Facilities Division, Attn: Response Plan Coordinator	200 Oceangate, Suite 900 Long Beach, CA 90802	1			
Office of Pipeline	1200 New Jersey Avenue, S.E.,			2	

Safety, Attn: John Hess	Room E22-210 Washington, D.C. 20590				
Mike Rounds, District Operations Manager	2801 Waterfront Road Martinez, CA 94553	1			
California Department of Fish and Game, Office of Spill Prevention & Response, Attn: Dave Blurton, Oil Spill Prevention Specialist	1700 K Street, Suite 250 Sacramento, CA 95814			2	

FIGURE 1-2 - MARTINEZ TERMINAL INFORMATION SUMMARY

Owner:	Plains Products Terminals LLC 5900 Cherry Avenue Long Beach, CA 90805 (562) 728-2800
Operator:	Plains Products Terminals LLC 5900 Cherry Avenue Long Beach, CA 90805 (562) 728-2800
Facility Name:	Martinez Terminal
Facility Address:	2801 Waterfront Road Martinez, 94553
Facility Latitude/Longitude:	(b) (7)(F) [redacted]
Facility Telephone/Fax:	(925) 228-3227 / (925) 228-5617
EPA FRP #:	FRP 09
PHMSA Facility FRP #:	1171
USCG Facility OSRP #:	MSDD0009
Description of Facility:	The Martinez Terminal is located approximately 1-1/2 nm east of the Benicia-Martinez Highway I-680 Bridge and Railroad Bridge along the south shore of Suisun Bay. The Martinez Terminal consists of 37 aboveground storage tanks

	(ASTs) with storage capacities ranging from 500 to 500,000 barrels. The facility includes a wharf connected to the tank farm by pipelines approximately 1-1/3 miles in length. The facility is surrounded by a chain link fence and is manned 24 hours per day. Electronic gates and other monitoring equipment are also used. Ships transporting petroleum products to the Martinez Terminal enter the San Francisco Bay from the shipping lane located roughly 50 miles off the California coast. The ships proceed up the Carquinez Strait and enter Bulls Head Channel along the south side of Suisun Bay approximately 1-1/2 miles east of the Benicia I-680 Bridge.
Size, Type, and Number of Vessels the Facility can Transfer Oil to or from Simultaneously:	The wharf will accommodate barges and ships up to 950 feet in length and 150,000 dead weight tons (DWT). The Martinez Terminal Wharf is a single berth dock serving one vessel at a time. Approximately 240 marine vessel calls occur per year. Products transferred through this facility include both persistent and non-persistent oils including gasolines, diesels, gasoline blend stocks, kerosene, fuel oils, and crude oils.
Name and Address of Person to Whom Correspondence Should be Sent:	Diana Herrick 5900 Cherry Avenue Long Beach, CA 90805
River Mile:	Suisun Bay, upstream-Benicia Bridge
Agent for Service of Process:	Corporation Service Company 2730 Gateway Oaks Drive, Ste 100 Sacramento, CA 95833 (916) 641-5100

FIGURE 1-2 - MARTINEZ TERMINAL INFORMATION SUMMARY, CONTINUED

	Facility	
Qualified Individuals: (Refer to APPENDIX A, FIGURE A.2-3 for QI Training Records)	**Name and Contact Information**	**Work Address**
	Jeff Carlton Terminal Manager Deputy Incident Commander, Operations Section (925) 372-5219 (Office) (b) (6) [redacted] (925) 765-3275 (Mobile)	2801 Waterfront Rd Martinez, CA 94553
	Mike Rounds District Manager Incident Commander, Deputy Incident Commander (925) 372-5212 (Office) (b) (6) [redacted] (925) 890-4879 (Mobile)	2801 Waterfront Rd. Martinez, CA 94553
	Dennis Webb	2801 Waterfront Rd.

	Lead Operator Operations Section (925) 228-3227 (Office) (b) (6) [redacted] (925) 766-5048 (Mobile)	Martinez, CA 94553
	Walter Eckhoff Terminal Manager Deputy Incident Commander, Operations Section (510) 232-7447 (Office) (b) (6) [redacted] (925) 348-1309 (Mobile)	488 Wright Avenue Richmond, CA 94804
	Business Unit	
	Name and Contact Information	**Work Address**
	John Cook Lead Operator Operations Section (510) 232-7447 (Office) (b) (6) [redacted] (510) 719-8134 (Mobile)	488 Wright Avenue Richmond, CA 94804
	Darren Palmer District Manager Incident Commander, Deputy Incident Commander, Oil Spill Group Supervisor (661) 336-7908 (Office) (b) (6) [redacted] (661) 978-4915 (Mobile)	3600 Bowman Court Bakersfield, CA 93308
	Walter Eckhoff Terminal Manager Deputy Incident Commander, Operations Section (510) 232-7447 (Office) (b) (6) [redacted] (925) 348-1309 (Mobile)	488 Wright Avenue Richmond, CA 94804

FIGURE 1-2 - MARTINEZ TERMINAL INFORMATION SUMMARY, CONTINUED

Current Operations
Ships transporting petroleum products to the terminal enter the San Francisco Bay from the shipping lane located roughly 50 miles off the California coast. The ships proceed up the Carquinez Strait and enter Bulls Head Channel along the south side of Suisun Bay approximately 1-1/2 miles east of the Benicia I-680 bridge. The Martinez Terminal includes the following: (1) Transportation-related tank farm area, subject to the authority of DOT PHMSA under 49 CFR 194. (2) Transportation-related marine terminal, subject to the authority of the U. S. Coast Guard under 33 CFR 154 and OSPR under 14 CCR 817. (3) Transportation-related pipeline subject to the authority of DOT PHMSA under 49 CFR 194.

FIGURE 1-2 - MARTINEZ TERMINAL INFORMATION SUMMARY, CONTINUED

Line Sections / Products Handled: (Refer to Product Characteristics and Hazards, FIGURE D.11-1)

Section	Products	Total Segment Mileage	Counties / Parish	State
Line 191	Refined Hydrocarbon Products	3.80	Contra Costa	California
Line 929	Refined Hydrocarbon Products	1.56	Contra Costa	California
Line 930	Crude Oil and Other Refinery Feed Stocks	1.56	Contra Costa	California
Line 931	Refined Hydrocarbon Products	0.72	Contra Costa	California
Line 1083	Crude Oil and Other Refinery Feed Stocks	0.06	Contra Costa	California

Facility Data: (For date and type of substantial expansion, see Description of Facility and Tank Table in APPENDIX C)

Location (Address and County)	Hours of Operations/ Manning	Throughput	Date of Startup	Wellhead Protection Area
2801 Waterfront Road Martinez, Contra Costa County, 94553	The facility operates 24 hours a day, 365 days per year.	The throughput of materials at the facility is 1,500,000 barrels per month.	1973	N/A

Description of Zone:	The pipeline carries refined oil (including - #2 Fuel Oil, #5 Fuel Oil, #6 Fuel Oil (Black Oil), Crude Oil, Gasoline, Naphtha, Vacuum Gas Oil) in the areas shown in **FIGURE D.11-1**.
Response Zone Consists of the Following Counties:	Contra Costa County
Alignment Maps (Piping, Plan Profiles):	Maintenance and Engineering Room at the Terminal
Worst Case Discharge:	(b) (7)(F) [redacted]
Statement of Significant and Substantial Harm:	The pipelines meet the regulatory criteria as being capable of causing substantial harm to the environment in the event of a discharge of oil because it is located within the vicinity of an environmentally sensitive area, namely Bulls Head Point Marsh, within the Suisun Bay Wildlife Management Area. However, the pipelines do not meet the criteria for significant and substantial harm pursuant to 40 CFR 194.103(c) because they are less than 10 miles in length.
Spill Detection and Mitigation Procedures:	Refer to **SECTION 2.1.1**, **APPENDIX D.2.1** and **APPENDIX D.3**.
Date Prepared:	

The information contained in this Plan is intended to be used as guidelines for the spill responder. Actual circumstances will vary and will dictate the procedures to be followed, some of which may not be included in this manual.

Note: For further information on the Qualified Individuals' training and qualifications, refer to **SECTION 4.5** and **APPENDIX A.2** in this Plan.

FIGURE 1-3 - FACILITY AREA MAP

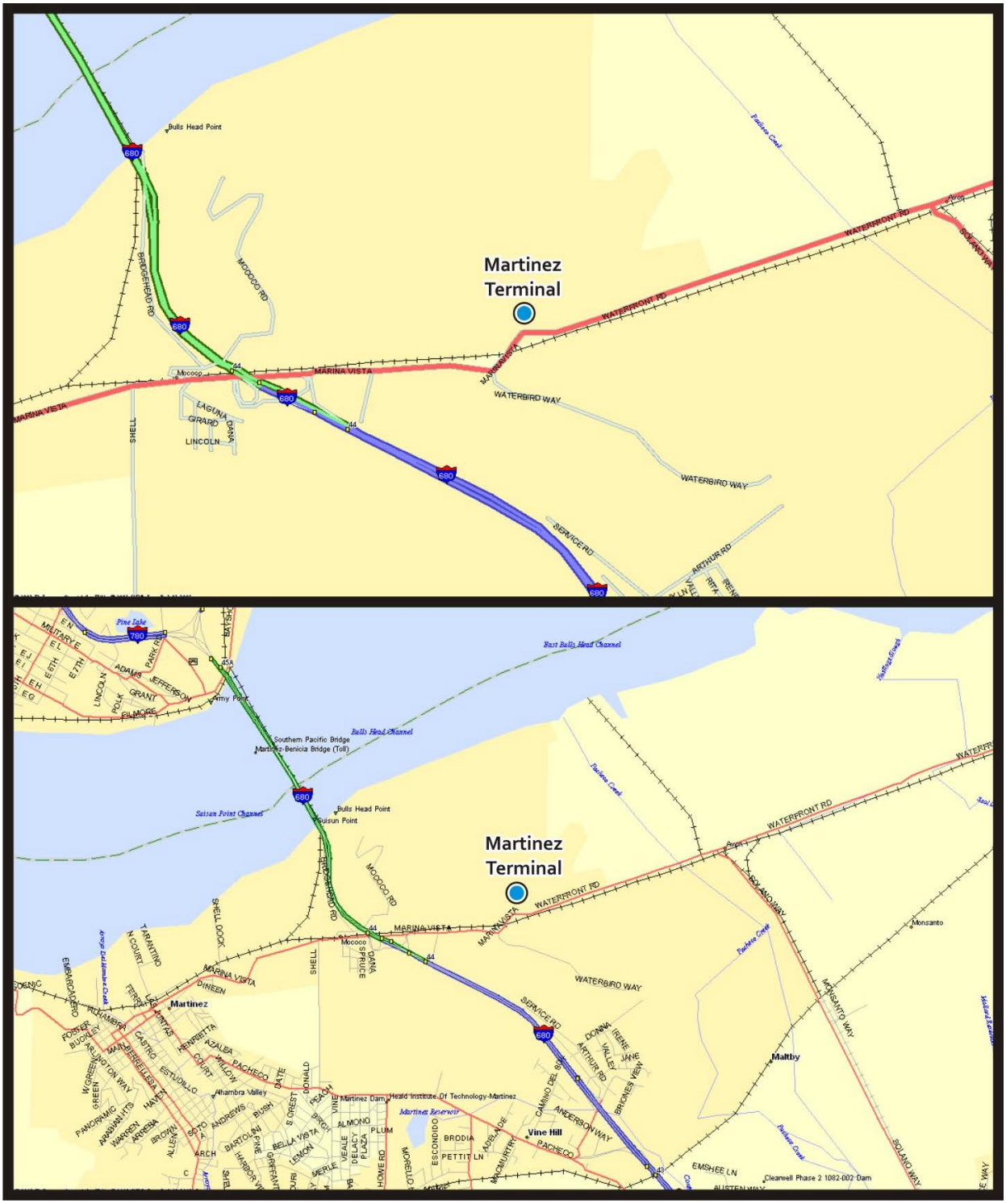

FIGURE 1-4 - FACILITY PHOTOGRAPH

FIGURE 1-5 - FACILITY SITE PLAN

Click here for Facility Site Evacuation Plan.

FIGURE 1-5 - FACILITY SITE PLAN

Click here for Wharf Detail Map.

FIGURE 1-5 - FACILITY SITE PLAN

Click here for Offsite Pipelines.

FIGURE 1-6 - PIPELINE OVERVIEW

No Pipeline System Overview Uploaded.

1.1 PURPOSE / SCOPE OF PLAN

The purpose of this Emergency Response Plan (Plan) is to provide guidelines to quickly, safely, and effectively respond to a spill. The Facility is owned and operated by Plains Products Terminals LLC , herein referred to as "Company."

This Plan is intended to satisfy the requirements of the Oil Pollution Act of 1990 (OPA 90), and has been prepared in accordance with the National Oil and Hazardous Substances Pollution Contingency Plan (NCP) and applicable Area Contingency Plans (ACP), EPA Region IX Regional Contingency Plan and the California Office of Oil Spill Prevention and Response (OSPR). Specifically, this Plan is intended to satisfy:

- U.S. Environmental Protection Agency (EPA) requirements for an OPA 90 Plan (40 CFR 112.20)
- U.S. Coast Guard (USCG) requirements for an OPA 90 Plan (33 CFR 154.1035)
- Pipeline and Hazardous Materials Safety Administration (PHMSA), U.S. Department of Transportation requirements for an OPA 90 Plan (49 CFR 194)
- California 817.02 Code of Regulations, Title 14, Division 1, Subdivision 4, Office of Oil Spill Prevention and Response
- Occupational Safety and Health Administration (OSHA) requirements for emergency response plans (EAP and ERP) (29 CFR 1910)

1.2 PLAN REVIEW AND UPDATE PROCEDURE

In accordance with 40 CFR 112.20, this Plan will be reviewed annually and modified to address new or different operating conditions or information included in the Plan. In the event the Company experiences a Worst Case Discharge, the effectiveness of the plan will be evaluated and updated as necessary. If a new or different operating condition or information would substantially effect the implementation of the Plan, the Company will modify the Plan to address such a change and, within 30 days of making such a change, submit the change to PHMSA. EPA must receive the change within 60 days.

Upon review of the response plan for each five-year period, revisions will be submitted to PHMSA provided that changes to the current plan are needed, or a letter stating will be submitted to PHMSA stating that the plan is still current.

The U.S. Coast Guard (USCG) requires that plan changes be submitted in a timely manner. 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 shall submit a letter to the USCG stating "No Changes Required."

Examples of changes in operating conditions that would cause a significant change to the Plan include:

CONDITIONS REQUIRING REVISIONS AND SUBMISSIONS	EPA	PHMSA	USCG
Relocation or replacement of the transportation system in a way			

that substantially affects the information included in the Plan, such as a change to the Worst Case Discharge volume.	x	x	
A change in the Facility's configuration that materially alters the information included in the Plan.	x		x
A change in the type of oil handled, stored, or transferred that materially alters the required response resources.	x	x	x
A change in key personnel (Qualified Individuals).	x	x	
Material change in capabilities of the Oil Spill Removal Organization(s) (OSROs) that provide equipment and personnel.	x	x	
Material change in the Facility's spill prevention and response equipment or emergency response procedures.	x		x
Any other changes that materially affect the implementation of the Plan.	x	x	x
A change in the NCP or ACP that has significant impact on the equipment appropriate for response activities.		x	
A change in the name of the Oil Spill Removal Organization (OSRO).			x
A change in the Facility's operating area that includes ports or geographic area.			x
Applicable regulations are required.			
The plan fails in an emergency.			

EH&S Department will coordinate with Terminal Management to support the plan review and update procedures.

The most current version of the plan is always the electronic copy. Revisions to the site-specific information are made through the password protected maintenance interface. The date at the beginning of each Section indicates the last date that Section was revised. Any revisions made after that date should be reprinted and inserted into the paper copy of the plan.

1.3 AGENCY SUBMITTAL / APPROVAL LETTERS / CERTIFICATION STATEMENT

Click here to view Plains Certification

Click here to view USCG Approval 11/16/2011

Click here to view OSPR Plan Renewal

SECTION 2 Last Revised: May 2008

INITIAL RESPONSE ACTIONS

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2.1 Spill Response

Figure 2.1-1 - Spill Response Action Checklist

2.1.1 Spill Detection and Mitigation Procedures

Figure 2.1-2 - Spill Mitigation Procedures

2.1.2 Spill Surveillance Guidelines

Figure 2.1-3 - Spill Surveillance Checklist

2.1.3 Spill Volume Estimating

Figure 2.1-4 - Spill Estimation Factors

2.1.4 Estimating Spill Trajectories

2.1.5 Initial Containment Actions

2.1.6 Safety Considerations

2.2 Evacuation

2.3 Tornado

2.4 Earthquake

2.5 Flood

2.6 Medical

2.7 Bomb/Terrorist Threat

2.8 **Sabotage**

2.9 **Vandalism**

2.10 **Fire and/or Explosion**

2.11 **Wildfires (Right of Way)**

2.12 Vapor Cloud

2.13 Fire Pre Plans

2.1 SPILL RESPONSE

FIGURE 2.1-1 - SPILL RESPONSE ACTION CHECKLIST

RESPONSE ACTION	
First Person to Discover Spill	
Immediately notify Supervisor, Terminal Manager and/or Operations Office. Take appropriate action to protect life and ensure safety of personnel. Contact the appropriate local emergency responders or request the Control Center personnel to do so.	☐
Immediately shut down terminal operations (if applicable). (b) (7)(F) [redacted]	☐
If safe to do so, direct facility responders to shut down potential ignition sources in the vicinity of the spill, including motors, electrical pumps, electrical power, flares, etc. If applicable, keep drivers away from truck rack if spill occurs there. The Facility Manager will notify Person-In-Charge of any moored vessel alerting them to the condition at the terminal.	☐
Evacuate nonessential personnel, notify emergency response agencies to provide security, and evacuate surrounding area (if necessary). Notify Person-In-Charge. **At our Dock Terminals, Security efforts will be coordinated by our Facility Security Officer, and followed according to our Facility Security Plan.**	☐
If safe to do so, direct facility responders to shut down and control the source of the spill. Be aware of potential hazards associated with product and ensure that lower explosive limits (LELs) and air quality for breathing are within safe levels before sending personnel into the spill area.	☐
Assign initial role of Incident Commander (IC) and Safety Officier (SO). If only one person on scene, IC and SO will be one in the same person.	☐
If safe to do so, direct facility responders to stabilize and contain the situation. This may include construction of minor earthen berms and/or deployment of sorbent boom and pads.	☐
Contact the E& R/C Department for Agency Spill Notifications.	☐
Follow procedures in the Facility Security Plan to secure the scene. Isolate the area and assure the safety of people and the environment. Keep people away from the scene and outside the safety perimeter.	☐
Terminal Management	
Assume role of Incident Commander until relieved by upper Management (if applicable).	☐
Conduct preliminary assessment of health and safety hazards.	☐
Evacuate nonessential personnel, notify emergency response agencies to provide security, and evacuate surrounding area (if necessary).	☐
Call out Emergency Management Team and primary spill response contractors, as needed (**FIGURE 3.1-5**).	☐
Notify the Division Operations Manager and provide an incident briefing. Evaluate	

the need for activating the Divisional Response Team (DRT).	☐
Notify the Division E&R/C Director.	☐
For low flash product (<100ºF), consider applying foam over the product, using water spray to reduce vapors, grounding all equipment handling the product, and using non-sparking tools.	☐
If there is a potential to impact shorelines, consider lining shoreline with sorbent or diversion boom to reduce impact.	☐
Notify Local Emergency Responders. Obtain the information necessary to complete the Leak Accident Report Form (**FIGURE 3.1-2**).	☐
Make local notifications: • LEPC • Police • Fire • Sheriff	☐

FIGURE 2.1-1 - SPILL / RELEASE RESPONSE ACTION CHECKLIST, CONTINUED

RESPONSE ACTION, CONTINUED	
E&R/C Division Director or Designee	
Make appropriate notifications: • National Response Center (800) 424-8802 • External regulatory notifications (**FIGURE 3.1-5**)	☐
Emergency Management Team	
Activate all or a portion of Emergency Management Team (EMT) (as necessary). E&R/C Department will maintain contact with notified regulatory agencies.	☐
Mobilize spill response contractors (if necessary). It is much better to demobilize equipment and personnel if not needed than to delay contacting them if they are needed.	☐
Document all response actions taken, including notifications, agency/media meetings, equipment and personnel mobilization and deployment, and area impacted. (Refer to **SECTION 5** for documentation.)	☐
Water-based Spills: Initiate spill tracking and surveillance operations. Determine extent of pollution via surveillance aircraft or vehicle. Estimate volume of spill utilizing information in **SECTION 2.1.3**. Send photographer / videographer, if safe. Use of dispersants requires Federal or State approval.	☐
Land-based Spills: Initiate spill tracking and surveillance, if applicable.	☐
SECONDARY RESPONSE ACTIONS (Refer to EMT job descriptions in **SECTION 4.6**)	
FACILITY-SPECIFIC RESPONSE CONSIDERATIONS (Refer to **SECTION 6** for maps, tactical plans, and sensitivity information.)	

FIGURE 2.1-1 - SPILL / RELEASE RESPONSE ACTION CHECKLIST, CONTINUED

SITE SPECIFIC ACTIONS	
DOCUMENT ALL ACTIONS TAKEN	
First Priority	
Account for all personnel and visitors.	☐
Identify and assess fire/safety hazards.	☐
Second Priority	
Secure spill source, if possible.	☐
Assure all required notifications are conducted.	☐
Secure all drainage leading from Facility.	☐
Third Priority	
Facility drainage and secondary containment will be adequate to contain a spill of small or medium size, preventing it from going off-site. Once the spill has been contained, resources are present at the facility to recover spilled product, safety conditions permitting.	☐
If unable to contain spill to facility property, refer to SECTION 6.8 of the FRP or SECTION 9.0 of the ERAP for the location of the tactical strategy.	☐
Once deployment of response equipment has been completed, initiate recovery of product.	☐
Upon arrival of EMT, assure all information is accurate and complete prior to being released.	☐
Assure proper documentation has been completed from initial discovery of spill to finish; reference **SECTION 5**.	☐

2.1.1 Spill Detection and Mitigation Procedures

See **APPENDIX D** for spill detection protocols.

Each spill mitigation situation is unique and must be treated according to the circumstance present. In every situation, however, personnel safety must be assessed as the first priority. The potential for ignition and/or toxic exposure must be promptly evaluated. Spill mitigation procedures are listed in FIGURE 2.1-2. Discharge volume calculations are provided in **APPENDIX D**.

FIGURE 2.1-2 - SPILL MITIGATION PROCEDURES

TYPE	MITIGATION PROCEDURE
Failure of Transfer Equipment/Loading Arms	1. Personnel safety is the first priority. Evacuate nonessential personnel or personnel at high risk. 2. Terminate transfer operations and close block valves. 3. Drain product into containment areas (if possible). 4. Eliminate sources of vapor cloud ignition by shutting down all engines and motors.

Tank Overfill/Failure	1. Personnel safety is the first priority. Evacuate nonessential personnel or personnel at high risk. 2. Shut down or divert source of incoming flow to tank. 3. Shut down source of vapor cloud ignition by shutting down all engines and motors. 4. Ensure that dike discharge valves are closed. 5. Transfer fluid to another tank with adequate storage capacity (if possible). 6. Monitor diked containment area for leaks and potential capacity limitations. 7. Begin transferring spilled product to another tank as soon as possible.
Piping Rupture/Leak (under pressure and no pressure)	1. Personnel safety is the first priority. Evacuate nonessential personnel or personnel at high risk. 2. Shut down pumps. Close the closest block valves on each side of the rupture. 3. Drain the line back into contained areas (if possible). Alert nearby personnel of potential safety hazards. 4. Shut down source of vapor cloud ignition by shutting down all engines and motors. 5. If piping is leaking and under pressure, relieve pressure by draining into a containment area or back to a tank (if possible). Then repair line according to established procedures.
Fire/Explosion	1. Personnel safety is the first priority. Evacuate nonessential personnel or personnel at risk of injury. 2. Notify local fire and police departments. 3. Attempt to extinguish fire if it is in incipient (early) stage and **if it can be done safely**. 4. Shut down transfer or pumping operation. Attempt to divert or stop flow of product to the hazardous area (if it can be done safely). 5. Eliminate sources of vapor cloud ignition by shutting down all engines and motors. 6. Control fire before taking steps to contain spill. Also refer to fire/explosion response procedures in **SECTION 2.10**.
Manifold Failure	1. Personnel safety is the first priority. Evacuate nonessential personnel or personnel at high risk. 2. Terminate transfer operations immediately. 3. Isolate the damaged area by closing block valves on both sides of the leak/rupture. 4. Shut down source of vapor cloud ignition by shutting down all engines and motors. 5. Drain fluids back into containment areas (if possible).

2.1.2 Spill Surveillance Guidelines

- Surveillance of an oil spill should begin as soon as possible following discovery to enable response personnel to assess spill size, movement, and potential impact locations.
- All surveillance should be done upwind of the spill.
- Dispatch observers to crossings downstream or downgradient to determine the spill's maximum reach.
- Clouds, shadows, sediment, floating organic matter, submerged sand banks, or wind-induced patterns on the water may resemble an oil slick if viewed from a distance.
- Sorbent pads may be used to detect oil on water.
- Use surface vessels to confirm the presence of any suspected oil slicks (if safe to do so); consider directing the vessels and photographing the vessels from the air, the latter to show their position and size relative to the slick.
- It is difficult to adequately observe oil on the water surface from a boat, dock, or shoreline.
- Spill surveillance is best accomplished through the use of helicopters or small planes; helicopters are preferred due to their superior visibility and maneuverability.
- If fixed-wing planes are to be used, high-wing types provide better visibility than low-wing types.
- All observations should be documented in writing and with photographs and/or videotapes.
- Describe the approximate dimensions of the oil slick based on available reference points (i.e., vessel, shoreline features, facilities); use the aircraft or vessel to traverse the length and width of the slick while timing each pass; calculate the approximate size and area of the slick by multiplying speed and time.
- Record aerial observations on detailed maps, such as topographic maps.
- In the event of reduced visibility, such as dense fog or cloud cover, boats may have to be used to patrol the area and to document the location and movements of the spill; however, this method may not be safe if the spill involves a highly flammable product.
- Surveillance also is required during spill response operations to gauge the effectiveness of response operations; to assist in locating skimmers; and to assess the spill's size, movement, and impact.
- A Spill Surveillance Checklist is provided in **FIGURE 2.1-3**.
- The Company utilizes USCG classified OSRO's to address aerial surveillance.

FIGURE 2.1-3 - SPILL SURVEILLANCE CHECKLIST

Record your observations of spilled oil either in a notebook or directly on a chart of the area under observation. This checklist is an aid for organizing your observations.

General Information	
Date:	Tidal or river stage (flood, ebb, slack, low water):
Time:	On-scene weather (wind, sea state, visibility):
Incident name:	Platform (helicopter, fixed-wing aircraft, boat, shore):
Observer's name:	Flight path/trackline:
Observer's affiliation:	Altitude where observation taken:
Location of source (if known):	Areas not observed (i.e., foggy locations, restricted air or land spaces, shallow water areas):
Oil Observations	
Slick location(s):	Color and appearance (i.e., rainbow, dull or silver sheen, black or brown in color or mousse):
Slick dimensions:	Percent coverage:
Orientation of slick(s):	Is oil recoverable (Y/N)?:
Distribution of oil (i.e., windrows, streamers, pancakes or patches):	
Considerations	
• During surveillance, travel beyond known impacted areas to check for additional oil spill sites. • Include the name and phone number of the person making the observations. • Clearly describe the locations where oil is observed and the areas where no oil has been seen.	
Other Observations	
Response Operations	
Equipment deployment (general locations where equipment is working and whether the work is done in the heaviest concentration of oil):	
Boom deployment (general locations of boom, whether the boom contains oil, and whether the oil entrains under the boom):	

FIGURE 2.1-3 - SPILL SURVEILLANCE CHECKLIST, CONTINUED

Record your observations of spilled oil either in a notebook or directly on a chart of the area under observation. This checklist is an aid for organizing your observations.

Environmental Observations
Locations of convergence lines, terrain, and sediment plumes:
Locations of debris and other features that could be mistaken for oil:
Wildlife present in area (locations and approximate numbers):
Spill Sketch

2.1.3 Spill Volume Estimating

Early in a spill response, estimation of spill volume is required in order to:

- Report to agencies.
- Determine liquid recovery requirements.
- Determine personnel and equipment requirements.
- Estimate disposal and interim storage requirements.

Some rapid methods to estimate spill size are:

- Transfer operations: Multiply the pumping rate by the elapsed time that the leak was in progress, plus the drainage volume of the line between the two closest valves or isolation points (volume loss = pump rate [bbls/min] x elapsed time [min] + line contents [bbl]).
- Tank overfills: Elapsed time multiplied by the pumping rate.
- Visual assessment of the surface area and thickness (**FIGURE 2.1-4**); the method may yield unreliable results because:
    - Interpretation of sheen color varies with different observers.
    - Appearance of a slick varies depending upon amount of available sunlight, sea-state, and viewing angle.
    - Different products may behave differently, depending upon their properties.

FIGURE 2.1-4 - SPILL ESTIMATION FACTORS

OIL THICKNESS ESTIMATIONS				
Standard Form	**Approx. Film Thickness**		**Approx. Quantity of Oil in Film**	
	inches	**mm**	**gallons/mile^2**	**liters/km^2**
Barely Visible	0.0000015	0.00004	25	44
Silvery	0.000003	0.00008	50	88
Slightly colored	0.000006	0.00015	100	179
Brightly colored	0.000012	0.0003	200	351
Dull	0.00004	0.001	666	1,167
Dark	0.00008	0.002	1,332	2,237
Thickness of light oils: 0.0010 inches to 0.00010 inches				
Thickness of heavy oils: 0.10 inches to 0.010 inches				

NOAA, 09/2000

2.1.4 Estimating Spill Trajectories

In some cases, oil spill trajectories should be estimated in order to predict direction and speed of the slick movement. Trajectory calculations provide an estimate of where oil slicks may impact shorelines and other sensitive areas, and also provide an estimate of the most effective location in which to mobilize spill response resources for protection, containment, and recovery.

Oil spill trajectories can be estimated using vector addition or with computer programs. Hand calculations typically utilize the following assumptions:

- Oil moves at approximately the same direction and speed as the water currents, unless the winds are strong.
- Wind speed can be multiplied by 0.034 to determine the effect of winds on speed and direction of spill movement.
- The combined effects of winds and currents can be added to estimate spill movement speed and direction.

More sophisticated predictions can be obtained from computer programs. Oil spill trajectory services can be obtained from:

- National Oceanic and Atmospheric Administration (NOAA) through the Federal On-Scene Commander (FOSC)
- Private consulting firms

2.1.5 Initial Containment Actions

Initial containment actions will focus on utilizing containment on-site in the most effective manner to:

- Prevent the oil from impacting water, thereby reducing the surface area and the shoreline to be cleaned.
- Concentrate the oil (when safe to do so), making physical recovery more efficient.
- Limit the environmental impact to the immediate spill area.

Selection of the appropriate location and method will depend upon:

- Length of time spill occurs before being noticed,
- Amount of spill,
- Area of coverage,
- Environmental factors such as wind speed and direction, and
- Oil's characteristics.

2.1.6 Safety Considerations

- Containment actions should not be conducted during inclement weather or unsafe conditions, such as high winds, fast currents, or unstable terrain.
- Eliminate all ignition sources.
- Avoid contact with the spilled product.
- Use respiratory protection (if trained to do so).
- Ensure that the area remains secure to air/boat/vehicular traffic.

2.2 EVACUATION

EVACUATION CHECKLIST	
TASK	
Request assistance from off-site response organizations; convey Command Post's location. Notify appropriate agencies (if appropriate).	☐
Assemble personnel at predetermined safe location: upwind/up gradient of release (assembly area).	☐
Account for Company and contractor personnel.	☐
Assess casualties (number/type/location).	☐
Determine probable location of missing personnel.	☐
Secure site, establish re-entry point and check-in/check-out procedures.	☐
Develop list of known hazards (confined spaces, electrical hazards, physical hazards, vapors, oxygen deficiency, fire/explosion, etc.).	☐
Monitor situation (weather, vapors, product migration) for significant changes.	☐
Assist in developing a Rescue Plan, if necessary.	☐

2.2 EVACUATION, CONTINUED

EVACUATION FACTORS	
FACTOR	**DESCRIPTION**
Stored material location	• Located in oil storage area • Identified in facility Plot Plan (**APPENDIX C**)
Spilled material hazards	• Hazard is fire/explosion
Water currents, tides, or wave conditions	• The flood current commences approximately 1.5 hours before the Golden Gate reference area. The ebb begins approximately 1.0 hour earlier. Maximum current velocities do generally

	exceed 1.5 knots. The tide cycle is semi-diurnal and maximum predicted range is 7.5 feet.
Evacuation routes	• Routes are summarized on Evacuation Plan Diagram (**APPENDIX C**) • Criteria for determining safest evacuation routes from facility may include: wind direction, potential exposure to toxins and carcinogens, intense heat, potential for explosion/fire, and blockage of planned route by fire, debris, or released liquid
Alternate evacuation routes	• Alternate routes may exist; refer to Evacuation Plan Diagram (**APPENDIX C**)
Injured personnel transportation	• Emergency vehicles can be mobilized to the facility (**FIGURE 3.1-5**)
Alarm/Notification system location	• Sound evacuation alarm. Communicate by radio/cellphone as necessary
Community evacuation plans	• Company may request local police, county sheriff, and/or state police assistance (**FIGURE 3.1-5**). Community evacuations are the responsibility of these agencies.
Spill flow direction	• Surface runoff generally flows to the north. • Identified in Facility Drainage Diagram (**APPENDIX C**)
Prevailing wind direction and speed	• The wind direction is primarily from the northwest. However, on the water, the wind is generally channeled through Carquinez Strait. • Because wind direction varies with weather conditions, consideration for evacuation routing will depend in part on wind direction
Emergency personnel/response equipment arrival route	• Waterfront Road • Directions to nearest medical facility provided below

2.2 EVACUATION, CONTINUED

EVACUATION FACTORS	
FACTOR	**DESCRIPTION**
Centralized check-in area	• Outside the Contractor Gate

	• Supervisor or designee is responsible for head count
Mitigation Command Center location	• Initial Command Center located at Terminal office or the Emergency Response trailer located next to the office building. If more space is required then the command center could be located at the Hilton Hotel in Concord, California. • Mobile Command Posts may be established as necessary
Facility Shelter Location	• One personnel shelter is located in the southwest corner of the main wharf platform. • Not a safe harbor from fires, explosions, vapor clouds, or other significant emergencies; however, may be used for temporary shelter from inclement weather
Directions to nearest medical facility	Directions to John Muir Medical Center - 2540 East Street, Concord, CA : • Take Waterfront Road west to I-680 South towards San Jose. Merge onto CA-4 East via Exit 53 toward Antioch/Pittsburg. Merge onto CA-242 South via Exit 15A toward Oakland/Concord. Take the Solano Way exit toward Grant Street. Take the ramp toward Grant Street. Turn left onto Solano Way. Solano Way become Grant Street. Turn onto East Street.

2.3 TORNADO

TORNADO CHECKLIST	
TASK	
Monitor news media reports (**FIGURE 3.1-5**). • Tornado watch means conditions are favorable for tornadoes. • Tornado warning means a tornado has been sighted.	☐
When a tornado warning is issued, sound the local alarm. Notify off-site personnel of the situation (Control Center or Regional Management).	☐
Take shelter: • Go to an interior room on the lowest floor. • Get under a sturdy piece of furniture or solid structure. • Use your arms to protect head and neck.	☐
Have location personnel report to the designated area.	☐

Account for all personnel on duty.	☐
Look for funnel formations on the ground or in the clouds; listen for a roar that sounds like a jet aircraft or rail traffic.	☐
If the facility is damaged by the tornado, notify Management.	☐
Go to the scene of the incident to evaluate the situation. • Be aware of broken glass and downed power lines. • Assess the area for damaged equipment or product releases. • Check for injuries. • Use caution entering a damaged building.	☐
Update Supervisory Personnel/Management.	☐
Conduct post-emergency evaluation and report.	☐

2.4 EARTHQUAKE

Earthquakes generally strike without warning, thus making preparation very difficult. While the initial quake may be unpredictable, there is a certain amount of post quake activity accompanying most quakes. These procedures should be followed in the aftermath of a major earthquake within the vicinity of the pipeline system.

Fires, explosions, spills, or releases resulting from earthquakes should be treated as described in this section.

EARTHQUAKE CHECKLIST	
TASK	
Call 9-1-1, if necessary. Listen to media coverage to determine the location of the quake.	☐
Shut down the potentially affected pipeline section. Continuously monitor the static pipeline pressures to ascertain the mechanical condition of the pipeline.	☐
If damage is found, an assessment of the situation will be reported to the Operations Control Center. In conjunction with the Engineering Department, repair efforts shall be undertaken and completed prior to start up of the pipeline.	☐
If no damage is found, continue to maintain the shutdown condition and continue to monitor the static pipeline pressures. The Division Manager will assess the conditions and confer on the start up and return to service of the pipeline system.	☐
Inside a building:	
Move away from windows, tall fire cabinets, and other things that could fall on or crush you.	☐
Shelter yourself by getting under a table or desk.	☐
Protect yourself by putting your head as close to your lap as possible, or kneel down and protect your head.	☐
Remain calm and clearheaded. Remember that even major earthquakes generally	☐

last less than 60 seconds.	
Do not try to stand in the doorway. The doors are heavy and can cause damage when they swing during an earthquake.	☐
Do not attempt to leave the building. You are much safer inside the building until the shaking stops.	☐
Wait for further instructions after the shaking stops.	☐
Outside a building:	
Seek protection away from buildings. Falling glass, power lines, and debris can be very hazardous.	☐
Once it is safe to do so, contact Supervisory personnel and the Operations Control Center to advise them of your location and report the earthquake. They will advise the employee of the next steps to take.	☐

2.5 FLOOD

FLOOD CHECKLIST	
TASK	
Perform continuous monitoring of the situation by listening to radio and/or television reports (**FIGURE 3.1-5**). • Flash flood watch means flooding is possible. • Flash flood warning means flooding is occurring or is imminent.	☐
Update Supervisory Personnel when flooding is imminent.	☐
Establish an evacuation plan (**SECTION 2.2**).	☐
Take preliminary actions to secure the facility before flooding and mandatory evacuation.	☐
Consider having sandbags brought to sites that could be affected by the flooding.	☐
Consider obtaining portable pumps and hoses from local suppliers or from other petroleum service locations in the area.	☐
Remove product from underground storage tanks (i.e., sumps and separators, if applicable) and replace with water to prevent them from floating out of the ground.	☐
If additional new product is available fill each tank to the minimum level necessary to prevent buoyancy in the event of flooding (Rule of thumb is 30% of the safe fill height). If additional product is not available, transfer appropriate product among tanks to prevent buoyance. If minimum levels cannot be reached through product transfer, add water bottoms.	☐
Plug all rack drains and facility drains connected to the sump.	☐
Empty all dikes of water.	☐
Ensure that tank roof drains are working properly.	☐
Anchor all bulk additive tanks, fuel barrels, empty drums, and propane tanks (if applicable).	☐

Notify Supervisory Personnel/Management that the facility will be closed. Customer should be notified.	☐
Back up computer files.	☐
Remove assets such as files, computers, spare parts, and vehicles.	☐
Shut off high voltage power and natural gas lines.	☐
Close all valves on product and additive storage tanks.	☐
Before evacuation, know where all the employees will be residing and obtain phone numbers so they can be contacted if additional emergencies occur.	☐

2.5 FLOOD, CONTINUED

FLOOD CHECKLIST	
TASK	
Conduct a post-emergency evacuation and report.	☐
Maintain hazards awareness: • Structural damage; • Equipment damage and product releases; • Downed power lines; • Leaking natural gas, water, and sewer lines; • Poisonous snakes and other wildlife sheltering in structures, vehicles, and furniture; and • Avoid direct contact with flood water, mud, and animal carcasses.	☐

2.6 MEDICAL

MEDICAL CHECKLIST	
TASK	
Summon Emergency Medical Services (EMS) to the scene (**FIGURE 3.1-5**).	☐
Do not move the patient unless a situation (such as a fire) threatens the patient's life.	☐
If trained, provide appropriate first aid for both injury and shock until the EMS arrives at the scene.	☐
As the situation warrants, try to stop the bleeding and keep the patient breathing until the EMS arrives at the scene.	☐
The rescuer's role includes: • Removing the patient from any situation threatening patient's life or the	

lives of rescuers. • Correcting life-threatening problems and immobilizing injured parts before transporting the patient. • Transporting the patient in a way that minimizes further damage to injured parts. • Administering essential life support while the patient is being transported. • Observing and protecting the patient until medical staff can take over. • Administering care as indicated or instructed.	☐
Notify Supervisory Personnel and/or Regional Management.	☐
Notify victim's immediate family.	☐
Complete follow-up and written reporting, as the situation demands.	☐

2.7 BOMB/TERRORIST THREAT

(b) (7)(F)

[redacted]

(b) (7)(F)

[redacted]

(b) (7)(F)

[redacted]

2.8 SABOTAGE

(b) (7)(F)

[redacted]

(b) (7)(F)

[redacted]

2.9 VANDALISM

The difference between vandalism and sabotage is the intent of the person committing the act. While a saboteur seeks to destroy or disrupt for a specific reason, vandals are likely to strike

without reason or provocation. For this reason acts of vandalism are more likely to be confined to one location and be somewhat more obvious in nature. Therefore, while the end result may be the same, the response to an act of vandalism will be different.

(b) (7)(F)

[redacted]

2.10 FIRE AND/OR EXPLOSION

Your first consideration is always the safety of people in the immediate area, including your own.

The first responder's initial objective is site management.

FIRE AND/OR EXPLOSION CHECKLIST	
TASK	
At a manned facility	
It is Plains' Pipeline policy that fighting fires, which accelerate beyond the incipient stage, will not be conducted by Plains personnel. If it becomes apparent that a fire may grow beyond the point of being controlled by fire extinguishers, the local fire department will manage the fire fighting and Plains will only provide assistance as necessary and if safe to do so; for example shutting off the supply of fuel to the fire. Tank fires and fires fueled by pipeline releases will generally be allowed to burn out.	☐
Evaluate the situation; approach cautiously from upwind; do not rush in.	☐
Notify the local police and fire departments (Dial 911).	☐
Sound the facility alarm and push the red emergency shutdown switch (if equipped).	
Notify Qualified Individual and Operations Control (if applicable).	☐
Appropriately trained personnel may attempt to extinguish the fire if it is in the incipient (early) stage and **if it can be done safely**.	☐
In the event the fire is too large for an individual to fight alone, the individual	

sounding the alarm or making the phone call should stand by at a safe distance to direct the fire department to the scene of the fire and keep personnel and vehicles from entering the danger area.	☐
Alert all Facility areas of the exact location and extent of the fire.	☐
Instruct all drivers to discontinue loading, disconnect loading arms, and tell all drivers present to stand by the trucks (if safe to do so) and wait for instructions to remove same to safe area.	☐
Shut off all pumps.	
If the fire/explosion is a result of a pipe rupture, isolate product release by closing valves.	☐
If product is being received from pipelines, notify the appropriate pipeline personnel of the fire and request that the pipeline be shut down. The tank which is receiving product from the pipeline must not be closed until assurance is received that the pipeline is shut down, unless that tank is on fire.	
After confirmation has been received that pipelines have been shut down, close the pipeline header valves.	☐
Undertake basic site control: • Make an assessment of hazards. • Isolate the area. • Keep people away from the scene and outside the safety perimeter. • Establish safety zones and escape routes.	☐

2.10 FIRE AND/OR EXPLOSION, CONTINUED

Your first consideration is always the safety of people in the immediate area, including your own.

The first responder's initial objective is site management.

FIRE AND/OR EXPLOSION CHECKLIST, CONTINUED	
TASK	
At a manned facility, Continued	
Respond to the fire: • Establish a Command Post and lines of communication. • Maintain site control. • Establish Incident Command/Unified Command as necessary (**SECTION 4.4**).	☐
Call in additional resources if on-scene personnel and equipment are inadequate to handle the emergency.	☐

Conduct a post-emergency evaluation and report.	☐

2.10 FIRE AND/OR EXPLOSION, CONTINUED

Your first consideration is always the safety of people in the immediate area, including your own.

The first responder's initial objective is site management.

FIRE AND/OR EXPLOSION CHECKLIST, CONTINUED	
TASK	
At an unmanned facility	
It is Plains' Pipeline policy that fighting fires, which accelerate beyond the incipient stage, will not be conducted by Plains personnel. If it becomes apparent that a fire may grow beyond the point of being controlled by fire extinguishers, the local fire department will manage the fire fighting and Plains will only provide assistance as necessary and if safe to do so; for example shutting off the supply of fuel to the fire. Tank fires and fires fueled by pipeline releases will generally be allowed to burn out.	☐
Handle the call.	☐
Notify the local police and fire departments.	☐
Notify Qualified Individual and Operations Control.	☐
Go to the incident scene to evaluate the situation; approach cautiously from upwind; do not rush in.	☐
Undertake basic site control: • Make an assessment of hazards. • Isolate the area. • Keep people away from the scene and outside the safety perimeter. • Establish safety zones and escape routes.	☐
If roads or railroads are in the affected area, assist the sheriff or local emergency officials with halting traffic.	☐
Update the next level manager.	☐
If the fire/explosion is a result of a pipe rupture, isolate the product release by closing valves.	☐
Respond to the fire: • Establish a Command Post and lines of communication. • Maintain site control. • Establish Incident Command/Unified Command as necessary (**SECTION 4.4**).	☐

Call in additional resources if on-scene personnel and equipment are inadequate to handle the emergency.	☐
Conduct a post-emergency evaluation and report.	☐

2.11 WILDFIRES (RIGHT OF WAY)

The possibility of a wild/brush fire exists due to the amount and type of vegetation along certain sections of the pipeline Right-of-Way. It is highly unlikely that a wild/brush fire would affect the buried pipeline. The Right-of-Way will most likely serve as a "fire fuel break" and could serve as access to the area for emergency firefighting equipment (e.g. bulldozer and scrapers). It is necessary to recognize the potential for mechanical damage to the pipeline from such equipment, and that a leak or rupture could fuel the fire and impede fire fighting capabilities. Care should be taken to reduce the potential for any mechanical damage caused by equipment to the pipeline.

WILDFIRE CHECKLIST	
TASK	
In the Vicinity of the Pipeline Right-of-Way	
Notify the PCC. Observe and be prepared to report wind direction, wind velocity, and direction of fire travel.	☐
The PCC will immediately notify the Division Manager and appropriate jurisdictional authority.	☐
Unless specifically trained to fight a wild/brush fire, make no attempts at fire suppression. Relocate to a safe zone where the status of the fire can be monitored and reported.	☐
On PAALP Pipeline or Facility	
Notify the PCC.	☐
The PCC will notify the Division Manager.	☐
Look for injured or trapped people to the degree you feel is reasonable without putting your well being in danger. (Rescues, when possible, should be left to trained professionals; however, any rescue attempt is left to the discretion of the person who is faced with the situation).	☐
Cut off the flow of fuel to the fire if the fire officials on the scene are in agreement. Do not open or close valves or actuate other devices unless you have been trained and are aware of the consequences of that action.	☐
Assess the danger to surrounding areas if the fire continues.	☐
Evacuate or isolate those areas to the extent necessary.	☐
Contain the spilled liquid, if possible, to prevent further spread of the fire.	☐
Work with fire officials or other agencies by providing them with your knowledge of the facility and oil. Allow them to fight the fire as they are trained to do.	☐
Once the flow of fuel is cut off, the fire should burn itself out. This is normally the way petroleum fires are handled. If it is necessary to extinguish the fire before the fuel is expended, it is CRITICAL that all hot spots or other potential sources	☐

of ignition are eliminated.	
Occasionally it may be wise to continue to operate or flow through a portion of a system that is on fire or very near to a fire. The reason for this is to cool the piping with the hope of preventing damage to it which may add to the existing fire. If this is done, pressure should be lowered to minimal levels while retaining a flowing liquid and preventing vaporization in the line. The nearest manually operated block valves should be manned, if necessary, for quick closure.	☐

2.12 VAPOR CLOUD

VAPOR CLOUD CHECKLIST	
TASK	
The person who discovers the vapor cloud will sound the alarm and notify the supervisor on duty and vacate the area.	☐
Remember: the only proper action in the presence of a vapor cloud is to get away from it. Do not shut off electrical equipment.	☐
All personnel will report to the evacuation muster point for roll call and further instructions.	☐
After all personnel have been accounted for, the Facility Management, the Facility Supervisor, or a Facility Operator will initiate the following actions as deemed necessary: • Shut down pipeline. • Evacuate adjacent property. • Only the fire department will be permitted to enter the Facility.	☐
Contact the appropriate agencies and potentially affected neighbors (refer to **FIGURE 3.1-5**).	☐

2.13 FIRE PRE PLANS

Name:	Martinez Terminal
Address:	2801 Waterfront Road Martinez 94553
Latitude / Longitude:	(b) (7) [redacted]
Phone / Fax:	(925) 228-3227 / (925) 228-5617
DESCRIPTION:	
The Martinez Terminal is located approximately 1-1/2 nm east of the Benicia-Martinez Highway I-680 Bridge and Railroad Bridge along the south shore of Suisun Bay. The Martinez Terminal consists of 37 aboveground storage tanks (ASTs) with storage capacities ranging from (b) (7)(F) [redacted]. The facility includes a wharf connected to the tank farm by pipelines approximately 1-1/3 miles in length.	

The facility is surrounded by a chain link fence and is manned 24 hours per day. Electronic gates and other monitoring equipment are also used. Ships transporting petroleum products to the Martinez Terminal enter the San Francisco Bay from the shipping lane located roughly 50 miles off the California coast. The ships proceed up the Carquinez Strait and enter Bulls Head Channel along the south side of Suisun Bay approximately 1-1/2 miles east of the Benicia I-680 Bridge.
DRIVING DIRECTIONS:
DISTANCE / DIRECTION TO NAVIGABLE WATER:
EVACUATION:

2.13 FIRE PRE PLANS, CONTINUED

*24 Hour Number

Company Personnel		
Affiliation	**Phone Number**	**Time Contacted**
Jeff Carlton Terminal Manager **Qualified Individual**	(925) 372-5219 (Office) (b) (6) [redacted] (925) 765-3275 *(Mobile)	
Mike Rounds District Manager **Qualified Individual**	(925) 372-5212 (Office) (b) (6) [redacted] (925) 890-4879 *(Mobile)	
Dennis Webb Lead Operator **Qualified Individual**	(925) 228-3227 (Office) (b) (6) [redacted] (925) 766-5048 *(Mobile)	
Walter Eckhoff Terminal Manager **Qualified Individual**	(510) 232-7447 (Office) (b) (6) [redacted] (925) 348-1309 *(Mobile)	

Refer to **APPENDIX A**, **FIGURE A.2-3** for personnel training records

2.13 FIRE PRE PLANS, CONTINUED

*24 Hour Number

Company Personnel		
Affiliation	**Phone Number**	**Time Contacted**
Tom McLane	713-646-4109 (Office) 832-584-3314 *(Mobile)	

Sr. E&R/C Director		
Ngiabi Gicuhi Western Division Dir., Environmental & R/C	562-728-2358 (Office) (b) (6) [redacted] 562-216-0120 *(Mobile)	
Kathy Randall Operations Supervisor	805-922-9897 (Office) (b) (6) [redacted] 805-657-6764 *(Mobile)	
Darren Palmer District Manager **Qualified Individual**	(661) 336-7908 (Office) (b) (6) [redacted] (661) 978-4915 *(Mobile)	
Craig Johnson Sr. Division Safety Manager	661-336-7912 (Office) (b) (6) [redacted] 661-203-7096 *(Mobile)	
Bob Osborn Maintenance Planner	661-336-7907 (Office) (b) (6) [redacted] 661-979-7003 *(Mobile)	
Lanny Kippes District Operations Manager	562-728-2342 (Office) (b) (6) [redacted] 562-221-4510 *(Mobile)	
Richard Hartig Western Division Assistant Operations Manager **Qualified Individual**	(562) 728-2023 (Office) (b) (6) [redacted] (562) 453-6926 *(Mobile)	
Steve Caddell Western Division Operations Manager	562-728-2895 (Office) (b) (6) [redacted] 562-607-7991 *(Mobile)	
John Rifilato Long Beach Terminal Manager	562-728-2346 (Office) (b) (6) [redacted] 562-216-3863 *(Mobile)	

NOTE: Refer to **APPENDIX A** for training dates.

2.13 FIRE PRE PLANS, CONTINUED

*24 Hour Number

Company Personnel		
Affiliation	**Phone Number**	**Time Contacted**
Andrew Hall	(562) 728-2365 (Office) (b) (6) [redacted]	

Maintenance Supervisor	(562) 843-3544 *(Mobile)	
Steven Franks Operations Supervisor	(562) 728-2094 (Office) (b) (6) [redacted] (562) 355-8685, (562) 355-2094 *(Mobile)	
Brendan Geraghty Consultant - O'Brien's Group	(714) 577-2115 (Office) (562) 217-0791 *(Mobile)	
Jeremy Wiggins E&R/C Specialist	(661) 336-7913 (Office) (661) 204-1065 *(Mobile)	
Guy Castro Project Engineer	(562) 728-2339 (Office) (b) (6) [redacted] (562) 756-2647 *(Mobile)	
John-Paul Nepote Sr. Env., R/C, and Safety Specialist	(925) 372-5220 (Office) (b) (6) [redacted] (925) 765-3177 *(Mobile)	
Lloyden Wall Operations Supervisor, Long Beach	(562) 728-2800 (Office) (562) 254-5645 *(Mobile)	
Troy E. Valenzuela Vice President, EH&S	(713) 646-4614, (713) 739-6724 (Office) (b) (6) [redacted] (713) 444-6984 *(Mobile)	
John Cook Lead Operator **Qualified Individual**	(510) 232-7447 (Office) (b) (6) [redacted] (510) 719-8134 *(Mobile)	
Walter Eckhoff Terminal Manager **Qualified Individual**	(510) 232-7447 (Office) (b) (6) [redacted] (925) 348-1309 *(Mobile)	

NOTE: Refer to **APPENDIX A** for training dates.

2.13 FIRE PRE PLANS, CONTINUED

*24 Hour Number

Company Personnel		
Affiliation	**Phone Number**	**Time Contacted**
Christine McIntosh Customer Relations	(925) 228-3227 (Office) (b) (6) [redacted] (925) 766-9750 *(Mobile)	

Steve Varnardo Dir. Terminals, Marketing	(713) 993-5141 (Office) (713) 898-4878 *(Mobile)	
Salvador Rodriguez Jr. Maintenance Manager	(925) 228-3227 (Office) (b) (6) [redacted] (925) 349-8269 *(Mobile)	
Bill Senner E&R/C Specialist	562-728-2056 (Office) 562-221-8211 *(Mobile)	

NOTE: Refer to **APPENDIX A** for training dates.

2.13 FIRE PRE PLANS, CONTINUED

*24 Hour Number

Emergency Response Contractors		
Affiliation	**Phone Number**	**Time Contacted**
C-K Associates, LLC	225 755-1000 (office) 225 751-2010 (fax) 225 252-6526 (cell)	
Martinez Terminal	(925) 228-3227 (925) 228-5617 (fax)	
NRC Environmental Service	(800) 899-4672*	
NRC Environmental Service	(800) 899-4672*	
NRC Environmental Service	(800) 899-4672*	
NRC Environmental Service	(800) 899-4672 (510) 432-1304 (510) 385-3253 (cell)	
NRC Environmental Service	(800) 899-4672*	
NRC Environmental Service	(800) 899-4672*	
NRC Environmental Service	(800) 899-4672*	
NRC Environmental Service	(800) 899-4672*	
NRC Environmental Service	(800) 899-4672*	

NRC Environmental Service	(800) 899-4672* (562) 432-1304* (562) 432-1826* (fax)	
NRC Environmental Service	(800) 899-4672*	
NRC Environmental Service	(800) 899-4672*	
NRC Environmental Service	(800) 899-4672*	
O'Briens Response Management	(985) 781-0804 (714) 577-2115 (562) 217-0791 (Brendon Geraghty Mobile)	
Robert J. Myers and Associates	(281) 635-5217 (281) 635-5214	
So. Cal Ship Services	(707) 745-8411	
Worley Catastrophe Response	(888) 887-8070 (office) (504) 908-4537 (mobile) (b) (6) [redacted] (866) 753-3619 (claims)	

2.13 FIRE PRE PLANS, CONTINUED

*24 Hour Number

AFFILIATION	PHONE NUMBER	TIME CONTACTED
Initial		
Contra Costa Health Services Note: Call will roll over to Sheriff Dept. after hours	(925) 335-3232	
National Response Center http://www.nrc.uscg.mil/nrchp.html	(800) 424-8802* (202) 267-2675* (202) 267-1322 (Fax)	
Recommended		
Federal Agencies		
EPA Region IX	(800) 300-2193 (800) 241-1754 (415) 947-8000	
Federal Bureau of Investigation	(415) 553-7400	
National Oceanic and Atmospheric Admin. (NOAA) Scientific Support Coordinator	(510) 437-5844 (800) SKY-PAGE	

(SSC)		
U.S. Fish and Wildlife Service (USFWS)	(916) 414-6600	
USCG Sector San Francisco Command Center	(415) 399-3545 (415) 399-3521 (fax)	
State Agencies		
CA Department of Fish and Game - OSPR - Dispatch Oil Spill Prevention & Response	(916) 358-1300	
Cal-EPA, Dept. of Toxic Substances Control (contact to determine waste permit needs)	(510) 540-3739 (916) 255-2002	
California Emergency Management Agency	(800) 852-7550 (916) 262-1621	
California Highway Patrol	(510) 450-3821	
California Office of Historic Preservation CA Dept. Parks and Recreation	(916) 445-7000 (916) 445-7053 (fax)	
California Oiled Wildlife Care Network (OWCN)	(877) 823-6926	
California State Fire Marshal Office Pipeline Safety	(916) 445-8477 (8am-5pm M-F) (562) 497-9100 (So. Cal.)	
State Lands Commission Northern California Division	(510) 741-4950 (562) 590-5201*	

2.13 FIRE PRE PLANS, CONTINUED

*24 Hour Number

AFFILIATION	PHONE NUMBER	TIME CONTACTED
Recommended		
Local Agencies		
Bay Area Air Quality Management District	(415) 749-4979 (800) 334-6367	
Bay Conservation and Development Comm. - Oil Spill Program (BCDC) (request for emergency permits)	(415) 352-3600	
Contra Costa County Office of Emergency Services	(925) 646-4461*	
Regional Water Quality Control Board (San Francisco Bay)	(510) 622-2300	

Fire Departments		
Central Contra Costa Fire Protection District	911 (925) 941-3300	
Emergency Medical Services		
Paramedics	911 (510) 620-6901	
Hospitals		
Advanced Industrial Care	(925) 680-0230	
Brookside (Burn Center), San Pablo	(925) 235-7006	
Childrens Hospital Oakland	(510) 428-3000	
John Muir Medical Center	911 (925) 682-8200	
Law Enforcement		
Contra Costa County Sheriff	(925) 646-2402	
Martinez Police Department	911 (925) 372-3440	
USCG CLASSIFIED OSRO		
NRC Environmental Service	(800) 899-4672*	
NRC Environmental Service	(800) 899-4672*	
NRC Environmental Service	(800) 899-4672*	

2.13 FIRE PRE PLANS, CONTINUED

*24 Hour Number

AFFILIATION	PHONE NUMBER	TIME CONTACTED
Recommended		
USCG CLASSIFIED OSRO		
NRC Environmental Service	(800) 899-4672*	
NRC Environmental Service	(800) 899-4672*	
NRC Environmental Service	(800) 899-4672*	
NRC Environmental Service	(800) 899-4672*	
NRC Environmental Service	(800) 899-4672*	
NRC Environmental Service	(800) 899-4672* (562) 432-1304* (562) 432-1826* (fax)	
NRC Environmental Service	(800) 899-4672*	
NRC Environmental Service	(800) 899-4672*	
NRC Environmental Service	(800) 899-4672*	
NRC Environmental Service	(800) 899-4672	

	(510) 432-1304 (510) 385-3253 (cell)	
So. Cal Ship Services	(707) 745-8411	
NON USCG CLASSIFIED OSRO		
C-K Associates, LLC	225 755-1000 (office) 225 751-2010 (fax) 225 252-6526 (cell)	
Martinez Terminal	(925) 228-3227 (925) 228-5617 (fax)	
O'Briens Response Management	(985) 781-0804 (714) 577-2115 (562) 217-0791 (Brendon Geraghty Mobile)	
Robert J. Myers and Associates	(281) 635-5217 (281) 635-5214	

2.13 FIRE PRE PLANS, CONTINUED

*24 Hour Number

AFFILIATION	PHONE NUMBER	TIME CONTACTED
Recommended		
NON USCG CLASSIFIED OSRO		
Worley Catastrophe Response	(888) 887-8070 (office) (504) 908-4537 (mobile) (b) (6) [redacted] (866) 753-3619 (claims)	
Additional Services		
Petrochemical Mutual Aid Organization (PMAO)	(510) 242-5555	
Contract Spill Management Technical Advisors		
Centers for Toxicology and Environmental Health, LLC	(866) 869-2834* Emergency Response	
Neighboring Facilities		
Conoco Phillips Rodeo Refinery	(510) 799-4411	
Crockett Marina	(510) 787-1049	
East Bay Regional Parks	(510) 881-1121	
Glen Cove Marina	(707) 552-3236	
Martinez Marina	(925) 313-0942	
MOTCO Naval Weapons Station	(925) 260-6584	
Rhodia, Inc.	(925) 228-5530	
Rodeo Sanitary	(510) 799-2970 (510) 799-5403	

Shell Martinez Refinery	(925) 313-3000	
Tesoro (Avon)	(925) 228-1220	
Valero Benicia Refinery	(707) 745-7011	
Radio Stations		
KALW 91.7 FM San Francisco	(415) 841-4121	

2.13 FIRE PRE PLANS, CONTINUED

*24 Hour Number

AFFILIATION	PHONE NUMBER	TIME CONTACTED
Recommended		
Radio Stations		
KDFC 102.1 FM San Francisco	(415) 546-8710	
KNBR 680 AM San Francisco	(415) 995-6800	
Service Providers		
BlueWater & Assoc. Terry Joslin	(415) 492-2882 (415) 990-2583 (Mobile)	
Native American Heritage Commission	(916) 653-4082 (916) 657-5390 (fax)	
Ponder Environmental Services	(707) 748-7775	
Television Stations		
KBHK 44 UPN San Francisco	(415) 765-8144	
KGO 7 ABC San Francisco	(415) 954-7777	
KSBW 8 NBC Salinas	(831) 758-8888	
Waste Management		
Clean Harbors, Buttonwillow, CA	(661) 762-6200 (661) 762-7681 (fax)	
Clean Harbors, Los Angeles, CA	(323) 277-2500 (323) 277-2523 (fax)	
Clean Harbors, Phoenix, AZ	(602) 462-2300 (602) 462-2391 (fax)	

Demenno Kerdoon	(310) 537-7100 (310) 639-2946 (fax)	
Evergreen Environmental, Carson, CA	(800) 972-5284 (310) 769-0157 (fax)	
TPS Technologies Soil Recycling, Adelanto, CA	(760) 246-8001 (760) 246-8004 (fax)	
U.S. Filter, Parker, AZ	(928) 669-5758 (928) 669-5775 (fax)	

2.13 FIRE PRE PLANS, CONTINUED

*24 Hour Number

AFFILIATION	PHONE NUMBER	TIME CONTACTED
Recommended		
Water Intakes		
Contra Costa Water District	(925) 688-8095 (925) 688-8374	
Weather		
National Weather Service (NWS)	(510) 936-1212 (415) 364-6854 (408) 656-1717 (831) 656-1725 (SF Bay/Monterey)	

SECTION 3 Last Revised: March 27, 2013

NOTIFICATIONS / TELEPHONE NUMBERS

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3.1 Emergency Information and Notification Procedures

Figure 3.1-1 - Emergency Notification Flow Chart

Figure 3.1-2 - Situation Report (Spill Event) Information Collection Worksheet

Figure 3.1-3 - EPA Spill Report Form

Figure 3.1-4 - Internal Notifications and Telephone Numbers

Figure 3.1-5 - External Notifications and Telephone Numbers

Figure 3.1-6 - Reporting Requirements

3.1 EMERGENCY INFORMATION AND NOTIFICATION PROCEDURES

The notification sequence for a spill is as follows:

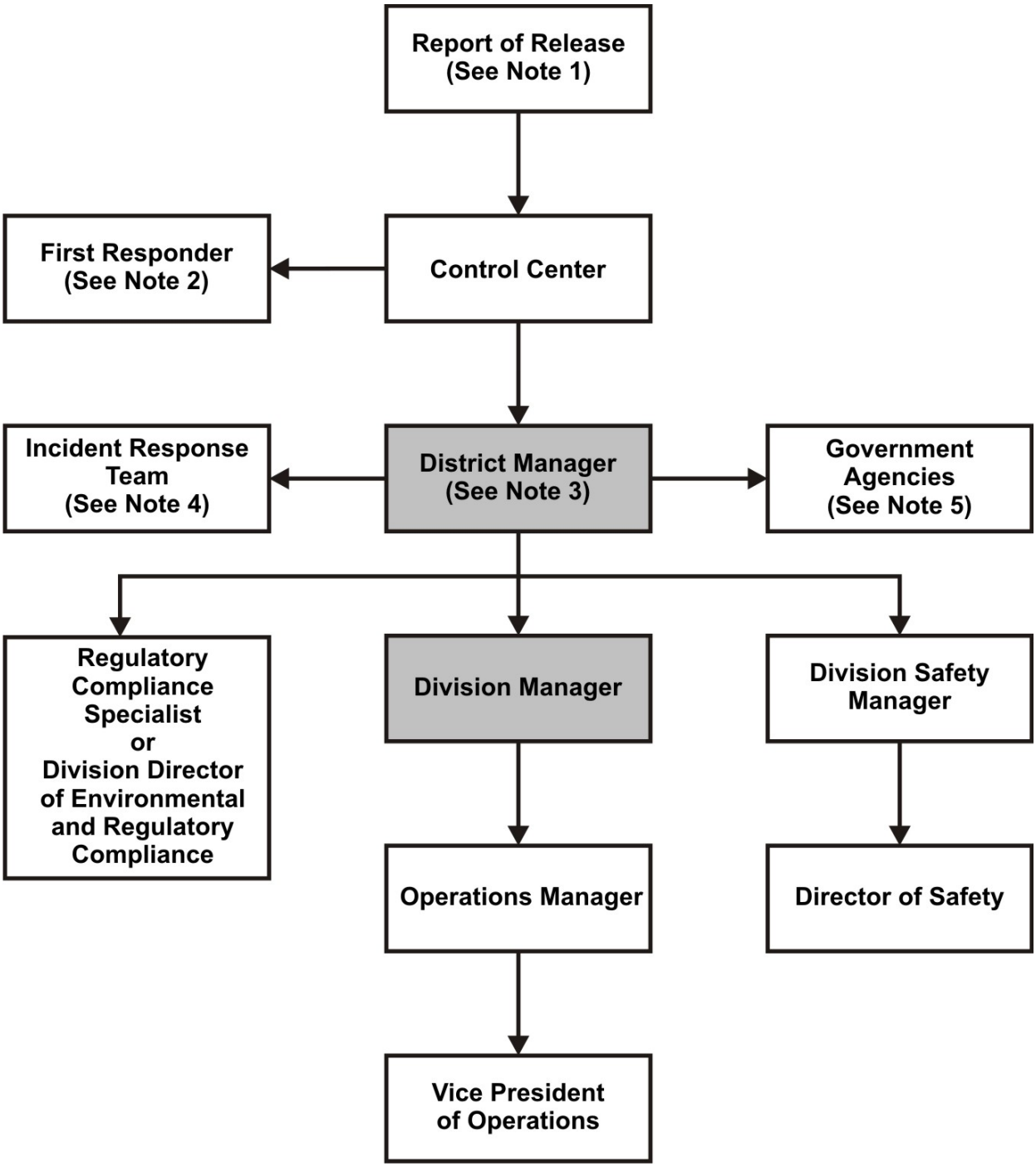
- Facility Manager will identify and control the source of a spill, if safe to do so, then will notify the Qualified Individual.
- The Qualified Individual will conduct notifications as illustrated in the Notification Flow Chart (**FIGURE 3.1-1**).

The priority of actions and response procedures will depend upon actual circumstances and will be determined by the Incident Commander.

This section also contains the following:

- FIGURE 3.1-2 provides a Situation Report (Spill Event) Information Collection Worksheet. This form is utilized for initial notifications.
- FIGURE 3.1-3 provides a EPA Spill Report Form. This form is utilized for internal leak reporting.

FIGURE 3.1-1 - EMERGENCY NOTIFICATION FLOW CHART



NOTE: Shaded boxes denote Qualified Individuals.

1. Report of release can come from a non-Plains entity.
2. First Responder is the Plains personnel closest to the potential problem dispatched to respond. In many cases, the District Manager is the closest operations responder. The District Manager may designate a proxy first responder as part of the Incident Response Team.
3. A Qualified Individual, or his alternate, will make subsequent notifications, based on his professional judgment, for each response and will coordinate with EH&S as necessary.
4. The Incident Response Team reflects the level of support required to address each response. In addition to Plains personnel, OSROs, Contractors, suppliers, and the Location Response Team may be included.
5. Government Agencies include federal, state, and local agencies that require notification for each response.

FIGURE 3.1-2 - SITUATION REPORT (SPILL EVENT) INFORMATION COLLECTION WORKSHEET

Today's Date & Time:		
Name of Person Calling/ Reporting:	Caller / Reporter:	
	Information Taken by:	
Date of Spill or Event:		
Time of Spill or Event:		
Name of Pipeline System or Operator Involved:		
Weather Conditions at scene: (include forecast and wind directions if possible)		
Landowner: (identity/contact)?		
Legal Description:		
Location:		
Latitude:		
Longitude:		
County:		
Driving Instructions:		
Cause of Spill / Release:		
Type of Crude / Product Released:		
Amount of Spill / Release:	Barrels:	Gallons:
Current Response Status:		
Has Spill been Contained?		
Amount Recovered:	Barrels:	Gallons
Has Product Impacted Navigable Waters (Waters of the State)?	Name of Lake, Stream, River, or Waterway:	
Local, State, or Federal Agencies Contacted?		
Name / Position / Agency:		
Name / Position / Agency:		
Name / Position / Agency:		
Name / Position / Agency:		
Name / Position / Agency:		
Name / Position / Agency:		

FIGURE 3.1-3 - EPA SPILL REPORT FORM

INVOLVED PARTIES			
Reporting Party		**Suspected Responsible Party**	
Name:		Name:	
Phone:	(Day)	Phone:	(Day)

(Evening)	(Evening)
Position:	Company:
Company:	Organizational Type: ☐ Private Citizen ☐ Private Enterprise ☐ Public Utility ☐ Local Government ☐ State Government ☐ Federal Government
Address:	
Person Discovering Incident	
Name:	
Company/Organization:	
City: State: Zip:	
Were materials released? ☐ Yes ☐ No	Calling for Responsible Party ☐ Yes ☐ No

INCIDENT DESCRIPTION

Date: Time: ☐ AM ☐ PM	Weather:
Incident Address/Location:	Latitude: _____ degrees _____ min _____ sec N Longitude: _____ degrees _____ min _____ sec W
Mile Post/River Marker:	
City/County:	Distance from City:
State:	Direction from City:
Source and Cause of Incident:	
Storage Tank Type: ☐ Above Ground ☐ Below Ground ☐ Unknown	
Tank Capacity:	Facility Capacity:

MATERIAL INFORMATION

CHRIS Code	Product Released	Released Quantity (Include units of measure)	Quantity in Water (Include units of measure)

*** INITIAL NOTIFICATION SHOULD NOT BE DELAYED PENDING COLLECTION OF ALL INFORMATION**

FIGURE 3.1-3 - EPA SPILL REPORT FORM, CONTINUED

INITIAL IMPACT

Number of Injuries:	Number of Deaths:
Were there Evacuations? ☐ Yes ☐ No	Number Evacuated:
Was there any Damage? ☐ Yes ☐ No	

Damage in dollars (estimate):
Is the Spill Contained within the boundaries of the facility? ☐ Yes ☐ No
Direction of Flow:
RESPONSE ACTION(S)
Action(s) Taken to Correct, Control or Mitigate Incident:
ADDITIONAL INFORMATION
Any information about the incident not recorded elsewhere in the report (e.g., duration of spill, treatment or disposal measures).

COMPLETED NOTIFICATIONS

Report	Phone Number	Date	Case Number	Time	Name	Title
NRC ☐	(800) 424-8802*					

*** INITIAL NOTIFICATION SHOULD NOT BE DELAYED PENDING COLLECTION OF ALL INFORMATION**

FIGURE 3.1-4 - INTERNAL NOTIFICATIONS AND TELEPHONE NUMBERS

Note: Notification Forms can only be printed from the Section File (not available in the Forms Navigator)

*24-Hour Number

FACILITY RESPONSE TEAM		
NAME/TITLE	**PHONE NUMBER**	**RESPONSE TIME (hours)**
Jeff Carlton Terminal Manager Deputy Incident Commander,	(925) 372-5219 (Office) (b) (6) [redacted]	1

Operations Section **Qualified Individual**	(925) 765-3275 *(Mobile)	
Mike Rounds District Manager Incident Commander, Deputy Incident Commander **Qualified Individual**	(925) 372-5212 (Office) (b) (6) [redacted] (925) 890-4879 *(Mobile)	1
Dennis Webb Lead Operator Operations Section **Qualified Individual**	(925) 228-3227 (Office) (b) (6) [redacted] (925) 766-5048 *(Mobile)	1
Walter Eckhoff Terminal Manager Deputy Incident Commander, Operations Section **Qualified Individual**	(510) 232-7447 (Office) (b) (6) [redacted] (925) 348-1309 *(Mobile)	1

Refer to **APPENDIX A, FIGURE A.2-3** for personnel training records

FIGURE 3.1-4 - INTERNAL NOTIFICATIONS AND TELEPHONE NUMBERS, CONTINUED

Note: Notification Forms can only be printed from the Section File (not available in the Forms Navigator)

*24-Hour Number

EMERGENCY RESPONSE PERSONNEL AND BUSINESS UNIT NOTIFICATIONS						
NAME/TITLE	**PHONE NUMBER**	**RESPONSE TIME (hours)**	**ICS POSITION**	**RESPONSE TRAINING TYPE[1]**		
				1	**2**	**3**
Tom McLane Sr. E&R/C Director	713-646-4109 (Office) 832-584-3314 *(Mobile)	48	Corporate Support			
Ngiabi Gicuhi Western Division Dir., Environmental & R/C	562-728-2358 (Office) (b) (6) [redacted] 562-216-0120 *(Mobile)	8	Planning Section, Compliance			
Kathy Randall Operations Supervisor	805-922-9897 (Office) (b) (6) [redacted] 805-657-6764 *(Mobile)	8	Operations Section, Staging			
Darren Palmer District Manager **Qualified Individual**	(661) 336-7908 (Office) (b) (6) [redacted] (Home) (661) 978-4915 *(Mobile)	8	Incident Commander, Deputy Incident Commander, Oil Spill Group Supervisor			

Craig Johnson Sr. Division Safety Manager	661-336-7912 (Office) (b) (6) [redacted] 661-203-7096 *(Mobile)	8	Safety Officer			
Bob Osborn Maintenance Planner	661-336-7907 (Office) (b) (6) [redacted] 661-979-7003 *(Mobile)	8	Logistics Section			
Lanny Kippes District Operations Manager	562-728-2342 (Office) (b) (6) [redacted] 562-221-4510 *(Mobile)	8	Incident Commander			
Richard Hartig Western Division Assistant Operations Manager **Qualified Individual**	(562) 728-2023 (Office) (b) (6) [redacted] (Home) (562) 453-6926 *(Mobile)	8	Deputy Incident Commander			
Steve Caddell Western Division Operations Manager	562-728-2895 (Office) (b) (6) [redacted] 562-607-7991 *(Mobile)	8	Incident Commander			

EMERGENCY RESPONSE TRAINING TYPE[1]

There are three different types of training described below including HAZWOPER, OPA, and Qualified Individual/Incident Command Training. An "x" has been placed in the applicable columns (type 1, 2, or 3) in the table above for the type of training completed by each individual.

TYPE[1]	DESCRIPTION
1	29 CFR 1910.120 HAZWOPER
2	OPA (Training Reference for Oil Spill Response) All Facility Personnel, SMT, QI Components
3	Qualified Individual/Incident Command Training

Note: Refer to **APPENDIX A** for training dates.

FIGURE 3.1-4 - INTERNAL NOTIFICATIONS AND TELEPHONE NUMBERS, CONTINUED

Note: Notification Forms can only be printed from the Section File (not available in the Forms Navigator)

*24-Hour Number

EMERGENCY RESPONSE PERSONNEL AND BUSINESS UNIT NOTIFICATIONS						
NAME/TITLE	PHONE NUMBER	RESPONSE TIME (hours)	ICS POSITION	RESPONSE TRAINING TYPE[1]		
				1	2	3

John Rifilato Long Beach Terminal Manager	562-728-2346 (Office) (b) (6) [redacted] (Home) 562-216-3863 *(Mobile)	8	Operations Section Chief			
Andrew Hall Maintenance Supervisor	(562) 728-2365 (Office) (b) (6) [redacted] (Home) (562) 843-3544 *(Mobile)	8	Operations Section			
Steven Franks Operations Supervisor	(562) 728-2094 (Office) (b) (6) [redacted] (Home) (562) 355-8685, (562) 355-2094 *(Mobile)	8	Deputy Operations Section Chief			
Brendan Geraghty Consultant - O'Brien's Group	(714) 577-2115 (Office) (562) 217-0791 *(Mobile)	8	Planning Section			
Jeremy Wiggins E&R/C Specialist	(661) 336-7913 (Office) (661) 204-1065 *(Mobile)	8	Wildlife/Environmental Branch			
Guy Castro Project Engineer	(562) 728-2339 (Office) (b) (6) [redacted] (Home) (562) 756-2647 *(Mobile)	8	Incident Commander, Logistics Section			
John-Paul Nepote Sr. Env., R/C, and Safety Specialist	(925) 372-5220 (Office) (b) (6) [redacted] (Home) (925) 765-3177 *(Mobile)	1	Planning Section, Safety Officer			
Lloyden Wall Operations Supervisor, Long Beach	(562) 728-2800 (Office) (562) 254-5645 *(Mobile)	8	Operations Section			
Troy E. Valenzuela Vice President, EH&S	(713) 646-4614, (713) 739-6724 (Office) (b) (6) [redacted] (Home) (713) 444-6984 *(Mobile)	48	Corporate Support Personnel, Information Officer			

EMERGENCY RESPONSE TRAINING TYPE[1]	
There are three different types of training described below including HAZWOPER, OPA, and Qualified Individual/Incident Command Training. An "x" has been placed in the applicable columns (type 1, 2, or 3) in the table above for the type of training completed by each individual.	
TYPE[1]	**DESCRIPTION**
1	29 CFR 1910.120 HAZWOPER
2	OPA (Training Reference for Oil Spill Response) All Facility Personnel, SMT, QI Components
3	Qualified Individual/Incident Command Training

Note: Refer to **APPENDIX A** for training dates.

FIGURE 3.1-4 - INTERNAL NOTIFICATIONS AND TELEPHONE NUMBERS, CONTINUED

Note: Notification Forms can only be printed from the Section File (not available in the Forms Navigator)

*24-Hour Number

EMERGENCY RESPONSE PERSONNEL AND BUSINESS UNIT NOTIFICATIONS						
NAME/TITLE	**PHONE NUMBER**	**RESPONSE TIME (hours)**	**ICS POSITION**	**RESPONSE TRAINING TYPE[1]**		
				1	**2**	**3**
John Cook Lead Operator **Qualified Individual**	(510) 232-7447 (Office) (b) (6) [redacted] (Home) (510) 719-8134 *(Mobile)	1	Operations Section			
Walter Eckhoff Terminal Manager **Qualified Individual**	(510) 232-7447 (Office) (b) (6) [redacted] (Home) (925) 348-1309 *(Mobile)	1	Deputy Incident Commander, Operations Section			
Christine McIntosh Customer Relations	(925) 228-3227 (Office) (b) (6) [redacted] (Home) (925) 766-9750 *(Mobile)	1	Liaison Officer			
Steve Varnardo Dir. Terminals, Marketing	(713) 993-5141 (Office) (713) 898-4878 *(Mobile)	48	Customer Relations			
	(925) 228-3227					

Salvador Rodriguez Jr. Maintenance Manager	(Office) (b) (6) [redacted] (Home) (925) 349-8269 *(Mobile)	1	Operations Section			
Bill Senner E&R/C Specialist	562-728-2056 (Office) 562-221-8211 *(Mobile)	8	Planning Section			

EMERGENCY RESPONSE TRAINING TYPE[1]

There are three different types of training described below including HAZWOPER, OPA, and Qualified Individual/Incident Command Training. An "x" has been placed in the applicable columns (type 1, 2, or 3) in the table above for the type of training completed by each individual.

TYPE[1]	DESCRIPTION
1	29 CFR 1910.120 HAZWOPER
2	OPA (Training Reference for Oil Spill Response) All Facility Personnel, SMT, QI Components
3	Qualified Individual/Incident Command Training

Note: Refer to **APPENDIX A** for training dates.

FIGURE 3.1-4 - INTERNAL NOTIFICATIONS AND TELEPHONE NUMBERS, CONTINUED

Note: Notification Forms can only be printed from the Section File (not available in the Forms Navigator)

*24-Hour Number

EMERGENCY RESPONSE CONTRACTORS

NAME/TITLE	PHONE NUMBER	RESPONSE TIME (hours)	RESPONSIBILITY DURING RESPONSE ACTION	RESPONSE TRAINING TYPE[1]		
				1	2	3
Martinez Terminal	(925) 228-3227 (925) 228-5617 (fax)	0				
Worley Catastrophe Response	(888) 887-8070 (office) (504) 908-4537 (mobile) (b) (6) [redacted] (home) (866) 753-3619 (claims)	0				
NRC Environmental	(800) 899-4672*					

Service		1				
NRC Environmental Service	(800) 899-4672*	1				
NRC Environmental Service	(800) 899-4672*	1				
NRC Environmental Service	(800) 899-4672*	1				
NRC Environmental Service	(800) 899-4672*	1				
So. Cal Ship Services	(707) 745-8411	1	Pre-booming, initial response/recovery on water.			
NRC Environmental Service	(800) 899-4672*	1				
NRC Environmental Service	(800) 899-4672*	1				
O'Briens Response Management	(985) 781-0804 (714) 577-2115 (562) 217-0791 (Brendon Geraghty Mobile)	2				
NRC Environmental Service	(800) 899-4672 (510) 432-1304 (510) 385-3253 (cell)	2	Response/recovery on water or land, industrial cleaning, and sorbent supply; 350 personnel including supervisors			

EMERGENCY RESPONSE TRAINING TYPE[1]

There are three different types of training described below including HAZWOPER, OPA, and Qualified Individual/Incident Command Training. An "x" has been placed in the applicable columns (type 1, 2, or 3) in the table above for the type of training completed by each individual.

TYPE[1]	DESCRIPTION
1	29 CFR 1910.120 HAZWOPER
2	OPA (Training Reference for Oil Spill Response) All Facility Personnel, SMT, QI Components
3	Qualified Individual/Incident Command Training

Note: Refer to **APPENDIX A** for training dates.

FIGURE 3.1-4 - INTERNAL NOTIFICATIONS AND TELEPHONE NUMBERS, CONTINUED

Note: Notification Forms can only be printed from the Section File (not available in the Forms Navigator)

*24-Hour Number

EMERGENCY RESPONSE CONTRACTORS						
NAME/TITLE	PHONE NUMBER	RESPONSE TIME (hours)	RESPONSIBILITY DURING RESPONSE ACTION	RESPONSE TRAINING TYPE[1]		
				1	2	3
NRC Environmental Service	(800) 899-4672*	2.2				
NRC Environmental Service	(800) 899-4672*	7.8				
NRC Environmental Service	(800) 899-4672*	11				
NRC Environmental Service	(800) 899-4672*	11.2				
NRC Environmental Service	(800) 899-4672* (562) 432-1304* (562) 432-1826* (fax)	11.4				
C-K Associates, LLC	225 755-1000 (office) 225 751-2010 (fax) 225 252-6526 (cell)	12				
Robert J. Myers and Associates	(281) 635-5217 (281) 635-5214	12				

EMERGENCY RESPONSE TRAINING TYPE[1]	
There are three different types of training described below including HAZWOPER, OPA, and Qualified Individual/Incident Command Training. An "x" has been placed in the applicable columns (type 1, 2, or 3) in the table above for the type of training completed by each individual.	
TYPE[1]	DESCRIPTION
1	29 CFR 1910.120 HAZWOPER
2	OPA (Training Reference for Oil Spill Response) All Facility Personnel, SMT, QI Components
3	Qualified Individual/Incident Command Training

Note: Refer to **APPENDIX A** for training dates.

FIGURE 3.1-5 - EXTERNAL NOTIFICATIONS AND TELEPHONE NUMBERS

Note: Notification Forms can only be printed from the Section File (not available in the Forms

Navigator)

*24-Hour Number

AFFILIATION	PHONE NUMBER	TIME CONTACTED
Initial		
Contra Costa Health Services Note: Call will roll over to Sheriff Dept. after hours	(925) 335-3232	
National Response Center http://www.nrc.uscg.mil/nrchp.html	(800) 424-8802* (202) 267-2675* (202) 267-1322 (Fax)	
Recommended		
Federal Agencies		
EPA Region IX	(800) 300-2193 (800) 241-1754 (415) 947-8000	
Federal Bureau of Investigation	(415) 553-7400	
National Oceanic and Atmospheric Admin. (NOAA) Scientific Support Coordinator (SSC)	(510) 437-5844 (800) SKY-PAGE	
U.S. Fish and Wildlife Service (USFWS)	(916) 414-6600	
USCG Sector San Francisco Command Center	(415) 399-3545 (415) 399-3521 (fax)	
State Agencies		
CA Department of Fish and Game - OSPR - Dispatch Oil Spill Prevention & Response	(916) 358-1300	
Cal-EPA, Dept. of Toxic Substances Control (contact to determine waste permit needs)	(510) 540-3739 (916) 255-2002	
California Emergency Management Agency	(800) 852-7550 (916) 262-1621	
California Highway Patrol	(510) 450-3821	
California Office of Historic Preservation CA Dept. Parks and Recreation	(916) 445-7000 (916) 445-7053 (fax)	
California Oiled Wildlife Care Network (OWCN)	(877) 823-6926	
California State Fire Marshal	(916) 445-8477 (8am-	

Office Pipeline Safety	5pm M-F) (562) 497-9100 (So. Cal.)	
State Lands Commission Northern California Division	(510) 741-4950 (562) 590-5201*	

FIGURE 3.1-5 - EXTERNAL NOTIFICATIONS AND TELEPHONE NUMBERS , CONTINUED

Note: Notification Forms can only be printed from the Section File (not available in the Forms Navigator)

*24-Hour Number

AFFILIATION	PHONE NUMBER	TIME CONTACTED
Recommended		
Local Agencies		
Bay Area Air Quality Management District	(415) 749-4979 (800) 334-6367	
Bay Conservation and Development Comm. - Oil Spill Program (BCDC) (request for emergency permits)	(415) 352-3600	
Contra Costa County Office of Emergency Services	(925) 646-4461*	
Regional Water Quality Control Board (San Francisco Bay)	(510) 622-2300	
Fire Departments		
Central Contra Costa Fire Protection District	911 (925) 941-3300	
Emergency Medical Services		
Paramedics	911 (510) 620-6901	
Hospitals		
Advanced Industrial Care	(925) 680-0230	
Brookside (Burn Center), San Pablo	(925) 235-7006	
Childrens Hospital Oakland	(510) 428-3000	
John Muir Medical Center	911 (925) 682-8200	

Law Enforcement		
Contra Costa County Sheriff	(925) 646-2402	
Martinez Police Department	911 (925) 372-3440	
USCG CLASSIFIED OSRO		
NRC Environmental Service Richmond, CA	(800) 899-4672*	
NRC Environmental Service San Francisco, CA	(800) 899-4672*	
NRC Environmental Service Pittsburgh, CA	(800) 899-4672*	

FIGURE 3.1-5 - EXTERNAL NOTIFICATIONS AND TELEPHONE NUMBERS , CONTINUED

Note: Notification Forms can only be printed from the Section File (not available in the Forms Navigator)

*24-Hour Number

AFFILIATION	PHONE NUMBER	TIME CONTACTED
Recommended		
USCG CLASSIFIED OSRO		
NRC Environmental Service Eureka, CA	(800) 899-4672*	
NRC Environmental Service Sacramento, CA	(800) 899-4672*	
NRC Environmental Service Stockton, CA	(800) 899-4672*	
NRC Environmental Service Richmond, CA	(800) 899-4672*	
NRC Environmental Service Carson, CA	(800) 899-4672*	
NRC Environmental Service Long Beach, CA	(800) 899-4672* (562) 432-1304* (562) 432-1826* (fax)	
NRC Environmental Service Pt. Hueneme, CA	(800) 899-4672*	
NRC Environmental Service Selby, CA	(800) 899-4672*	
NRC Environmental Service Martinez, CA	(800) 899-4672*	

NRC Environmental Service Alameda, CA	(800) 899-4672 (510) 432-1304 (510) 385-3253 (cell)	
So. Cal Ship Services Benicia, CA	(707) 745-8411	
NON USCG CLASSIFIED OSRO		
C-K Associates, LLC	225 755-1000 (office) 225 751-2010 (fax) 225 252-6526 (cell)	
Martinez Terminal	(925) 228-3227 (925) 228-5617 (fax)	
O'Briens Response Management	(985) 781-0804 (714) 577-2115 (562) 217-0791 (Brendon Geraghty Mobile)	
Robert J. Myers and Associates	(281) 635-5217 (281) 635-5214	

FIGURE 3.1-5 - EXTERNAL NOTIFICATIONS AND TELEPHONE NUMBERS , CONTINUED

Note: Notification Forms can only be printed from the Section File (not available in the Forms Navigator)

*24-Hour Number

AFFILIATION	PHONE NUMBER	TIME CONTACTED
Recommended		
NON USCG CLASSIFIED OSRO		
Worley Catastrophe Response	(888) 887-8070 (office) (504) 908-4537 (mobile) (b) (6) [redacted] (home) (866) 753-3619 (claims)	
Additional Services		
Petrochemical Mutual Aid Organization (PMAO)	(510) 242-5555	
Contract Spill Management Technical Advisors		
Centers for Toxicology and	(866) 869-2834*	

Environmental Health, LLC	Emergency Response	
Neighboring Facilities		
Conoco Phillips Rodeo Refinery	(510) 799-4411	
Crockett Marina	(510) 787-1049	
East Bay Regional Parks	(510) 881-1121	
Glen Cove Marina	(707) 552-3236	
Martinez Marina	(925) 313-0942	
MOTCO Naval Weapons Station	(925) 260-6584	
Rhodia, Inc.	(925) 228-5530	
Rodeo Sanitary	(510) 799-2970 (510) 799-5403	
Shell Martinez Refinery	(925) 313-3000	
Tesoro (Avon)	(925) 228-1220	
Valero Benicia Refinery	(707) 745-7011	
Radio Stations		
KALW 91.7 FM San Francisco	(415) 841-4121	

FIGURE 3.1-5 - EXTERNAL NOTIFICATIONS AND TELEPHONE NUMBERS , CONTINUED

Note: Notification Forms can only be printed from the Section File (not available in the Forms Navigator)

*24-Hour Number

AFFILIATION	PHONE NUMBER	TIME CONTACTED
Recommended		
Radio Stations		
KDFC 102.1 FM San Francisco	(415) 546-8710	
KNBR	(415) 995-6800	

680 AM San Francisco		
Service Providers		
BlueWater & Assoc. Terry Joslin	(415) 492-2882 (415) 990-2583 (Mobile)	
Native American Heritage Commission	(916) 653-4082 (916) 657-5390 (fax)	
Ponder Environmental Services	(707) 748-7775	
Television Stations		
KBHK 44 UPN San Francisco	(415) 765-8144	
KGO 7 ABC San Francisco	(415) 954-7777	
KSBW 8 NBC Salinas	(831) 758-8888	
Waste Management		
Clean Harbors, Buttonwillow, CA	(661) 762-6200 (661) 762-7681 (fax)	
Clean Harbors, Los Angeles, CA	(323) 277-2500 (323) 277-2523 (fax)	
Clean Harbors, Phoenix, AZ	(602) 462-2300 (602) 462-2391 (fax)	
Demenno Kerdoon	(310) 537-7100 (310) 639-2946 (fax)	
Evergreen Environmental, Carson, CA	(800) 972-5284 (310) 769-0157 (fax)	
TPS Technologies Soil Recycling, Adelanto, CA	(760) 246-8001 (760) 246-8004 (fax)	
U.S. Filter, Parker, AZ	(928) 669-5758 (928) 669-5775 (fax)	

FIGURE 3.1-5 - EXTERNAL NOTIFICATIONS AND TELEPHONE NUMBERS ,

CONTINUED

Note: Notification Forms can only be printed from the Section File (not available in the Forms Navigator)

*24-Hour Number

AFFILIATION	PHONE NUMBER	TIME CONTACTED
Recommended		
Water Intakes		
Contra Costa Water District	(925) 688-8095 (925) 688-8374	
Weather		
National Weather Service (NWS)	(510) 936-1212 (415) 364-6854 (408) 656-1717 (831) 656-1725 (SF Bay/Monterey)	

FIGURE 3.1-6 - Reporting Requirements

AGENCY / ADDRESS	DESCRIPTION
California Emergency Management Agency 3650 Schriever Ave. Mather, CA 95655	Initial notification should take place as soon as practicable. According to applicable California laws and regulations (aboveground Petroleum Storage Act, Porter-Cologne Act, and CCR Title 22 - Section 67145) a petroleum spill of 42 gallons (one barrel) or more must be reported immediately (verbally). Notify if the spill 1) was greater than 1 barrel OR 2) was greater than 5 gallons if State Fire Marshal jurisidictional OR 3) entered or threatened to enter waters of the state. Notify if the spill involves an extremely hazardous material or CERCLA-listed material over reportable quantities.
California State Fire Marshall 1131 "S" Street Sacramento, CA 95811 PO Box 944246 Sacramento, CA 94244-2460	If DOT FORM 7000-1 is completed and submitted to the Department of Transportation, a copy must be supplied to the State Fire Marshall.
California State Lands Commission Sacramento Office 100 Howe Ave Suite 100 South Sacramento, CA 95825-8202 -or-	Notify if the spill threatens state land, waterways, and tidelands out to 3 nautical miles, managed by the State Lands Commission.

Long Beach Office Marine Facilities Division 200 Oceangate, Suite 900 Long Beach, CA 90802 -or- Long Beach Office Mineral Resources Management Division 200 Oceangate, 12th Floor Long Beach, CA 90802	
DOT/PHMSA Office of Pipeline Safety Information Resources Manager, 1200 New Jersey Ave., SE East Building, 2nd Floor, (PHP-20) Room Number E22-321 Washington, D.C. 20590	Complete DOT FORM 7000-1 and submit to the DOT within 30 days if the release resulted in any of the following: Telephone report to NRC. Loss of consciousness to any person. Lost time injury. Release of more than 5 gallons. Injury that causes any person to be carried from the scene. Any release greater than 5 barrels as a result of routine maintenance activities. Damage equal to $50,000. Complete DOT form 5800.1 and submit to the DOT within 30 days if a spill resulted in a report to NRC or a release of any amount occurs during motor vehicle, rail car, or loading/unloading.

FIGURE 3.1-6 - Reporting Requirements

AGENCY / ADDRESS	DESCRIPTION
National Response Center (NRC) c/o United States Coast Guard (CG-5335) - Stop 7581 2100 2nd Street, SW Washington, D.C. 20593-0001	Notification Conditions: - Explosion or Fire>=5 gallons - Any release in water - Any release >5 barrels related to maintenance activites - Damage >=$50,000 - Death - Injury requiring hospitalization - Any release that the operator deems significant Notify ASAP for all Reportable Quantities (RQs). The NRC must be notified of any spill on land that threatens navigable waters. The NRC is then responsible for notifying other federal agencies. A report must then be filed with the EPA. Reports must include the following: a. Name and address of the operator. b. Name and telephone number of report. c. Location of the failure. d. Time of the failure. e. Fatalities and personal injuries, if any. f. All other significant facts known by the operator that are relevant to the cause of the failure or extent of the damages. 24-Hour Phone Number: 1-800-424-8802

Contra Costa Health Services 4585 Pacheco Blvd., Suite 100 Martinez, CA 94553	Immediate notification is required upon discovery of any release or threatened release of a hazardous material for which exposure to the release concentration poses or results in adverse health effects. 72-Hour and 30-Day Follow-up written reports may be required.
Bay Area AQMD 939 Ellis Street San Francisco, CA 94109	Notify if the spill is likely to cause excess air emissions.

SECTION 4 Last Revised: May 2008

RESPONSE TEAM ORGANIZATION

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4.1 Description

4.2 Activation Procedures

4.3 Team Member Response Times

4.4 Incident Command System / Unified Command

4.5 Qualified Individual (QI)

Figure 4.5-1 - Emergency Management Team (EMT) Organization Chart

4.6 Emergency Management Team (EMT) Job Descriptions and Guidelines

4.1 DESCRIPTION

The Company has developed its emergency response organization around the Incident Command System (ICS), which provides the structure for effective management of response resources. The Emergency Management Team (EMT) has been created and organized to plan for and manage oil spills and other emergencies.

The Company utilizes a Division Response Team (DRT) to staff ICS positions during emergencies that exceed the capabilities of the on-site Emergency Management Team. The DRT provides enhanced assimilation with the Unified Command System during significant emergencies. Personnel from the DRT are trained to address Planning, Logistics, Administration/Finance, Information, and Liaison roles.

Job descriptions for each EMT member are provided in **SECTION 4.6**. The EMT will train by participating in exercises as noted in **APPENDIX A**. Refer to **FIGURE 3.1-1** for notification procedures.

4.2 ACTIVATION PROCEDURES

Following initial notification the IC may be able to respond without assistance from the EMT. If the situation requires more resources, additional personnel or management support may be requested from the EMT.

In the case of a larger emergency, the DRT would be activated by the QI requesting additional resources through the Division Manager. The Division Manager would activate the DRT to the incident. Depending on the size of the event, the Division Manager may request assistance from corporate personnel to provide additional resources, as needed.

4.3 TEAM MEMBER RESPONSE TIMES

See **FIGURE 3.1-4** for each team member's response time "EPA Facilities only".

4.4 INCIDENT COMMAND SYSTEM / UNIFIED COMMAND

The Incident Command System (ICS) will be used by the Company EMT for spill response. The EMT organization chart is provided in FIGURE 4.5-1. The organization can be expanded or contracted as necessary. If an OSRO or other contractor is used to staff ICS positions for the Spill Management Team, the commitment will be specified in writing.

The Unified Command System (UCS) is the accepted method of organizing key spill management entities within the Incident Command System. The primary entities include:

- Federal On-Scene Coordinator (FOSC)
- State On-Scene Coordinator (SOSC)
- Company Incident Commander

These three people share decision-making authority within the Incident Command System and are each responsible for coordinating other federal, state, and company personnel to form an effective integrated Emergency Management Team. Refer to **SECTION 4.6** for detailed checklists of the EMT roles and responsibilities as well as organizational interfaces with external parties.

4.5 QUALIFIED INDIVIDUAL (QI)

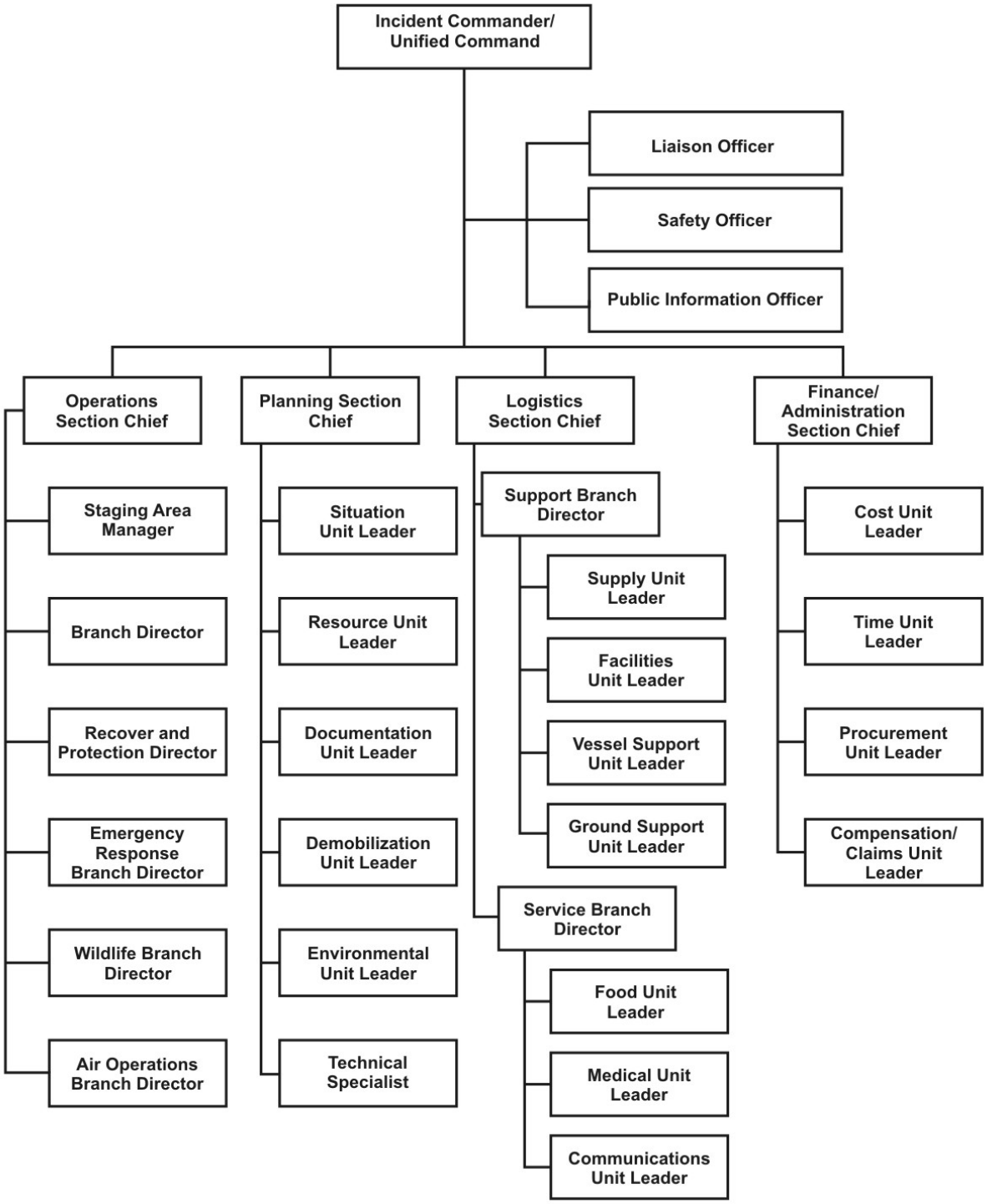
The Qualified Individual (QI) or alternate is an English-speaking representative, available on a 24-hour basis, and trained in the responsibilities outlined in this section. The QI has the following responsibilities and authorities as required by the Oil Pollution Act of 1990 (OPA 90):

- The Qualified Individual (QI) is granted full authority to implement the Facility Response Plan (FRP).
- Activate internal alarm and hazard communication systems to notify all appropriate personnel.
- Notify all response personnel and contractors (as needed).
- Identify the character, exact source, amount, and extent of the release and other necessary items needed for notifications.
- Notify and provide information to appropriate federal, state, and local authorities.
- Assess the interaction of the spilled substance with water and/or other substances stored at the facility and notify on-scene response personnel of assessment.
- Assess possible hazards to human health and the environment.
- Assess and implement prompt removal actions.
- Coordinate rescue and response actions.
- Access Company funds to initiate cleanup activities.
- Direct cleanup activities until properly relieved of the responsibility or the incident is terminated.

For further information on Qualified Individual's training, refer to **APPENDIX A**. Phone numbers for Qualified Individuals are provided in **FIGURES 1-2** and **3.1-4**.

FIGURE 4.5-1 - EMERGENCY MANAGEMENT TEAM (EMT) ORGANIZATION CHART

(Click here for larger view)



4.6 EMERGENCY MANAGEMENT TEAM (EMT) JOB DESCRIPTIONS AND GUIDELINES

The following job descriptions and guidelines are intended to be used as a tool to assist EMT members in their particular positions within the Incident Command System (ICS):

- Incident Commander
- Safety Officer
- Operations Chief

- Planning Chief
- Logistics Chief
- Finance Chief
- Information Officer
- Liaison Officer

INCIDENT COMMANDER

The Incident Commander (IC) manages all activities related to an emergency response and acts as Qualified Individual (QI). As such, the Incident Commander needs to be familiar with the contents of the Facility Response Plan (FRP), Oil Spill Response Plan (OSRP), Emergency Response Action Plan (ERAP), and the Spill Prevention Control and Countermeasure Plan (SPCC). The Incident Commander (IC) must also be familiar with the operation of the Incident Command System (ICS) and the Unified Command Structure (UCS).

The primary goal of this system is to establish and maintain control of the emergency response. If the emergency involves a multi-jurisdictional response (Federal and State), the Unified Command Structure (UCS) should be established. **Realize that the Federal On-Scene Coordinator (FOSC) does have the authority to override the Incident Commander and assume control of the response**. Every effort should be made to establish a collaborative relationship to manage the incident site with the appropriate responding agencies.

As soon as possible but not later than one (1) week following an incident, the Incident Commander shall conduct a critique of the response and follow-up of action items. Participants shall include Operations Control personnel, Company supervisors, and employees and outside agencies involved in the response. An Incident Debriefing Form is provided in **SECTION 8.3**.

Responsibilities:

- ☐ Maintain Activity Log.
- ☐ Establish Incident Command/Unified Command Post.
- ☐ Activate necessary section(s) of the Incident Command System (ICS) to deal with the emergency. Fill out the appropriate section(s) of the Incident Command organization chart and post it at the Incident Command Center.
- ☐ Develop goals and objectives for response.
- ☐ Work with Safety Officer and Planning Section Chief to develop a Site Safety Plan (SSP).
- ☐ Approve, authorize, and distribute Incident Action Plan (IAP) and SSP.
- ☐ Conduct planning meetings and briefings with the section chiefs.
- ☐ As Qualified Individual coordinate actions with Federal On-Scene Coordinator (FOSC) and State On-Scene Coordinator (SOSC).
- ☐ In a multi-jurisdictional response, ensure that all agencies are represented in the ICS.
- ☐ Coordinate and approve media information releases with the FOSC, SOSC, and Public Information Officer (PIO).
- ☐ Keep management informed of developments and progress.
- ☐

Authorize demobilization of resources as they are no longer needed.

- ☐ Complete Standard Incident Debriefing Form (**FIGURE 8.3-1**).

SAFETY OFFICER

The Safety Officer is responsible for assessing and monitoring hazardous and unsafe situations at the emergency response site(s). The Safety Officer must develop measures that assure the safety of the public and response personnel. This involves maintaining an awareness of active and developing situations, ensuring the preparation and implementation of the Site Safety Plan (SSP) and assessing safety issues related to the Incident Action Plans (IAP).

Responsibilities:

- ☐ Maintain Activity Log.
- ☐ Obtain briefing from Incident Commander (IC).
- ☐ Develop, implement, and disseminate SSP with IC and section chiefs.
- ☐ Participate in planning meetings and briefings.
- ☐ Establish safety staff if necessary.
- ☐ Identify emergency contact numbers. Fill out emergency contact chart and post in the Incident Command Center.
- ☐ Conduct safety briefings with all emergency responders.
- ☐ Investigate accidents that have occurred during emergency response.
- ☐ Ensure proper hazard zones are established.
- ☐ Ensure all emergency responders have appropriate level of training.
- ☐ Ensure proper Personal Protective Equipment (PPE) is available and used.
- ☐ Advise Security/Medical Group Leader concerning PPE requirements.
- ☐ Ensure emergency alarms/warning systems are in place as needed.
- ☐ Participate in Post Incident Review (**SECTION 8.3**).

OPERATIONS CHIEF

The Operations Chief is responsible for the management of all operations applicable to the field response and site restoration activities. Operations directs field activities based on the Incident Action Plan (IAP) and Site Safety Plan (SSP).

Responsibilities:

- ☐ Maintain Activity Log.
- ☐ Obtain briefing from Incident Commander (IC).
- ☐ Participate in Incident Command planning meetings and briefings.
- ☐ Conduct planning meetings and briefings for Operations Section.

- ☐ Develop operations portion of IAP.
- ☐ Supervise the implementation of the IAP.
- ☐ Make or approve expedient changes to the IAP.
- ☐ Request resources needed to implement IAP.
- ☐ Approve list of resources to be released.
- ☐ Ensure safe tactical operations.
- ☐ Establish a staging area for personnel and equipment.
- ☐ Confirm first responder actions.
- ☐ Confirm the completion of rescue/evacuation and administering of first aid.
- ☐ Confirm site perimeters have been established.
- ☐ Coordinate activities of public safety responders, contractors, and mutual assistance organizations.
- ☐ Participate in Post Incident Review (**SECTION 8.3**).

PLANNING CHIEF

The Planning Chief is responsible for collecting, evaluating, and disseminating information related to the current and future events of the response effort. The Planning Chief must understand the current situation; predict the future course of events; predict future needs; develop response and cleanup strategies; and review the incident once complete.

The Planning Chief must coordinate activities with the Incident Commander (IC) and other Chiefs to ensure that current and future needs are appropriately handled.

Responsibilities:

- ☐ Maintain Activity Log.
- ☐ Obtain briefing from the IC.
- ☐ Establish and maintain communication with IC and other Section Chiefs.
- ☐ Advise IC on any significant changes of incident status.
- ☐ Conduct planning meetings and briefings for Planning section.
- ☐ Coordinate and provide input to the preparation of the Incident Action Plan (IAP).
- ☐ Participate in Incident Command planning meetings and briefings.
- ☐ In a multi-jurisdictional response, ensure that all agencies are represented in the Planning Section.
- ☐ Coordinate future needs for the emergency response.
- ☐ Determine response personnel needs.
- ☐ Determine personnel needs and request personnel for Planning section.
- ☐ Assign technical specialists (archaeologists, historians, biologists, etc.) where needed.
- ☐ Collect and analyze information on the situation.

- ☐ Assemble information on alternative response and cleanup strategies.
- ☐ Ensure situation status unit has a current organization chart of the Incident Command Organization.
- ☐ Provide periodic spill movement/migration prediction.
- ☐ Participate in Post Incident Review (**SECTION 8.3**).

LOGISTICS CHIEF

The Logistics Chief is responsible for procuring facilities, services, and material in support of the emergency response effort.

Responsibilities:

- ☐ Maintain Activity Log.
- ☐ Obtain briefing from the Incident Commander (IC).
- ☐ Participate in Incident Command planning meetings and briefings.
- ☐ Conduct planning meetings and briefings for Logistics section.
- ☐ Participate in the preparation of the Incident Action Plan (IAP).
- ☐ Identify service and support requirements for planned operations.
- ☐ Identify sources of supply for identified and potential needs.
- ☐ Advise IC on current service and support requirements.
- ☐ Procure needed materials, equipment and services from sources by means consistent with the timing requirements of the IAP and Operations.
- ☐ Ensure all purchases are documented.
- ☐ Participate in Post Incident Review (**SECTION 8.3**).

FINANCE CHIEF

The Finance Chief is responsible for accounting, legal, right-of-way and risk management functions that support the emergency response effort. In this role, the primary responsibility is supporting the Command Staff and Logistics Section matters pertaining to expenses during and following the emergency response.

Responsibilities:

- ☐ Maintain Activity Log.
- ☐ Obtain briefing from Incident Commander (IC).
- ☐ Participate in Incident Command planning meetings and briefings.
- ☐ Conduct planning meetings and briefings for Finance section.
- ☐ Participate in preparation of the Incident Action Plan (IAP).
- ☐ Participate in planning meetings.

- ☐ Participate in Unified Command System (UCS) as incident warrants.
- ☐ Request assistance of corporate accounting, legal, right-of-way or risk management as needed.
- ☐ Assist with contracting administration.
- ☐ Participate in Post Incident Review (**SECTION 8.3**).

INFORMATION OFFICER

The Information Officer (IO) provides critical contact between the media/public and the emergency responders. The IO is responsible for developing and releasing information about the incident to the news media, incident personnel, appropriate agencies and public. When the response is multi-jurisdictional (involves the federal and state agencies), the IO must coordinate gathering and releasing information with these agencies.

The IO needs to communicate that the Company is conducting an effective response to the emergency. The IO is responsible for communicating the needs and concerns of the public to the Incident Commander (IC).

Responsibilities:

- ☐ Maintain Activity Log.
- ☐ Obtain briefing from IC.
- ☐ Participate in all planning meetings and briefings.
- ☐ Obtain outside information that may be useful to incident planning.
- ☐ Develop goals and objectives regarding public information.
- ☐ Arrange for necessary workspace, materials, telephones and staffing for Public Information Center (PIC).
- ☐ Establish a PIC, ensuring all appropriate agencies participate.
- ☐ Provide a single point of media contact for the IC.
- ☐ Coordinate media access to the response site as approved by the IC.
- ☐ Obtain approval for release of information from the IC.
- ☐ Arrange for meetings between media and emergency responders.
- ☐ Maintain list of all media present.
- ☐ Participate in Post Incident Review (**SECTION 8.3**)

LIAISON OFFICER

If a Unified Command Structure is not established, a Liaison Officer is appointed as the point of contact for personnel assigned to the incident from assisting or cooperating agencies.

Responsibilities:

- ☐ Maintain Activity Log.

- ☐ Obtain briefing from Incident Commander (IC).
- ☐ Participate in planning meetings and briefings.
- ☐ Identify and maintain communications link with agency representatives, assisting, and coordinating agencies.
- ☐ Identify current or potential inter-organizational issues and advise IC as appropriate.
- ☐ Coordinate with Legal Group Leader and Public Information Officer (PIO) regarding information and documents released to government agencies.
- ☐ Participate in Post Incident Review (**SECTION 8.3**).

SECTION 5 Last Revised: May 2008

INCIDENT PLANNING

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5.1 Documentation Procedures

5.2 Incident Action Plan Process and Meetings

Figure 5.2-1 Operational Period Planning Cycle

5.2.1 Incident Occurs / Notifications

5.2.2 Initial Response and Assessment

5.2.3 Unified Command Objectives Meeting

5.2.4 Tactics Meeting

5.2.5 Planning Meeting

5.2.6 Incident Action Plan (IAP) Preparation and Approval

5.2.7 Operations Briefing

5.2.8 Assess Progress

5.2.9 Initial Unified Command Meeting

5.2.10 Command Staff Meeting

5.2.11 Command and General Staff Breakfast / Supper

5.2.12 Business Management Meeting

5.2.13 Agency Representative Meeting

5.2.14 News Briefing

SECTION 5
INCIDENT PLANNING, CONTINUED

5.3 ICS Forms

5.3.1 Incident Briefing ICS 201-OS

5.3.2 Incident Action Plan (IAP) Cover Sheet

5.3.3 Incident Objectives ICS 202-OS

5.3.4 Organization Assignment List ICS 203-OS

5.3.5 Assignment List ICS 204-OS

5.3.6 Communications Plan ICS 205-OS

5.3.7 Medical Plan ICS 206-OS

5.3.8 Incident Status Summary ICS 209-OS

5.3.9 Unit Log ICS 214-OS

5.3.10 Individual Log ICS 214a-OS

5.4 Site Safety and Health Plan

5.5 Decontamination Plan

5.6 Disposal Plan

5.7 Incident Security Plan

5.8 Demobilization Plan

5.1 DOCUMENTATION PROCEDURES

Documentation of a spill response provides a historical record, keeps management informed, serves as a legal instrument, and is a means to account for the cleanup costs.

Documentation should begin immediately upon spill notification and continue until termination of all operations. Documentation should include the following:

- Spill origin and characteristics,
- Sampling surveys,
- Photographic surveys,
- Climatological data,
- Labor and equipment accounting, and
- Copies of all logs, contracts, contacts, and plans prepared for the incident.

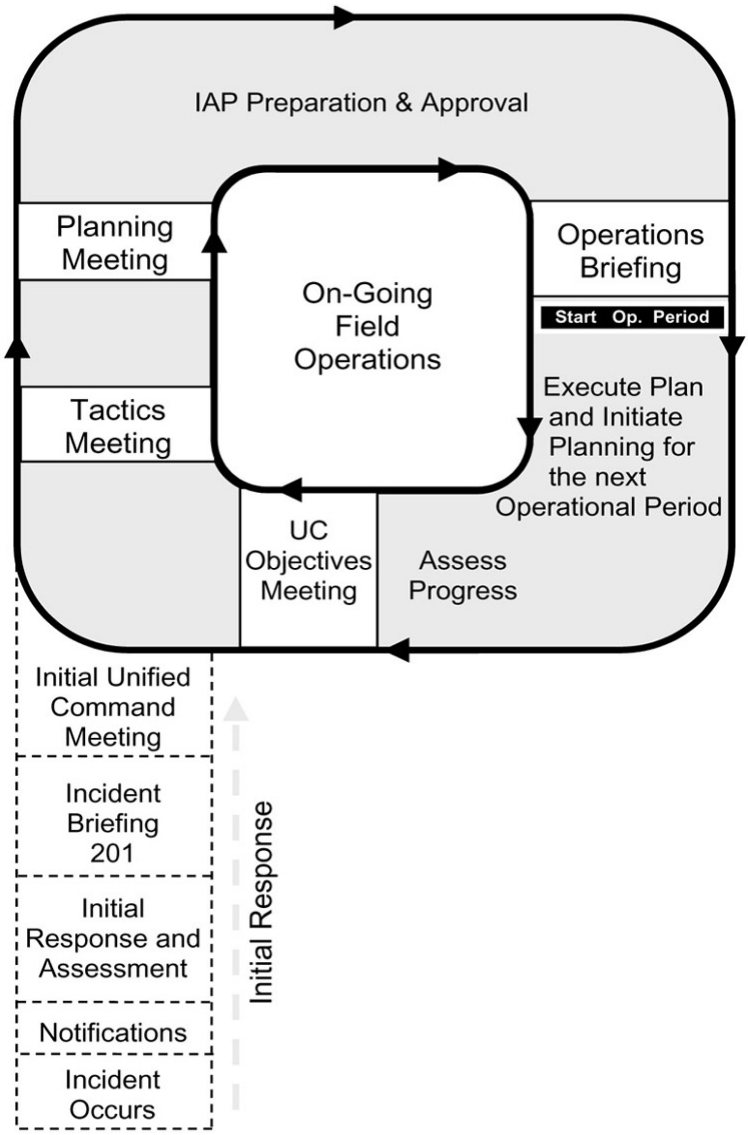
5.2 INCIDENT ACTION PLAN PROCESS AND MEETINGS

The period of INITIAL RESPONSE AND ASSESSMENT occurs in all incidents. Short-term responses (small in scope and/or duration, e.g., few resources working one operational period) often can be coordinated using only ICS 201 Briefings.

Longer-term, more complex responses, will likely require a dedicated Planning Section Chief (PSC) who must arrange for transition into the OPERATIONAL PERIOD PLANNING CYCLE. Certain meetings, briefings, and information-gathering during the Cycle lead to the Incident Action Plan (IAP) that guides operations of the next operational period. Only the meetings and events directly relevant to assembling the IAP are described. The IC/UC specifies the operational periods (e.g., 12-hour shifts, sunrise to sunset, 24-hour shifts etc.).

The SPECIAL PURPOSE meetings are most applicable to larger incidents requiring an OPERATIONAL PERIOD PLANNING CYCLE, but may have utility during INITIAL RESPONSE AND ASSESSMENT. The UNIFIED COMMAND MEETING and other special purpose meetings are briefly noted.

FIGURE 5.2-1 OPERATIONAL PERIOD PLANNING CYCLE



5.2.1 Incident Occurs / Notifications

When an incident occurs, notifications will be made to the appropriate Federal, State, and Local agencies and the initial assessment and response actions will begin.

5.2.2 Initial Response and Assessment

INCIDENT BRIEFING (ICS 201)

During the transfer of command process, an ICS 201 formatted briefing provides the incoming IC/UC with basic information regarding the incident situation and the resources allotted to the incident. Most importantly, it is the de facto Incident Action Plan (IAP) for the initial response and remains in force and continues to develop until the response ends or the Planning Section generates the incident's first IAP. It also is suitable for briefing individuals newly assigned to Command and General Staff, as well as needed assessment briefings for the staff.

When: New IC/UC; staff briefing, as required
Briefer: Current IC/UC
Attendees: Prospective IC/UC; Command, and General Staff, as required

Agenda: Using ICS 201 as an outline, included:

1. Situation (note territory, exposures, safety concerns, etc.; use map/charts).
2. Objectives and priorities.
3. Strategies and tactics.
4. Current organization.
5. Resource assignments.
6. Resources enroute and/or ordered.
7. Facilities established.

OPERATIONAL PERIOD PLANNING CYCLE
(Events most related to assembling IAP)

5.2.3 Unified Command Objectives Meeting

The IC/UC will review/identify and prioritize objectives for the next operational period for the ICS 202 form. Objectives from the previous operational period are reviewed and any new objectives are identified.

When: Prior to Tactics Meeting
Facilitator: UC Member
Attendees: UC Members; Command and General Staff, as appropriate
Agenda:

1. Review/identify objectives for the next operational period (clearly stated and attainable with the resources available, yet flexible enough to allow Operations Section Chief to choose tactics).
2. Review any open agenda items from initial/previous meetings.

5.2.4 Tactics Meeting

This 30-45 minute meeting creates the blueprint for tactical deployment during the next operational period. In preparation for the Tactics Meeting, the Planning Section Chief and Operations Section Chief review the current IAP and situation status information, as provided through the Situation Unit, to assess work progress against IAP objectives. The Operations Section Chief/Planning Section Chief will jointly develop primary and alternate strategies to meet objectives for consideration at the next Planning Meeting.

When: Prior to Planning Meeting
Facilitator: Planning Section Chief
Attendees: Planning Section Chief, Operations Section Chief, Logistics Section Chief, Resources Unit Leader, Situation Unit Leader, and Environmental Unit Leader
Agenda:

1. Review the objectives for the next operational period.
2. Develop strategies (primary and alternatives).
3. Prepare a draft of ICS 215 to identify resources that should be ordered through Logistics.

5.2.5 Planning Meeting

This meeting defines incident objectives, strategies, and tactics and identifies resource needs for the next operational period. Depending on incident complexity, this meeting should last no

longer than 45 minutes. This meeting fine-tunes objectives and priorities, identifies and solves problems, and defines work assignments and responsibilities on a completed ICS Form 215 (Operations Planning Worksheet). Meeting preparations include conducting a Tactics Meeting. Displays in the meeting room should include Objectives (ICS 202) for the next operational period, large sketch maps or charts clearly dated and timed, poster-size Operational Planning Worksheet (ICS 215), current resource inventory prepared by Resources Unit, and current situation status displays prepared by Situation Unit. After the meeting, the ICS 215 is used by the Logistics Section Chief to prepare the off-incident tactical and logistical resource orders, and used by Planning Section Chief to develop IAP assignment lists.

When: After the Tactics Meeting
Facilitator: Planning Section Chief
Attendees: Determined by IC/UC, generally IC/UC, Command Staff, General Staff, Air Operations Section Chief, Resources Unit Leader, Situation Unit Leader, Environmental Unit Leader, and Technical Specialists, as required
Agenda:

5.2.5 Planning Meeting, Continued

1. State incident objectives and policy issues. IC/UC
2. Briefing of situation, critical and sensitive areas, weather/sea forecast, resource status/availability. Planning Section Chief with Situation Unit Leader, Resources Unit Leader
3. State primary and alternative strategies to meet objectives. Operations Section Chief with Planning Section Chief, Logistics Section Chief
4. Designate Branch, Division, Group boundaries and functions, as appropriate; use maps and ICS 215. Operations Section Chief
5. Specify tactics for each Division, note limitations. Operations Section Chief, Situation Unit Leader assist
6. Specify resources needed by Divisions/Groups. Operations Section Chief, with Planning Section Chief, Logistics Section Chief
7. Specify operations facilities and reporting locations (plot on map). Operations Section Chief, Logistics Section Chief assist
8. Develop resources, support, and overhead order(s). Planning Section Chief, Logistics Section Chief
9. Consider support issues and agree on plans: communications, traffic, safety, medical, etc. Logistics Section Chief, Planning Section Chief assist
10. Assisting or cooperating agency and stakeholder group considerations regarding Incident Action Plan. Liaison Officer
11. Safety considerations regarding Incident Action Plan. Safety Officer
12. News media/public considerations regarding Incident Action Plan. Information Officer
13. Finalize, approve Incident Action Plan for next operational period. IC/UC

5.2.6 Incident Action Plan (IAP) Preparation and Approval

Immediately following the Planning Meeting, the attendees prepare their assignments for the IAP to meet the Planning Section Chief deadline for assembling the IAP components. The deadline will be early enough to permit timely IC/UC approval, and duplication of sufficient copies for the Operations Briefing and for overheads.

When: Immediately following Planning Meeting, Planning Section Chief assigns deadline
Facilitator: Planning Section Chief

Common Components:		Responsible to Prepare
1.	Incident Objectives (ICS 202)	[Resources Unit Leader]
2.	Organization List (ICS 203)	[Resources Unit Leader]
3.	Assignment List (ICS 204)	[Resources Unit Leader/Planning Section Chief]
4.	Communications Plan (ICS 205)	[Communications Unit Leader]
5.	Medical Plan (ICS 205)	[Medical Unit Leader]
6.	Incident Map	[Situation Unit Leader]

Optional Components (use as pertinent):

Optional Components (use as pertinent):		Responsible to Prepare
1.	Air Operations Summary (ICS 220)	[Air Operations Branch Director]
2.	Traffic Plan	[Ground Support Unit Leader]
3.	Demobilization Plan	[Demobilization Unit Leader]

5.2.7 Operations Briefing

This less-than-30-minute meeting conveys the IAP for the oncoming shift to the response organization. After this meeting, off-going field supervisors should be interviewed by their reliefs and by Operations Section Chief in order to further confirm or adjust the course of the new shift's IAP. Shifts in tactics may be made by the operations section supervisors. Similarly, a supervisor may reallocate resources within a division or group to adapt to changing conditions.

When: About an hour prior to each shift
Facilitator: Planning Section Chief
Attendees: IC/UC, Command Staff, General Staff, Branch Directors, Division/Group Supervisors, Task Force/Strike Team Leaders (if possible), Unit Leaders, others as appropriate.

Agenda:		Responsible to Present
1.	Review of IC/UC Objectives, changes to IAP.	[Planning Section Chief]
2.	Current response actions and last shift's accomplishments.	[Operations Section Chief]
3.	Weather and sea conditions forecast.	[Situation Unit Leader]
4.	Division/Group and air operations assignment.	[Operations Section Chief]
5.	Trajectory analysis.	[Situation Unit Leader]
6.	Transport, communications, supply updates.	[Logistics Section Chief]
7.	Safety message.	[Safety Officer]
8.	Financial report.	[Finance/Administration Section Chief]
9.	News Media report.	[Information Officer]

10.	Assisting/cooperating organization/agency reports of concern.	[Liaison Officer]
11.	Incident Action Plan endorsement and motivational remarks.	[IC/UC]

5.2.8 Assess Progress

The Operations and Planning Sections will review the incident response progress and make recommendations to the IC/UC in preparation for reviewing/identifying objectives for the next operational period. This feedback/information is gathered from various sources, including Field Observers, responder debriefs, stakeholders, etc.

SPECIAL PURPOSE MEETINGS

5.2.9 Initial Unified Command Meeting

Provides UC officials with an opportunity to discuss and concur on important issues prior to joint incident action planning. The meeting should be brief, and important points documented. Prior to the meeting, parties should review and prepare to address the agenda items. Planning Meeting participants will use the results of this meeting to guide the response efforts.

5.2.9 Initial Unified Command Meeting, Continued

When: When UC is formed, prior to the first operational period Planning Meeting
Facilitator: UC member
Attendees: Only ICs who will comprise UC
Agenda:

1. Identify jurisdictional priorities and objectives.
2. Present jurisdictional limitations, concerns, restrictions.
3. Develop collective set of incident objectives.
4. Establish and agree on acceptable priorities.
5. Adopt an overall strategy to accomplish objectives.
6. Agree on basic organizational structure and size.
7. Designate the best-qualified and acceptable Operations Section Chief.
8. Agree on General Staff personnel designations and planning, logistical, and finance agreements and procedures.
9. Agree on resource ordering procedures.
10. Agree on cost-sharing procedures.
11. Agree on informational matters.
12. Designate a Unified Command spokesperson.

5.2.10 Command Staff Meeting

Coordinate Command Staff functions, responsibilities and objectives. It is scheduled as necessary by the IC/UC. Command Staff (IC/UC, Safety Officer, Liaison Officer, Information Officer) attend.

5.2.11 Command and General Staff Breakfast / Supper

An opportunity for the Command (IC/UC, Safety Officer, Liaison Officer, Information Officer) and General Staff (Operations Section Chief, Planning Section Chief, Logistics Section Chief,

Finance/Administration Section Chief) to gather under informal and relaxing conditions to share and update each other on developing issues.

5.2.12 Business Management Meeting

This under-30-minute meeting is for participants to develop and update the operating plan for finance and logistics support. The agenda could include: finance requirements and criteria imposed by contributing organizations, business operating plan for resource procurement and incident funding, cost analysis and financial summary data. Attendees include: Finance/Administration Section Chief, Cost Unit Leader, Logistics Section Chief, Supply Unit Leader, Demobilization Unit Leader. It is generally conducted before the PLANNING MEETING.

5.2.13 Agency Representative Meeting

To update agency representatives and ensure that they can support IAP. Conducted by Liaison Officer, attended by Agency Representatives. Most appropriately held after the PLANNING MEETING in order to announce plans for next operational period, yet allow for changes should the plan's expectations be unattainable by an agency.

5.2.14 News Briefing

To brief the news media and public on the most current and accurate incident facts. Set up by the Information Officer, moderated by an appropriate representative, and featuring selected spokespersons. Spokespersons should be prepared by the Information Officer to address anticipated issues. The briefing should be well planned, organized, and scheduled to meet the media’s needs.

5.3 ICS FORMS

All ICS Forms are available electronically via this Plan's Forms Navigator.

- INCIDENT BRIEFING FORM - ICS 201 (Initial Report Only)

  For use by the Command Staff to gather information on the Emergency Management Team's (EMT) efforts to implement applicable response plans. It is prepared by the initial Incident Commander (IC) for providing documentation of the initial response.

- INCIDENT ACTION PLAN

  For use by the Planning Section to plan each day's response actions. This plan consists of the portions identified on the IAP cover page and must be approved by the Incident Commander, Federal On-Scene Coordinator (FOSC), and State On-Scene Coordinator (SOSC).

  In addition, these Incident Command System (ICS) forms may be found on the U.S. Coast Guard web page: http://www.uscg.mil/pacarea/pm/icsforms/ics.htm

  - **INCIDENT ACTION PLAN (IAP) COVER SHEET**

    For use in presenting initial information, signature approval, and table of contents of forms contained in the IAP.

- INCIDENT OBJECTIVES - ICS 202

  Describes the basic incident strategy, control objectives, and provides weather, tide and current information, and safety considerations for use during the next operational period.

- **ORGANIZATION ASSIGNMENT LIST - ICS 203**

  Provides ICS personnel with information on the units that are currently activated and the names of personnel staffing each position/unit.

- ASSIGNMENT LIST - ICS 204

  Submits assignments at the level of Division and Groups.

- COMMUNICATIONS PLAN - 205

  Is used to provide, in location, information on all radio frequency assignments down to Division/Group level for each operation period. Refer to **SECTION 7.1.6**.

- MEDICAL PLAN - ICS 206

  Provides information in incident medical aid stations, transportation services, hospitals, and medical emergency procedures.

5.3 ICS FORMS, CONTINUED

All ICS Forms are available electronically via the Forms Navigator.

- **INCIDENT STATUS SUMMARY - ICS 209**

  Used to inform personnel about the status of response efforts. It is not included in the IAP.

- **UNIT LOG - ICS 214**

  Used to log activities for an entire unit.

- **INDIVIDUAL LOG - ICS 214a**

  Used to log activities for an individual.

5.3.1 Incident Briefing ICS 201-OS

1. Incident Name	2. Prepared By: (name) Date: Time:	INCIDENT BRIEFING ICS 201-OS

3. Map/Sketch (Include maps drawn here or attached, showing the total area of operations, the incident site/area, overflight results, trajectories, impacted shorelines or other graphics depicting situational and response status)
INCIDENT BRIEFING March, 2000 ICS 201-OS (pg 1 of 4)

5.3.1 Incident Briefing ICS 201-OS, Continued

1. Incident Name	2. Prepared By: (name) Date: Time:	INCIDENT BRIEFING ICS 201-OS
4. Initial Incident Objectives		

5. Summary of Current Actions

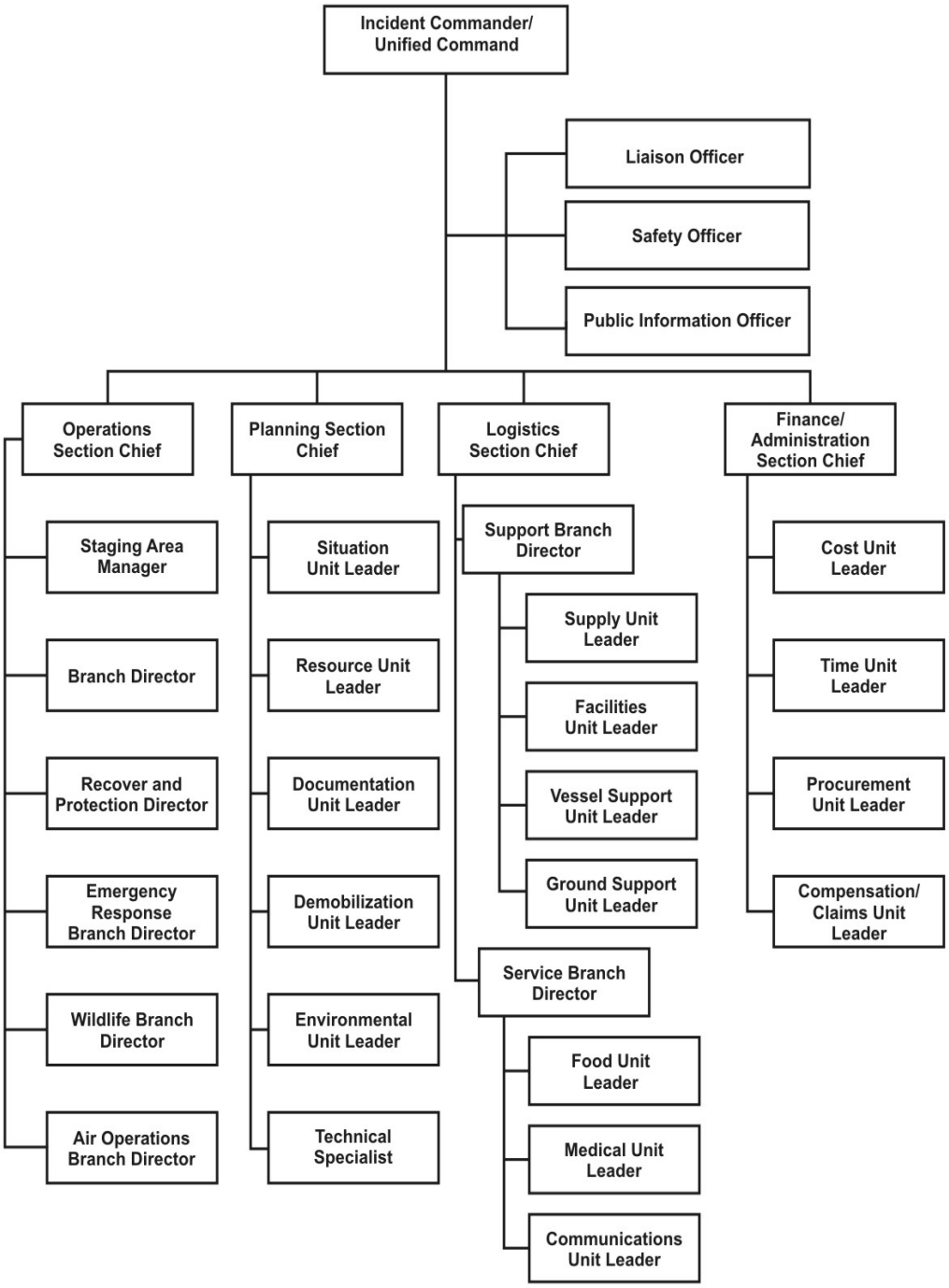
Time	**Action/Note**

INCIDENT BRIEFING March, 2000 ICS 201-OS (pg 2 of 4)

5.3.1 Incident Briefing ICS 201-OS, Continued

1. Incident Name	2. Prepared By: (name) Date: Time:	INCIDENT BRIEFING ICS 201-OS

6. Current Organization



INCIDENT BRIEFING	March, 2000	ICS 201-OS (pg 3 of 4)

5.3.1 Incident Briefing ICS 201-OS, Continued

1. Incident Name	2. Prepared By: (name) Date: Time:	INCIDENT BRIEFING ICS 201-OS

7. Resources Summary

Resources Needed	Time Ordered	Resource Identifier	ETA	On Scene? (X)	Notes: (Location/Assignment/Status)

INCIDENT BRIEFING		March, 2000			ICS 201-OS (pg 4 of 4)

5.3.2 Incident Action Plan (IAP) Cover Sheet

1. Incident Name	2. Operational Period to be covered by IAP (Date/Time)		IAP COVER SHEET
	From:	To:	

3. Approved by:

FOSC

SOSC

IC

INCIDENT ACTION PLAN

The items checked below are included in this Incident Action Plan:

- ☐ ICS 202-OS (Incident Objectives)
- ☐ ICS 203-OS (Organization Assignment List)
- ☐ ICS 204-OS (Assignment List)
- ☐ ICS 205-OS (Communications Plan)
- ☐ ICS 206-OS (Medical Plan)
- ☐ ICS 209-OS (Incident Status Summary)
- ☐ ICS 214-OS (Unit Log)
- ☐ ICS 214a-OS (Individual Log)
- ☐
- ☐

4. Prepared By: (Planning Section Chief)	**Date/Time:**
IAP COVER SHEET	March, 2000

5.3.3 Incident Objectives ICS 202-OS

1. Incident Name	2. Operational Period (Date/Time) From: To:	INCIDENT OBJECTIVES ICS 202-OS
3. Overall Incident Objective(s)		
4. Objectives for Specified Operational Period		
5. Safety Message for Specified Operational Period Approved Site Safety Plan Located at:		
6. Weather: See Attached Weather Sheet		
7. Tides/Currents: See Attached Tide/Current Data		
8. Time of Sunrise:	**Time of Sunset:**	
9. Attachments (check if attached) ☐ Organization List (ICS 203-OS) ☐ Assignment List (ICS 204-OS) ☐ Communications Plan (ICS 205-OS) ☐ Medical Plan (ICS 206-OS) ☐ Weather		
10. Prepared By: (Planning Section Chief)	**Date/Time:**	
INCIDENT OBJECTIVES March, 2000 ICS 202-OS		

5.3.4 Organization Assignment List ICS 203-OS

1. Incident Name	2. Operational Period (Date/Time) From: To:	ORGANIZATION ASSIGNMENT LIST ICS 203-OS

3. Incident Commander and Staff

	Primary	Deputy
Federal:		
State:		
IC:		

Safety Officer :

Information Officer:

Liaison Officer:

4. Agency Representatives

Agency	Name

5. Planning Section

Chief

Deputy

Resources Unit

Situation Unit

Environmental Unit

Documentation Unit

Demobilization Unit

Technical Specialists

6. Logistics Section

Chief

Deputy

Time Unit

Procurement Unit

Compensation Unit

Cost Unit

a. Support Branch

Director

Supply Unit

Facilities Unit

Transportation Unit

7. Operations Section

Chief

Deputy

a. Branch I - Division/Groups

Branch Director

Deputy

Division / Group

Division / Group

Division / Group

Division / Group

Division / Group

b. Branch II - Division/Groups

Branch Director

Deputy

Division / Group

Division / Group

Division / Group

Division / Group

Division / Group

c. Branch III - Division/Groups

Branch Director

Deputy

Division / Group

Division / Group

Division / Group

Division / Group

Division / Group

d. Air Operations Branch

Air Operations Br. Dir.

Air Tactical Supervisor

Air Support Supervisor

Helicopter Coordinator

Fixed-wing Coordinator

8. Finance Section

Chief

Deputy

Vessel Support Unit		Time Unit	
Ground Support Unit		Procurement Unit	
b. Service Branch		Compensation Unit	
Director		Cost Unit	
Communications Unit			
Medical Unit			
Food Unit			

9. Prepared by: (Resources Unit)	Date/Time	
ORGANIZATION ASSIGNMENT LIST	March, 2000	ICS 203-OS

5.3.5 Assignment List ICS 204-OS

1. Incident Name	2. Operational Period (Date/Time) From: To:	ASSIGNMENT LIST ICS 204-OS
3. Branch	4. Division/Group	

5. Operations Personnel	Name	Affiliation	Contact # (s)
Operations Section Chief:			
Branch Director:			
Division/Croup Supervisor:			

6. Resources Assigned This Period	"X" indicates 204a attachment with special instructions			
Strike Team/Task Force/ Resource Identifier	Leader	Contact Info. #	# of Persons	Notes/Remarks

7. Assignments

8. Special Instruction for Division/Group

9. Communications (radio and/or phone contact numbers needed for this assignment)			
Name/Function	**Radio: Freq./System/ Channel**	**Phone**	**Pager**
Emergency Communications			
Medical	Evacuation	Other	
10. Prepared By (Resources Unit Leader)	Date/Time	**11. Approved By** (Planning Section Chief)	Date/Time
ASSIGNMENT LIST	June, 2000		ICS 204-OS

5.3.6 Communications Plan ICS 205-OS

1. Incident Name	2. Operational Period (Date/Time) From: To:	COMMUNICATIONS PLAN ICS 205-OS

3. Basic Radio Channel Use

SYSTEM/CACHE	CHANNEL	FUNCTION	FREQUENCY	ASSIGNMENT	REMARKS

4. Prepared By (Communications Unit)	Date/Time
COMMUNICATIONS PLAN March, 2000	ICS 205-OS

5.3.7 Medical Plan ICS 206-OS

1. Incident Name	2. Operational Period (Date/Time) From: To:	MEDICAL PLAN ICS 206-OS

3. Medical Aid Stations

Name	Location	Contact #	Paramedics On Site (Y/N)

4. Transportation

Ambulance Service	Address	Contact #	Paramedics On Board (Y/N)

5. Hospitals

Hospital Name	Address	Contact #	Travel Time		Burn Ctr?	Heli-Pad?
			Air	Ground		

6. Special Medical Emergency Procedures

7. Prepared By (Medical Unit Leader)	Date/Time	8. Reviewed By (Safety Officer)	Date/Time

MEDICAL PLAN March, 2000 ICS 206-OS

5.3.8 Incident Status Summary ICS 209-OS

1. Incident Name	2. Period Covered By Report From: To:	Time of Report	INCIDENT STATUS SUMMARY ICS 209-OS

3. Spill Status (Estimated, in Barrels) [OPS/EUL/SSC]

Source Status:	Remaining Potential (bbl):
	Rate of Spillage (bbl/hr):

Secured	☐	Unsecured	☐

	Since Last Report	Total
Volume Spilled		
Mass Balance/Oil Budget		
Recovered Oil		
Evaporation		
Natural Dispersion		
Chemical Dispersion		
Burned		
Floating, Contained		
Floating, Uncontained		
Onshore		
Total Spilled Oil Accounted For:		

4. Waste Management (Estimated) **[OPS/Disposal]**

	Recovered	Stored	Disposed
Oil (bbl)			
Oily Liquids (bbl)			
Liquids (bbl)			
Oily Solids (tons)			
Solids (tons)			

5. Shoreline Impacts

7. Safety Status [Safety Officer]

	Since Last Report	Total
Responder Injury		
Public Injury		

8. Equipment Resources [RUL]

Description	Ordered	Available / Staged	Assigned	Out of Service
Spill Resp. Vsls				
Fishing Vessels				
Tugs				
Barges				
Other Vessels				
Skimmers				
Boom (ft.)				
Sbnt/Snr Bm. (ft.)				
Vacuum Trucks				
Helicopters				
Fixed Wing				

9. Personnel Resources **[RUL]**

Description	People in Cmd. Post	People in the Field	Total People On Scene

(Estimated, in miles)		[PSC/EUL/SSC]	
Degree of Oiling	Affected	Cleaned	To Be Cleaned
Light			
Medium			
Heavy			
Total			

6. Wildlife Impacts					[OPS/Wildlife Br.]	
Numbers in ( ) indicate subtotal that are threatened / endangered species.					Died in Facility	
	Captured	Cleaned	Released	DOA	Euth.	Other
Birds						
Mammals						
Reptiles						
Fish						
Total						

Federal			
State			
Local			
RP			
Contract Personnel			
Volunteers			
Total Response Personnel From All Organizations:			

10. Special Notes

11. Prepared By (Situation Unit Leader)	Date/Time

INCIDENT STATUS SUMMARY March, 2000 ICS 209-OS

5.3.9 Unit Log ICS 214-OS

1. Incident Name	2. Operational Period (Date / Time) From: To:	UNIT LOG ICS 214-OS
3. Unit Name	4. Unit Leader (Name and ICS Position)	

5. Personnel Assigned

Name	ICS Position	Home Base

6. Activity Log (Continue on Reverse)

Time	Major Events

7. Prepared by:	Date / Time

UNIT LOG	June 2000	ICS 214-OS

5.3.9 Unit Log ICS 214-OS, Continued

1. Incident Name	2. Operational Period (Date / Time) From: To:	UNIT LOG(Cont) ICS 214-OS
3. Unit Name	4. Unit Leader (Name and ICS Position)	

5. Personnel Assigned

Name	ICS Position	Home Base

6. Activity Log (Continue on Reverse)

Time	Major Events

7. Prepared by:	Date / Time

UNIT LOG	June 2000	ICS 214-OS

5.3.10 Individual Log ICS 214a-OS

1. Incident Name	2. Operational Period (Date / Time) From: To:	INDIVIDUAL LOG **ICS 214a-OS**

3. Individual Name	**4. ICS Section**	**5. Assignment / Location**

6. Activity Log	Page	of

TIME	MAJOR EVENTS

7. Prepared by:	**Date / Time**

INDIVIDUAL LOG	June 2000	ICS 214a-OS

5.4 SITE SAFETY AND HEALTH PLAN

SITE ENTRY PLAN

INCIDENT:					
Name of Incident:					
Report Number:			Date Prepared:		
Federal Representative:			Date/Time:		
State Representative:			Date/Time:		
Plains Representative:			Date/Time:		
PRODUCT RELEASED:					
☐ Sweet Crude ☐ Sour ☐ Other:					
MSDS On-Site: ☐ Yes ☐ No #:					
PERSONNEL PROTECTIVE EQUIPMENT REQUIRED:					
☐ Hard Hat	☐ Gloves	☐ Safety Shoes	☐ Rubber	☐ Glasses	☐ Goggles
Respiratory:					
Self-Contained: ☐ Yes ☐ No			Particle Mask: ☐ Yes ☐ No		
Clothing:					
Chemical Resistant: ☐ Yes ☐ No			Fire Retardant: ☐ Yes ☐ No		
Remarks:					
ATMOSPHERIC CONDITIONS:					
☐ Rain	☐ Showers	☐ Dry	☐ Cloudy	☐ Clear	☐ Dusty
Wind Direction:			Velocity:		
24-Hour Forecast:					
Fire Danger Present: ☐ Yes ☐ No			Fire Control On-Site: ☐ Yes ☐ No		
Date:			Time: ☐ AM ☐ PM		
Remarks:					
SITE MONITORING: (Monitoring requirements to be reevaluated upon any change in					

conditions.)			
Initial Monitoring Performed:	☐ Yes ☐ No		
Additional Monitoring Required:	☐ Continuously ☐ Hourly ☐ Every Two Hours ☐ Every Four Hours ☐ Every Eight Hours		
Monitor Readings:	Benzene: PPM	H_2S: PPM	O_2: %
	LEL: %	Other:	
Monitor Type:	Serial #:	Calibration Date:	
Remarks:			
PREPARED BY:	**DATE/TIME:**		

5.4 SITE SAFETY AND HEALTH PLAN, CONTINUED

SAFE WORK AND HEALTH PLAN

FACILITY/SYSTEM:		
Name of Facility/System:		
City:		
Street Address:		
Nearest Cross Street:		
Air Mile Marker:	Y-Map:	Station:
Product Released:		
Estimated Initial Volume:		
Remarks:		
MANAGEMENT: (See organization chart for command structure and leader identification.)		
Incident Command System Implemented:	☐ Yes ☐ No	
Communications Established:	☐ Yes ☐ No	
Satellite: ☐ Yes ☐ No	Radio: ☐ Yes ☐ No	Phone: ☐ Yes ☐ No
Staging Area Identified:	☐ Yes ☐ No Location:	
Remarks:		

ENGINEERING CONTROLS:					
Control Center Notified:	☐ Yes	☐ No	Upstream Valve #:	☐ Open	☐ Closed
Site Area Structured:	☐ Yes	☐ No	Downstream Valve #:	☐ Open	☐ Closed
Facility Shut Down:	☐ Yes	☐ No	Other:		
Remarks:					

PREPARED BY:	**DATE/TIME:**

5.4 SITE SAFETY AND HEALTH PLAN, CONTINUED

SAFE WORK AND HEALTH PLAN

WATER AFFECTED:					
Product In Water:	☐ Yes	☐ No			
☐ Creek ☐ Other:	☐ River	☐ Ocean	☐ Bay	☐ Canal	☐ Tidelands
Remarks:					

DESCRIPTION OF SITE AND TOPOGRAPHY:					
☐ Mountains	☐ Brush	☐ Grass	☐ Farming	☐ Dry	☐ Foothills
☐ Forest	☐ Crops	☐ Level	☐ Wet	☐ Other:	
Remarks:					

LAND USE:			
☐ Public	☐ City	☐ Residential	☐ Industrial
☐ Private	☐ County	☐ Recreation	☐ Farming
☐ Federal	☐ State	☐ Other:	
Remarks:			

PROPERTY DAMAGE:			
Owner Notified:	☐ Yes ☐ No		
Crops Affected:	☐ Yes ☐ No		
Crop Type:			
Area Damaged:			
Livestock:	☐ Yes ☐ No	Number:	Type:
Structures:	☐ Yes ☐ No	If Yes: ☐ Commercial	☐ Private
Remarks:			
PREPARED BY:		**DATE/TIME:**	

5.4 SITE SAFETY AND HEALTH PLAN, CONTINUED

SITE WORK PLAN

Incident Commander:	Operations Chief:
Safety Officer:	Planning Chief:
SAFETY MEETING:	
All personnel entering the response area will be required to produce HAZWOPER certification papers upon request. Safety Officer will conduct a safety meeting with the work crews prior to their entering the job site to discuss all known hazards that may be encountered at the site location. **FIRE DANGER – CONFINED SPACE – RESPIRATORY – MOVING EQUIPMENT** Evacuation Needed: ☐ Yes ☐ No The Safety Officer will prepare an evacuation plan, if needed. **If product contains benzene insure adequate personnel protection in place.** Other:	

PRODUCT CONTAINMENT:			
Vaccum Trucks Required:	☐ Yes ☐ No	Trucks Ordered:	Time: ☐ AM ☐ PM
Portable Pumps	☐ Yes ☐	Pumps Ordered:	Time: ☐ AM ☐ PM

Required: No		
Portable Tanks Required: ☐ Yes ☐ No	Tanks Ordered:	Time: ☐ AM ☐ PM
Remarks:		

EXCAVATION:	
Shoring Required: ☐ Yes ☐ No	Sloping or Benching: ☐ Yes ☐ No
Excavation Permit On-Site: ☐ Yes ☐ No	USA Alert Notice Sent: ☐ Yes ☐ No
Over 5' (CAOSHA Notified): **(OSHA Trenching and Shoring)** ☐ Yes ☐ No	
Competent Person On-Site: ☐ Yes ☐ No	Name:
Soil Classified: ☐ Yes ☐ No	Classification: ☐ A ☐ B ☐ C
Equipment Ordered: ☐ Back Hoe ☐ Tracklayer ☐ Excavator ☐ Grader ☐ 960 Loader ☐ Dragline ☐ Dump Truck ☐ Bottom Dump ☐ Other:	
Remarks:	
Estimated Time to Excavate Site for Repair:	
PREPARED BY:	**DATE/TIME:**

5.4 SITE SAFETY AND HEALTH PLAN, CONTINUED

SITE WORK PLAN

REPAIR:	
Pipe Replacement Needed: (API 1104) ☐ Yes ☐ No	Full Sleeve Repair Needed: (API 1104) ☐ Yes ☐ No
Rectifier Turned Off: ☐ Yes ☐ No	Hot Work Permit Issued: (PL) ☐ Yes ☐ No
Lock Out/Tag Out Done: (Safety Procedures Manual) ☐ Yes ☐ No	Weld Procedure On-Site: ☐ Yes ☐ No
Welders Test Papers On-Site: ☐ Yes ☐ No	Name:

Tested Pipe Verification: ☐ Yes ☐ No	Test #:
Fire Watch Established: ☐ Yes ☐ No	Name:
Equipment/Materials: ☐ Portable Welder ☐ Hydro Crane ☐ Portable Lights ☐ Dry Ice ☐ Nitrogen ☐ Fire Extinguishers ☐ Radiographic Inspection	
Remarks:	
Estimated Time to Complete Repair:	
SANITATION: (Note: **Potable water may be obtained through vacuum truck service.**)	
Employee Decontamination Facilities In Place:	☐ Yes ☐ No
Equipment Decontamination Area Established:	☐ Yes ☐ No
Decontamination Waste Fluid Containers On-Site:	☐ Yes ☐ No
Potable Water Available:	☐ Yes ☐ No
Portable Toilets & Washing Facilities On-Site:	☐ Yes ☐ No
Equipment Decontamination Area Established:	☐ Yes ☐ No
Remarks:	
Estimated Time to Set Sanitation Facilities:	
WASTE CONTAINMENT: (Note: Do not remove waste from site unless authorized by Environmental.)	
Contaminated Waste: ☐ Soil ☐ Debris ☐ Rags ☐ Pads ☐ Boom	
Type of Containment Needed: Contain and cover contaminated soil with Visqueen if authorized - use HazWaste bins. For contaminated debris, rags, pads, and boom use D.O.T. 17 H Drums if over 4 cubic yards and materials are non-flammable use bins.	
Remarks:	
Estimated Time to Contain Contaminated Materials:	
PREPARED BY:	**DATE/TIME:**

5.4 SITE SAFETY AND HEALTH PLAN, CONTINUED

SITE WORK PLAN

SITE SKETCH:
NORTH

Remarks:
Total Estimated Time for Response Repair Completion:
Note: If total response repair time exceeds _____ hours, establish employee shifts of _____ hours each.

PREPARED BY:	**DATE/TIME:**

5.4 SITE SAFETY AND HEALTH PLAN, CONTINUED

SITE WORK PLAN

SITE EMERGENCY INFORMATION:	
911:	
Can 911 be used to request emergency medical, fire, or police help?	☐ Yes ☐ No
Local Ambulance Service:	
Name:	

Town:	Phone #:
Local Hospital:	
Name:	
Town:	Phone #:
Is a map showing the route or directions to the hospital posted? ☐ Yes ☐ No	
Site Map or Sketch:	
Is a map or sketch of the work area and facilities posted? ☐ Yes ☐ No	
Remarks:	
PREPARED BY:	**DATE/TIME:**

5.5 DECONTAMINATION PLAN

Incident Name:	Location:
Effective Date of Plan:	Effective Time Period of Plan:
Spill Location:	Plan Prepared By:

- Work Zones:
    - Support (cold) zone
    - Contamination reduction (warm) zone
    - Exclusion (hot) zone

These zones are identified by signs, barrier tape or other means. Decontamination is performed in the contamination reduction zone. When responders exit the exclusion zone they must be decontaminated.

Crews are available to assist in decontamination procedures as needed. The crews must wear appropriate personal protective equipment (PPE), and are responsible for packaging and labeling of contaminated PPE.

- Decontamination Stations:

  Decontamination is performed within the contamination reduction zone, which is appropriately lined to prevent the spread of contaminants. Dikes are installed under the lining to contain runoff.

5.5 DECONTAMINATION PLAN, CONTINUED

Procedures for these stations are as follows:

MAXIMUM MEASURES FOR DECONTAMINATION		
STATION 1	Segregated equipment drop	Deposit equipment used on site (tools, sampling devices and containers, monitoring instruments, radios, clipboards, etc.) on plastic drop cloths or in different containers with plastic liners. Segregation at the drop reduces the probability of cross contamination. During hot weather operations, a cool down station may be set up within this area.
STATION 2	Boot cover and glove wash	Scrub outer boot cover and gloves with decontamination solution or detergent and water.
STATION 3	Boot cover and glove rinse	Rinse off decontamination solution from Station 2 using copious amounts of water.
STATION 4	Tape removal	Remove tape around boots and gloves and deposit in container with plastic liner.
STATION 5	Boot cover removal	Remove boot covers and deposit in containers with plastic liner.
STATION 6	Outer glove removal	Remove outer gloves and deposit in container with plastic liner.
STATION 7	Suit and boot wash	Wash splash suit, gloves, and safety boots. Scrub with long-handled scrub brush and decontamination solution.
STATION 8	Suit, boot, and glove rinse	Rinse off decontamination solution using water. Repeat as many times as necessary.
STATION 9	Canister or mask change	If worker leaves exclusion zone to change canister or this is the last step in the decontamination procedure; worker’s canister is exchanged, new outer gloves and boot covers are donned, joints are taped, and the worker returns to duty.

STATION 10	Safety boot removal	Remove safety boots and deposit in container with plastic liner.
STATION 11	Splash suit removal	With assistance of helper, remove splash suit. Deposit in container with plastic liner.
STATION 12	Inner glove wash	Wash inner gloves with decontamination solution.
STATION 13	Inner glove rinse	Rinse inner gloves with water.
STATION 14	Face piece removal	Remove face piece. Deposit in container with plastic liner. Avoid touching face with fingers.
STATION 15	Inner glove removal	Remove inner gloves and deposit in lined container.
STATION 16	Inner clothing removal	Remove clothing soaked with perspiration and place in lined container. Do not wear inner clothing off-site since there is a possibility that small amounts of contamination might have been transferred in removing the protective suit.

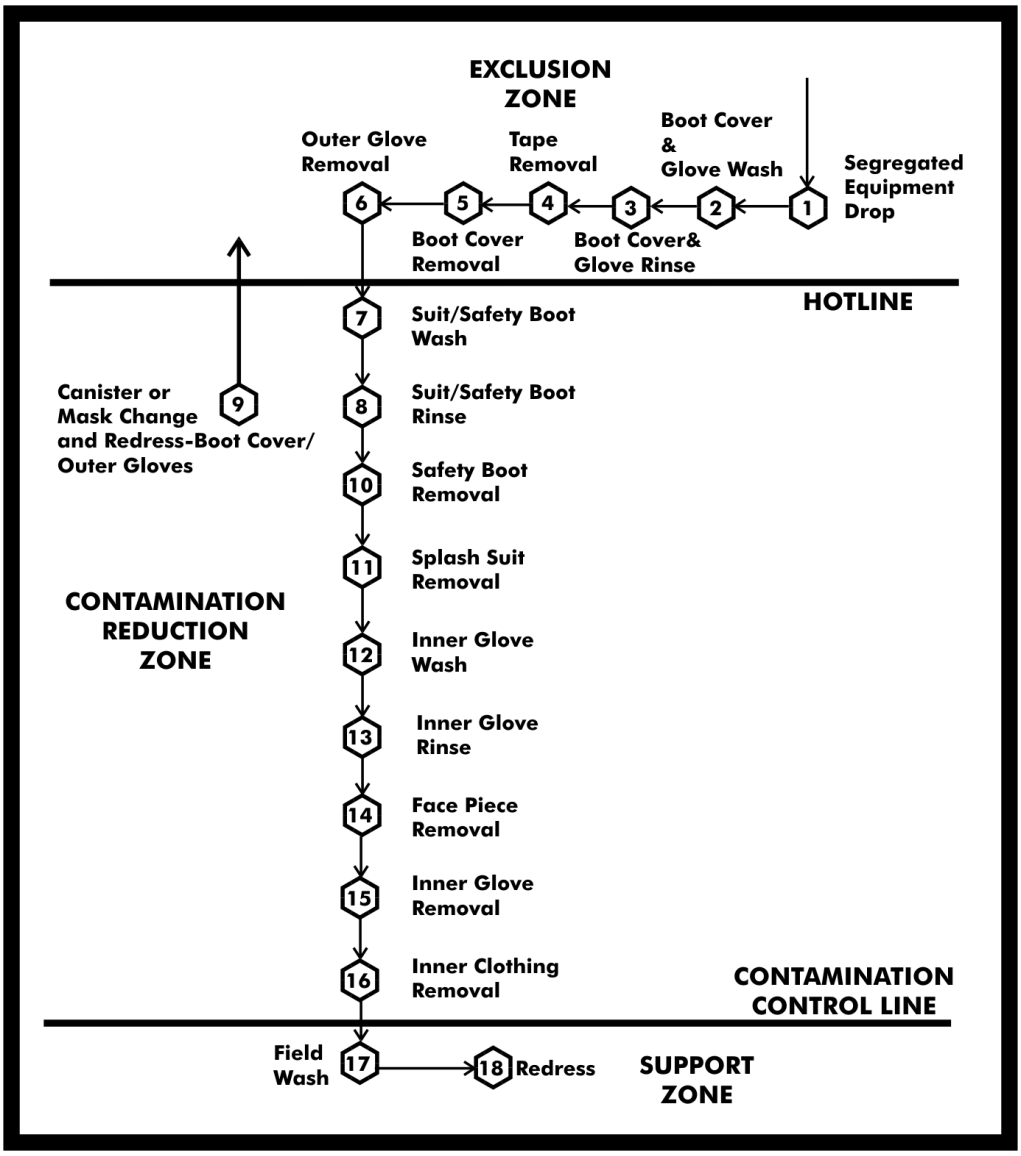
5.5 DECONTAMINATION PLAN, CONTINUED

Procedures for these stations are as follows:

MAXIMUM MEASURES FOR DECONTAMINATION, CONTINUED		
STATION 17	Field wash	Shower if highly toxic, skin-corrosive or skin-absorbable materials are known or suspected to be present. Wash hands and face if shower is not available.
STATION 18	Re-dress	Put on clean clothes.

5.5 DECONTAMINATION PLAN, CONTINUED

DECONTAMINATION PROCEDURES, MAXIMUM DECONTAMINATION LAYOUT



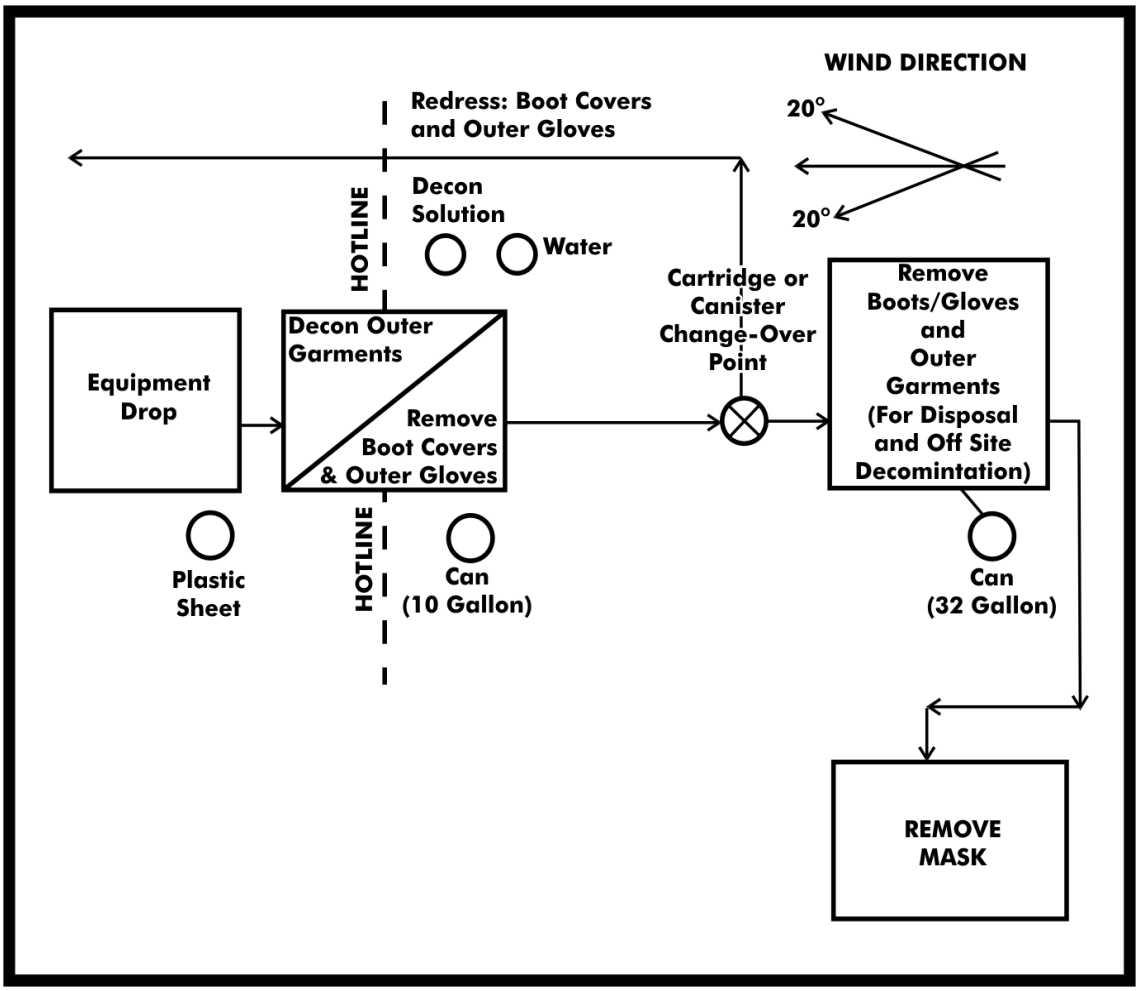
5.5 DECONTAMINATION PLAN, CONTINUED

MINIMUM MEASURES FOR DECONTAMINATION		
STATION 1	Equipment drop	Deposit equipment used on site (tools, sampling devices and containers, monitoring instruments, radios, clipboards, etc.) on plastic drop cloths. Segregation at the drop reduces the probability of cross contamination. During hot weather operations, a cool down station may be set up within this area.
STATION 2	Outer garment, boots and gloves wash and rinse	Scrub outer boots, outer gloves, and splash suit with decontamination solution or detergent and water. Rinse off using copious amounts of water.
STATION 3	Outer boot and glove removal	Remove outer boots and gloves. Deposit in container with plastic liner.
STATION 4	Canister or mask change	If worker leaves exclusion zone to change canister (or mask) or this is the last step in the

		decontamination procedures; worker's canister is exchanged, new outer gloves and boot covers are donned, joints are taped, the worker returns to duty.
STATION 5	Boot, gloves, and outer garment removal	Boots, chemical-resistant splash suit, inner gloves removed and deposited in separate containers lined with plastic.
STATION 6	Face piece removal	Face piece is removed. Avoid touching face with fingers. Face piece deposited on plastic sheet.
STATION 7	Field wash	Hands and face are thoroughly washed. Shower as soon as possible.

5.5 DECONTAMINATION PLAN, CONTINUED

DECONTAMINATION PROCEDURES, MINIMUM DECONTAMINATION LAYOUT



5.6 DISPOSAL PLAN

Date:	Location:

Source of release:
Amount of release:
Incident name:
State On-Scene Coordinator:
Federal On-Scene Coordinator:
Time required for temporary storage:
Proposed storage method:

Disposal priorities:

Sample date:	Sample ID:
Analysis required (type):	
Laboratory performing analysis:	

Disposal options:

	Available	Likely	Possible	Unlikely
Landfill:				
In-situ/ bio-remediation:				
In-situ burn:				
Pit burning:				
Hydrocyclone:				
Off-site incineration:				
Reclaim:				
Recycle:				

Resources required for disposal options:

General information:

Generator name:	U.S. EPA ID#:
Waste properties:	Waste name:
U.S. EPA waste code:	State waste code:
EPA hazardous waste:	
Waste storage and transportation:	
Proposed storage method:	
Proposed transportation method:	

5.6 DISPOSAL PLAN, CONTINUED

Permits required for storage:
Permits required for transportation:
Estimated storage capacity:
Number and type of storage required:
Local storage available for temporary storage of recovered oil:

PPE required for waste handling:	
Waste coordinator:	Date:

Resources required for disposal options:

Incident name:	
Sample number:	Date sent:
Source of sample:	
Date sample data received:	
Waste hazardous:	Non-hazardous:
Permits/variances requested:	
Approval received on waste profile:	
Date disposal can begin:	
Disposal facilities:	
Profile number:	
Storage contractors:	
Waste transporters:	
PPE designated and agrees with Site Safety and Health Plan:	

5.6 DISPOSAL PLAN, CONTINUED

Additional information:
Waste coordinator:

5.7 INCIDENT SECURITY PLAN

(b) (7)(F)

[redacted]

(b) (7)(F)

[redacted]

(b) (7)(F)

[redacted]

(b) (7)(F)

[redacted]

5.8 DEMOBILIZATION PLAN

Incident name:	**Location:**
Effective date of plan:	**Effective time period of plan:**
Spill location:	**Plan prepared by:**

Demobilization procedures:

- Operations Section will determine which resources are ready for release from a specific collection site.
- The Planning Section will provide guidance on release priorities and demobilization recommendations.
- Information maintained by the Planning Section will be utilized to assist in the prioritization.
- Each incident will require a Decontamination Area.
- Decontaminated equipment will be returned to appropriate staging area for release or re-deployment.
- Transports for equipment will be required if remote from staging area.
- The Planning Section will document all demobilization and decontamination activities.
- Equipment designated for re-assignment will be mobilized to the appropriate staging area.
- The Supervisor will ensure a log is maintained documenting that proper decontamination procedures are performed for each piece of equipment.
- The Operations Section will ensure that redeployed personnel receive proper rest prior to returning to duty.
- The Planning Section Chief will monitor personnel redeployment activities to ensure number of hours worked is within acceptable guidelines.
- The Operations Section Chief must approve the Demobilization Plan before decontamination, release, or redeployment of any resources.

SECTION 6 Last Revised: January 4, 2012

SENSITIVE AREAS / RESPONSE TACTICS

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6.1 Area Description

6.1.1 Hydrographic and Climatic Conditions

6.1.2 Physical Geographic Features / Navigational Hazards

6.2 Spill Containment / Recovery

Figure 6.2-1 - Response Tactics for Various Shorelines

6.3 Sensitive Area Protection

Figure 6.3-1 - Sensitive Area Protection Implementation Sequence

Figure 6.3-2 - Summary of Shoreline and Terrestrial Cleanup Techniques

6.3.1 Alternative Response Strategies

Figure 6.3-3 - Alternative Strategies Checklist

Figure 6.3-4 - Decision Guide for the Federal Bioremediation Approval Process

6.4 Wildlife Protection and Rehabilitation

Figure 6.4-1 - Wildlife Rehabilitation Contract

6.5 Endangered and Threatened Species By State

6.6 Vulnerability Analysis (Detailed)

6.7 Tactical Overview Map

6.8 Tactical Plan Index

6.9 Tactical Plans

6.10 Sensitivity Maps

6.11 Trajectory Maps

6.1 AREA DESCRIPTION

Site-specific maps and response tactics are included in **SECTION 6.7** and **SECTION 6.9**. Description of shoreline types and specific shoreline protection and cleanup techniques are presented in **FIGURE 6.2-1 and FIGURE 6.3-2.** The strategies and response examples are guidelines and must be evaluated during the response to ensure that the selected response methods are appropriate for the situation.

6.1.1 Hydrographic and Climatic Conditions

HYDROGRAPHIC AND CLIMATIC CONDITIONS	
Wind:	The wind direction is primarily from the northwest. However, on the water, the wind is generally channeled through Carquinez Strait.
Temperature:	The weather in this region is predominantly dry. Rain and fog appear mostly during the period from November through April. Average annual rainfall ranges from 14 to 18 inches. Average temperatures range from the 30s in the winter to the 90s in the summer. The daily and annual range in temperature is small. A few frosty mornings occur during the winter, but the temperature seldom drops below freezing. Winter temperatures generally rise to the high fifties in the early afternoon.
Tides and Currents:	The flood current commences approximately 1.5 hours before the Golden Gate reference area. The ebb begins approximately 1 hour earlier. Maximum current velocities rarely exceed 1.5 knots. The tide cycle is semi-diurnal and maximum predicted range is 7.5 feet.
Local Visibility Problems:	Low-lying fog is a frequent visibility problem in the area. The loading platform is equipped with navigation lights.

6.1.2 Physical Geographic Features / Navigational Hazards

PHYSICAL GEOGRAPHIC FEATURES / NAVIGATIONAL HAZARDS	
Bathymetry:	The Bathymetry of the Suisun Bay area varies greatly, consisting of large shallow areas and well-defined deeper channels used for shipping. The fringes of the bay are comprised of shallow areas grading into mud flats and marshes. Shallow areas and bars are also found in the central part of the bay. The wharf is located along the East Bulls Head channel which has an average depth of 33 feet at mean lower low water.
Beach Types:	Natural mudflats, salt flats, channelized stormwater runoff areas, and rocky shorelines
Type of Soil and Terrain:	Natural mudflats, salt flats, channelized stormwater runoff areas, and rocky shorelines
Buoys, Moorings or other Underwater Structures:	Much of San Francisco Bay is industrialized. Several ports are present throughout the bay; these ports are important economic centers for import and export of material used throughout the world.
Navigational Hazards:	Navigational hazards in the Suisun Bay area include the Carquinez and Benicia-Martinez Bridges. These hazards as well as others such as rocks, shallows (see above), points, and platforms are marked with the appropriate lights and audible devices. Further information is

	listed in the ACP.
Traffic Patterns:	Traffic in the area is monitored by the U.S. Coast Guard. Shipping channels are defined with the appropriate buoys and vessel traffic separation schemes (TSS), corridors and precautionary areas have been established where warranted. In Suisun Bay, all tank vessels carrying more than 5000 tons of oil are required to be accompanied by tug escorts through the Carquinez Strait north on the Sacramento Shipping Channel to one mile beyond the River Island Ferry Terminal. Further information is listed in the ACP.

6.2 SPILL CONTAINMENT / RECOVERY

Containment and recovery refer to techniques that can be employed to contain and recover terrestrial and aquatic petroleum spills.

Terrestrial spills typically result from pipeline or tank leaks. The Company is equipped with secondary containment systems for areas with non-pressurized storage tanks. Spills occurring within the secondary containment area or along pipeline and piping areas should be contained at or near their source to minimize the size of the cleanup area and quantity of soil affected.

Containment is most effective when conducted near the source of the spill, where the oil has not spread over a large area and the contained oil is of sufficient thickness to allow effective recovery and/or cleanup. The feasibility of effectively implementing containment and recovery techniques is generally dependent upon the size of the spill, available logistical resources, implementation time, and environmental conditions or nature of the terrain in the spill area.

For terrestrial spills, trenches and earthen berms or other dams are most often used to contain oil migration on the ground surface. Recovery of free oil is best achieved by using pumps, vacuum sources, and/or sorbents.

Spills that reach water spread faster than those on land. They also have greater potential to contaminate water supplies, to affect wildlife and populated areas, and to impact manmade structures and human activities. Responses on water should therefore emphasize stopping the spill, containing the oil near its source, and protecting sensitive areas before they are impacted.

Sorbents are used to remove minor on-water spills. For larger spills, booming is used to protect sensitive areas and to position oil so it can be removed with skimmers or vacuum trucks.

Due to entrainment, booming is not effective when the water moves faster than one knot or waves exceed 1.5 feet in height. Angling a boom will minimize entrainment. Using multiple, parallel booms will also improve recovery in adverse conditions. A summary of booming techniques is provided on the following page.

Containment/Diversion Berming

- Berms are constructed ahead of advancing surface spills to contain spill or divert spill to a containment area.
- May cause disturbance of soils and some increased soil penetration.

Blocking/Flow-Through Dams	• Construct dam in drainage course/stream bed to block and contain flow of spill. Cover with plastic sheeting. If water is flowing, install inclined pipes during dam construction to pass water underneath dam. • May increase soil penetration.
Culvert Blocking	• Block culvert with plywood, sandbags, sediments, etc., to prevent oil from entering culvert.
Interception Trench	• Excavate ahead of advancing surface spill to contain spill and prevent further advancement; cover bottom and gradients with plastic. • May cause disturbance of soils and increased soil penetration.
Containment Booming	• Boom is deployed around free oil. • Boom may be anchored or left to move with the oil.
Diversion Booming	• Boom is deployed at an angle to the approaching oil. • Oil is diverted to a less sensitive area. • Diverted oil may cause heavy oil contamination to the shoreline downwind and down current. • Anchor points may cause minor disturbance to the environment.
Exclusion Booming	• Boom is placed around a sensitive area or across an inlet, a river mouth, a creek mouth, or a small bay. • Approaching oil is contained or deflected (diverted) by the boom. • Anchor points may cause minor disturbance to the environment.

Sorbent Booming

- Used only on quiet water with minor oil contamination.
- Boom is anchored along a shoreline or used in a manner described above.
- May use boom made of sorbent material or may pack sorbent material between multiple booms placed parallel to each other.

Other cleanup methods include natural recovery, manual removal/scraping, low-pressure flushing, warm water washing, and burning. Berms and dams are also used in shallow waterways to protect areas.

Cleanup methods are provided in the appropriate Area Contingency Plan (ACP), NOAA's "Shoreline Assessment Manual," and NOAA's "Options for Minimizing Environmental Impacts of Freshwater Spill Response." (See http://www.response.restoration.noaa.gov for the latter two.)

FIGURE 6.2-1 - RESPONSE TACTICS FOR VARIOUS SHORELINES

TYPES	DESCRIPTION	PREDICTED OIL IMPACT	RECOMMENDED CLEANUP ACTIVITY

Developed/ Unforested land	• This class includes towns, cities, farms, pastures, fields, reclaimed wetlands, and other altered areas
	• Organisms and algae may be common in riprap structures and on pilings
		• Oil would percolate easily between the gravel and boulders of riprap structures
		• Oil would coat the intertidal areas of solid structures
		• Biota would be damaged or killed under heavy accumulations
			• May require high pressure spraying:
			  • To remove oil
			  • To prepare substrate for recolonization of barnacle and oyster communities
			  • For aesthetic reasons

Freshwater Flat	• Mud or organic deposits located along the shore or in shallow portions of nontidal freshwater lakes and ponds • They are exposed to low wave and current energy • They are often areas of heavy bird use	• Oil is expected to be deposited along the shoreline • Penetration of spilled oil into the water-saturated sediments of the flat will not occur • When sediments are contaminated, oil may persist for years	• These areas require high priority for protection against oil contamination • Cleanup of freshwater flats is nearly impossible because of soft substrate • Cleanup is usually not even considered because of the likelihood of mixing oil deeper into the sediments during the cleanup effort

			• Passive efforts, such as sorbent boom can be used to retain oil as it is naturally removed

Fresh Marsh	• Found along freshwater ponds and lakes
	• These marshes have various types of vegetative cover, including floating aquatic mats, vascular submerged vegetation, needle and broad-leaved deciduous scrubs and shrubs, and broad-leaved evergreen scrubs and shrubs
	• Birds and mammals extensively use fresh marshes for feeding and breeding purposes
		• Small amounts of oil will contaminate the outer marsh fringe only; natural removal by wave action can occur within months
		• Large spills will cover more area and may persist for decades
		• Oil, particularly the heavy fuel oils, tends to adhere readily to marsh grasses
			• Marshes require the highest priority for shoreline protection
			• Natural recovery is recommended when:
			  • A small extent of marsh is affected
			  • A small amount of oil impacts the marsh fringe
			• The preferred cleanup method is a combination of low-pressure flushing, sorption, and vacuum pumping performed from boats
			• Any cleanup activities should be supervised closely to avoid excessive disturbances of the marsh surface or roots
			• Oil wrack and other debris may be removed by hand

FIGURE 6.2-1 - RESPONSE TACTICS FOR VARIOUS SHORELINES, CONTINUED

TYPES	DESCRIPTION	PREDICTED OIL IMPACT	RECOMMENDED CLEANUP ACTIVITY
Swamp	• Swamps are freshwater wetlands having varying water depths with vegetation types ranging from shrubs and scrubs to poorly drained	• Even small amounts of spilled oil can spread through the swamp • Large spills will cover more area and may persist for decades since water-flushing rates	• No cleanup recommended under light conditions • Under moderate to heavy accumulations, to prevent chronic oil pollution of surrounding areas placement of sorbent

	forested wetlands. Major vegetative types include: scrubs, shrubs, evergreen trees, and hardwood forested woodlands • Birds and mammals use swamps during feeding and breeding activities	are low • Oil, particularly the heavy fuel oils, will adhere to swamp vegetation • Unlike mangroves, the roots of swamp forest trees are not exposed; thus, little damage to trees is expected. Any underbrush vegetation, however, would be severely impacted	along fringe swamp forest (to absorb oil as it is slowly released) may be effective under close scientific supervision • Proper strategic boom placement may be highly effective in trapping large quantities of oil, thus reducing oil impact to interior swamp forests • Oil trapped by boom can be reclaimed through the use of skimmers and vacuums
Open water	• Have ocean-like waves and currents • Weather changes effect on-water conditions • River mouths present problems • Thermal stratification occurs	• Most organisms are mobile enough to move out of the spill area • Aquatic birds are vulnerable to oiling • Human usage (such as transportation, water intakes, and recreational activities) may be restricted	• Booming, skimming, vacuuming, and natural recovery are the preferred cleanup methods • Should not use sorbents, containment booming, skimming, and vacuuming on gasoline spills • Cleanup options include physical herding, sorbents, and debris/vegetation removal
Large rivers	• May have varying salinities, meandering channels, and high flow rates • May include manmade structures (such as dams and locks) • Water levels vary seasonally • Floods generate high suspended sediment and debris loads	• Fish and migratory birds are of great concern • Under flood conditions, may impact highly sensitive areas in floodplains • Human usage may be high • When sediments are contaminated, oil may persist for years	• Booming, skimming, and vacuuming are the preferred cleanup methods • Should not use sorbents, containment booming, skimming, and vacuuming on gasoline spills • Cleanup options include natural recovery, physical herding, sorbents, and debris/vegetation removal

FIGURE 6.2-1 - RESPONSE TACTICS FOR VARIOUS SHORELINES, CONTINUED

TYPES	DESCRIPTION	PREDICTED OIL IMPACT	RECOMMENDED CLEANUP ACTIVITY
Small lakes and ponds	• Water surface can be choppy • Water levels can fluctuate widely • May completely freeze in winter • Bottom sediments near the shore can be soft and muddy • Surrounding area may include wet meadows and marshes	• Wildlife and socioeconomic areas likely to be impacted • Wind will control the oil's distribution	• Booming, skimming, vacuuming, and sorbents are the preferred cleanup methods • Should not use containment booming, vacuuming, sorbents, and skimming on gasoline spills • Cleanup options include physical herding, sorbents, and debris/vegetation removal
Small rivers and streams	• Wide range of water bodies - fast flowing streams to slow moving bayous with low muddy banks and fringed with vegetation • May include waterfalls, rapids, log jams, mid-channel bars, and islands • Weathering rates may be slower because spreading and evaporation are restricted	• Usually contaminate both banks and the water column, exposing a large number of biota to being oiled • Water intakes for drinking water, irrigation, and industrial use likely to be impacted	• Booming, skimming, vacuuming, sorbents, barriers, and berms are the preferred cleanup methods • Should not use containment booming, sorbents, vacuuming, and skimming on gasoline spills • Cleanup options include physical herding, natural recovery, debris removal, vegetation removal, and in-situ burn

6.3 SENSITIVE AREA PROTECTION

Protection refers to the implementation of techniques or methods to prevent oil from making contact with a shoreline or aquatic area that is determined to be sensitive for environmental, economic, cultural, or human use reasons. Implementation of sensitive area protection techniques must consider a number of factors such as sensitive features, priorities for areas to be protected, and potential degree of impact. In the event a product spill reaches a major area

waterway, it may be necessary to protect downstream sensitive areas if it appears that local containment and recovery efforts will not be sufficient to control the entire spill. Major waterways and specific sensitive areas located downstream of the Facility are provided in SECTION 6.7.

FIGURE 6.3-1 - SENSITIVE AREA PROTECTION IMPLEMENTATION SEQUENCE

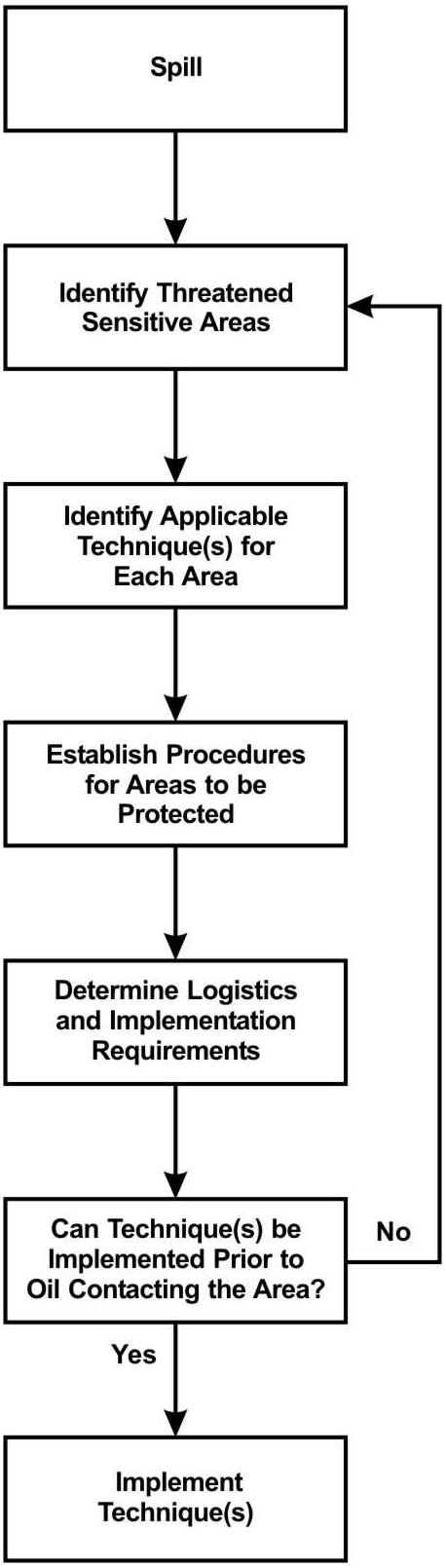


FIGURE 6.3-2 - SUMMARY OF SHORELINE AND TERRESTRIAL CLEANUP TECHNIQUES

TECHNIQUE	DESCRIPTION	RECOMMENDED EQUIPMENT	APPLICABILITY	POTENTIAL ENVIRONMENTAL EFFECTS

Removal				
1. Manual Removal	Hand tool (scrapers, wire brushes, shovels, cutting tools, wheel barrows, etc.) are used to scrape oil off surfaces or recover oiled sediments, vegetation, or debris where oil conditions are light or sporadic and/or access is limited.	Equipment misc. hand tools Personnel 10-20 workers	• Can be used on all habitat types • Light to moderate oiling conditions for stranded oil or heavy oils that have formed semi-solid to solid masses • In areas where roosting or birthing animals cannot or should not be disturbed	• Sediment disturbance and erosion potential
2. Mechanical Removal	Mechanical earthmoving equipment is used to remove oiled sediments and debris from heavily impacted areas with suitable access.	Equipment motor grader, backhoe, dump truck elevating scrapers Personnel 2-4 workers plus equipment operators	• On land, wherever surface sediments are accessible to heavy equipment • Large amounts of oiled materials	• Removes upper 2 to 12 inches of sediments
3. Sorbent Use	Sorbents are applied manually to oil accumulations, coatings, sheens, etc. to remove and recover the oil.	Equipment misc. hand tools misc. sorbents Personnel 2-10 workers	• Can be used on all habitat types • Free-floating oil close to shore or stranded on shore, secondary treatment method after gross oil removal • Sensitive areas where access is restricted	• Sediment disturbance and erosion potential • Trampling of vegetation and organisms • Foot traffic can work oil deeper into soft sediments

4. Vacuum / Pumps / Skimmers	Pumps, vacuum trucks, skimmers are used to remove oil accumulations from land or relatively thick floating layers from the water.	Equipment 1-2 50- to 100-bbl vacuum trucks w/ hoses 1-2 nozzle screens or skimmer heads Personnel 2-6 workers plus truck operators	• Can be used on all habitat types • Stranded oil on the substrate • Shoreline access points	• Typically does not remove all oil • Can remove some surface organisms, sediments, and vegetation

FIGURE 6.3-2 - SUMMARY OF SHORELINE AND TERRESTRIAL CLEANUP TECHNIQUES, CONTINUED

TECHNIQUE	DESCRIPTION	RECOMMENDED EQUIPMENT	APPLICABILITY	POTENTIAL ENVIRONMENTAL EFFECTS
Washing				
5. Flooding	High volumes of water at low pressure are used to flood the oiled area to float oil off and out of sediments and back into the water or to a containment area where it can be recovered. Frequently used with flushing.	Equipment 1-5 100- to 200-gpm pumping systems 1 100-ft perforated header hose per system 1-2 200-ft containment booms per system 1 oil recovery device per system Personnel 6-8 workers per system	• All shoreline types except steep intertidal areas • Heavily oiled areas where the oil is still fluid and adheres loosely to the substrate • Where oil has penetrated into gravel sediments • Used with other washing techniques	• Can impact clean downgradient areas • Can displace some surface organisms if present • Sediments transported into water can affect water quality
6. Flushing	Water streams at low to moderate pressure, and possibly elevated temperatures, are used to remove oil from surface or near-surface sediments	Equipment 1-5 50- to 100-gpm/ 100-psi pumping systems with manifold 1-4 100-ft hoses and nozzles per system 1-2 200-ft	• Substrates, riprap, and solid man-made structures • Oil stranded onshore • Floating oil on shallow	• Can impact clean downgradient areas • Will displace many surface organisms if present • Sediments

	through agitation and direct contact. Oil is flushed back into the water or a collection point for subsequent recovery. May also be used to flush out oil trapped by shoreline or aquatic vegetation.	containment booms per system 1 oil recovery device per system Personnel 8-10 workers per system	intertidal areas	transported into water can affect water quality • Hot water can be lethal to many organisms • Can increase oil penetration depth
7. Spot (High Pressure Washing)	High pressure water streams are used to remove oil coatings from hard surfaces in small areas where flushing is ineffective. Oil is directed back into water or collection point for subsequent recovery.	Equipment 1-5 1,200- to 4,000-psi units with hose and spray wand 1-2 100-ft containment booms per unit 1 oil recovery device per unit Personnel 2-4 workers per unit	• Bedrock, man-made structures, and gravel substrates • When low-pressure flushing is not effective • Directed water jet can remove oil from hard to reach sites	• Will remove most organisms if present • Can damage surface being cleaned • Can affect clean downgradient or nearby areas

FIGURE 6.3-2 - SUMMARY OF SHORELINE AND TERRESTRIAL CLEANUP TECHNIQUES, CONTINUED

TECHNIQUE	DESCRIPTION	RECOMMENDED EQUIPMENT	APPLICABILITY	POTENTIAL ENVIRONMENTAL EFFECTS
In Situ				
8. Passive Collection	Sorbent/snare booms or other sorbent materials are anchored at the waterline adjacent to heavily oiled areas to contain and recover oil as it leaches from the sediments.	Equipment 1,000-2,000 ft sorbent/snare boom 200-400 stakes or anchor systems Personnel 4-10 workers	• All shoreline types • Calm wave action • Slow removal process	• Significant amounts of oil can remain on the shoreline for extended periods of time

9. Sediment Tilling	Mechanical equipment or hand tools are used to till lightly to moderately oiled surface sediments to maximize natural degradation processes.	Equipment 1 tractor fitted with tines, dicer, ripper blades, etc., or 1-4 rototillers or 1 set of hand tools Personnel 2-10 workers	• Any sedimentary substrate that can support heavy equipment • Sand and gravel beaches with subsurface oil • Where sediment is stained or lightly oiled • Were oil is stranded above normal high waterline	• Significant amounts of oil can remain on the shoreline for extended periods of time • Disturbs surface sediments and organisms
10. In Situ Bioremediation	Fertilizer is applied to lightly to moderately oiled areas to enhance microbial growth and subsequent biodegradation of oil.	Equipment 1-2 fertilizer applicators 1 tilling device if required Personnel 2-4 workers	• Any shoreline habitat type where nutrients are deficient • Moderate to heavily oiled substrates • After other techniques have been used to remove free product on lightly oiled shorelines • Where other techniques are destructive or ineffective	• Significant amounts of oil can remain on the shoreline for extended periods of time • Can disturb surface sediments and organisms

FIGURE 6.3-2 - SUMMARY OF SHORELINE AND TERRESTRIAL CLEANUP TECHNIQUES, CONTINUED

		RECOMMENDED		POTENTIAL

TECHNIQUE	DESCRIPTION	EQUIPMENT	APPLICABILITY	ENVIRONMENTAL EFFECTS
In Situ, Continued				
11. Log/Debris Burning	Oiled logs, driftwood, vegetation, and debris are burned to minimize material handling and disposal requirements. Material should be stacked in tall piles and fans used to ensure a hot, clean burn.	Equipment 1 set of fire control equipment 2-4 fans 1 supply of combustion promoter Personnel 2-4 workers	• On most habitats except dry muddy substrates where heat may impact the biological productivity of the habitat • Where heavily oiled items are difficult or impossible to move • Many potential applications on ice	• Heat may impact local near-surface organisms • Substantial smoke may be generated • Heat may impact adjacent vegetation
12. Natural Recovery	No action is taken and oil is allowed to degrade naturally.	None required	• All habitat types • When natural removal rates are fast • Degree of oiling is light • Access is severely restricted or dangerous to cleanup crews • When cleanup actions will do more harm than natural removal	• Oil may persist for significant periods of time • Remobilized oil or sheens may impact other areas • Higher probability of impacting wildlife
13. Dispersants (If there is a potential threat to a USCG Pre-authorized	Dispersants are used to reduce the oil/water interfacial tension thereby decreasing the	Dispersants Boat or aircraft	• Water bodies with sufficient depth and volume for mixing and	• Use in shallow water could affect benthic resources • May adversely impact

dispersants zone USCG Classified OSRO equipment may need to be activated. The Company will not use dispersants without concurrence of the FOSC. Dispersants will not be used without concurrence of the EPA and the state with jurisdiction over the affected waters. Refer to the NCP for dispersant use policies and procedures.)	energy needed for the slick to break into small particles and mix into the water column. Specially formulated products containing surface-active agents are sprayed from aircraft or boats onto the slick.		dilution • When the impact of the floating oil has been determined to be greater than the impact of dispersed oil on the water-column community	organisms in the upper 30 feet of the water column • Some water-surface and shoreline impacts could occur
1 - Per 1000 feet of shoreline or oiled area				

Cleanup methods are provided in the appropriate Area Contingency Plan (ACP), NOAA's "Shoreline Assessment Manual," and NOAA's "Options for Minimizing Environmental Impacts of Freshwater Spill Response." (See http://response.restoration.noaa.gov for the latter two.)

6.3.1 Alternative Response Strategies

Non-mechanical methods for cleanup operations could involve the use of chemical cleaning products or appropriate bioremediation products. A checklist for evaluating different alternate strategies is present in **FIGURE 6.3-3**.

Dispersants

While physical removal is the most common method for eliminating spilled oil from the environment, mechanical removal may be limited by equipment capability, weather, sea conditions, and spill magnitude. An alternative strategy for reducing impacts from oil spills is to disperse the oil into the water by breaking it into small droplets and suspending them in the water. This process occurs naturally very slowly but can be accelerated by the application of a dispersant.

A dispersant is an agent (surfactant) which reduces the surface tension of the oil and water and allows them to mix more readily. In the presence of sufficient mixing energy supplied by waves, wind, or man-made turbulence, the oil can remain suspended in the water column

resisting resurfacing and recoalescing. Dispersants may be effective in area where environmental or logistical considerations do not allow the deployment of cleanup equipment and personnel, and may reduce the overall level of effort and manpower requirement and personnel necessary for responding to major spills.

The Company will not use dispersants without the concurrence of the FOSC. Dispersants will not be used without concurrence of the EPA and the state with jurisdiction over the affected waters. Refer to the NCP for dispersant use policies and procedures.

Bioremediation

Bioremediation is the process of stimulating the growth and activity of microorganisms such as bacteria and fungi that naturally feed on hydrocarbons. It is conducted as a means of accelerating the natural biodegradation rates of stranded or floating oil. Biodegradation is a natural process by which the above microorganism, in the presence of nutrients an oxygen, chemically breakdown hydrocarbons and other substances and produce by-products, including carbon dioxide, water, biomass, and partially oxidized products.

Biodegradation, together with physical processes, such as evaporation and dispersion, are the primary natural mechanisms for the removal of hydrocarbons (oil spills) from the environment. This process generally occurs at a very low rate but can often be enhanced by the application of nutrients, such as nitrogen, phosphorus, potassium, and others.

There are, however, instances on open seas or shorelines where standard recovery or cleanup techniques are not practical or will result in significant environmental or physical impacts. In these cases, bioremediation may be a viable response option and should be considered for use. **FIGURE 6.3-4** provides a federal decision guide for bioremediation consideration.

In-Situ Burn

"In-Situ" burning has been successfully used as a viable technique for mitigating oil spills off shore and in a marsh type environment. This is especially true of areas that have mostly grassy vegetation with little or no woody vegetation. In a grassy marshland environment, an "In-Situ" burn may produce less long-term damage to the environment than traditional mechanical cleanup methods.

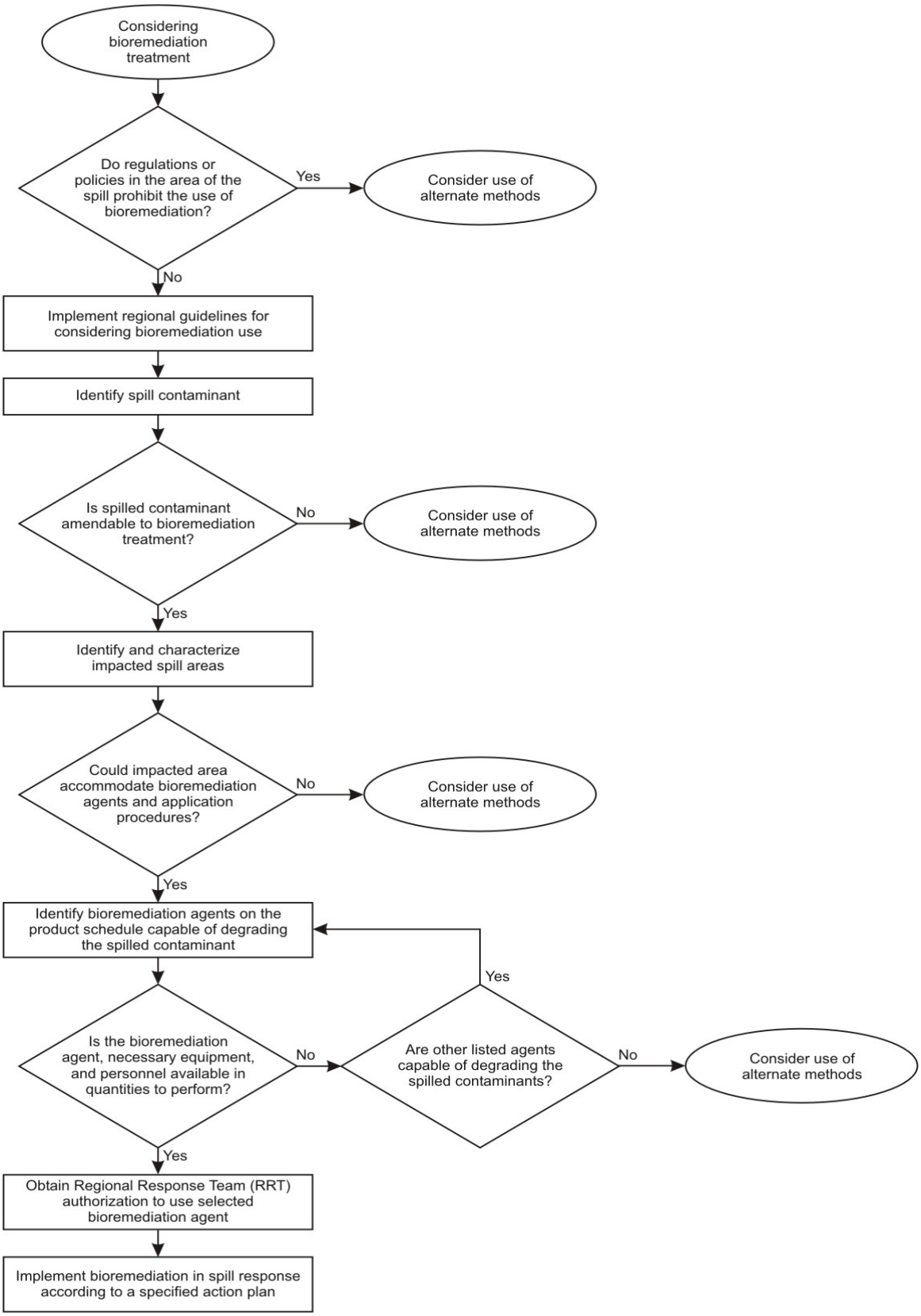
The Company will not use In-Situ Burn without the concurrence of the FOSC and the Regional Response Team (RRT).

FIGURE 6.3-3 - ALTERNATE STRATEGIES CHECKLIST

Evaluate Alternate Strategies (oil spills only)	**Initials**	**Date & Time Started**	**Date & Time Completed**
No response			
In-situ burning			
Flood and flush			
Bioremediation/nutrient application			
Dispersants/surfactants			

Gelling/solidifying agents			
Sorbents			
Mechanical recovery			

FIGURE 6.3-4 - DECISION GUIDE FOR THE FEDERAL BIOREMEDIATION APPROVAL PROCESS



6.4 WILDLIFE PROTECTION AND REHABILITATION

- The Company will support wildlife protection and rehabilitation efforts during the response, and assist in these efforts in alignment with local, state, and federal authorities and certified contractors

- Company personnel will not attempt to rescue or clean affected wildlife, because such actions may cause harm to the individuals or may place the animals at further risk
- Federal and state agencies responsible for wildlife capture and rehabilitation will typically coordinate capturing and rehabilitating oiled wildlife; a list of these agencies is included in **FIGURE 3.1-5**
- Wildlife rehabilitation specialists may be utilized to assist in capturing and rehabilitating oiled animals as well as deterring unaffected animals away from the spill site.
- The Company will secure, by contract, personnel, equipment, and facilities to address wildlife rehabilitation (refer to **FIGURE 6.4-1**).

FIGURE 6.4-1 - WILDLIFE REHABILITATION CONTRACT

Click here for Contract

6.5 ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Chub, bonytail entire	*Gila elegans*	Main stream of mid-sized to large rivers	E	California
Orcutt grass, California	*Orcuttia californica*	Vernal pools	E	California
Spineflower, Orcutt's	*Chorizanthe orcuttiana*	Open areas with sandy soils within low, southern maritime chaparral communities	E	California
Beetle, delta green ground	*Elaphrus viridis*	Vernal pools	T	California
Pussypaws, Mariposa	*Calyptridium pulchellum*	Sandy soils of decomposed granite, primarily in foothill oak woodlands	T	California
Abalone, White North America (West Coast from Point Conception, CA, U.S.A., to Punta Abreojos, Baja California,	*Haliotis sorenseni*	Open low and high relief rock or boulder habitat that is	E	California

Mexico)		interspersed with sand channels		
Albatross, short-tailed	*Phoebastria (=Diomedea) albatrus*	Pelagic; often in regions of high productivity	E	California
Allocarya, Calistoga	*Plagiobothrys strictus*	Geyser- and hot spring-fed vernal pools and swales in meadows	E	California
Alopecurus, Sonoma	*Alopecurus aequalis var. sonomensis*	Moist soils in freshwater marshes in Sonoma and Marin counties	E	California
Ambrosia, San Diego	*Ambrosia pumila*	Coastal scrub, grasslands, open floodplains and low valley bottoms	E	California
Barberry, island	*Berberis pinnata ssp. insularis*	Rocky soils of cool, moist, north-facing slopes and canyons	E	California
Barberry, Nevin's	*Berberis nevinii*	Steep slopes with coarse soils and chaparral communities	E	California
Bedstraw, El Dorado	*Galium californicum ssp. sierrae*	Oak woodland areas with ponderosa pine and gray pine	E	California
Bedstraw, island	*Galium buxifolium*	Sea cliffs, bluffs, and dry, rocky slopes in coastal sage scrub	E	California
Beetle, Mount Hermon June	*Polyphylla barbata*	Sand parkland and other sandy areas within chaparral and ponderosa pine stands	E	California

T - Threatened
E - Endangered

6.5 ENDANGERED AND THREATENED SPECIES BY STATE, CONTINUED

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Bird's beak, palmate-bracted	*Cordylanthus palmatus*	Alkaline soils of valley lowlands	E	California
Bird's-beak, Pennell's	*Cordylanthus tenuis ssp. capillaris*	Serpentine soil flats within chaparral	E	California
Bird's-beak, salt marsh	*Cordylanthus maritimus ssp. maritimus*	Coastal salt marshes	E	California
Bird's-beak, soft	*Cordylanthus mollis ssp. mollis*	Salt grass/pickleweed marshes at or near the limits of tidal action	E	California
Bladderpod, San Bernardino Mountains	*Lesquerella kingii ssp. bernardina*	Dry flats, yellow pine forest, east end of Bear Valley, San Bernardino Mts	E	California
Bluegrass, Napa	*Poa napensis*	Geyser- and hot spring-fed moist meadows	E	California
Bluegrass, San Bernardino	*Poa atropurpurea*	Edges of moist meadows	E	California
Broom, San Clemente Island	*Lotus dendroideus ssp. traskiae*	Shrublands and disturbed grasslands	E	California
Buckwheat, cushenbury	*Eriogonum ovalifolium var. vineum*	Limestone slopes, joshua tree woodland, Cushenbury Canyon, San Bernardino Mts	E	California
Buckwheat, Ione (incl. Irish Hill)	*Eriogonum apricum incl. var. prostratum*	Coarse, very acidic, nutrient-poor soils with cement-like, iron oxide crusts	E	California
Bush-mallow, San Clemente Island	*Malacothamnus clementinus*	Valley and foothill grasslands, and rocky canyon walls in coastal scrub	E	California
Bush-mallow, Santa Cruz Island	*Malacothamnus fasciculatus var. nesioticus*	Shrub	E	California
Butterfly, Behren's silverspot	*Speyeria zerene behrensii*	Coastal prairie	E	California
Butterfly, callippe silverspot	*Speyeria callippe callippe*	Native grassland and adjacent habitats	E	California
Butterfly, El Segundo blue	*Euphilotes battoides allyni*	Sand dune remnants	E	California

T - Threatened
E - Endangered

6.5 ENDANGERED AND THREATENED SPECIES BY STATE, CONTINUED

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Butterfly, Lange's metalmark	*Apodemia mormo langei*	Coastal sand dunes	E	California
Butterfly, lotis blue	*Lycaeides argyrognomon lotis*	Coastal bogs	E	California
Butterfly, mission blue	*Icaricia icarioides missionensis*	Coastal scrub	E	California
Butterfly, Myrtle's silverspot	*Speyeria zerene myrtleae*	Dunes, scrub, and grasslands	E	California
Butterfly, Palos Verdes blue	*Glaucopsyche lygdamus palosverdesensis*	Mountain meadows, open woodlands, brush, canyons, seeps, and streamsides	E	California
Butterfly, Quino checkerspot	*Euphydryas editha quino (=E. e. wrighti)*	Chaparral and coastal sage scrubland	E	California
Butterfly, San Bruno elfin	*Callophrys mossii bayensis*	Rocky outcrops and cliffs in coastal scrub on the San Francisco peninsula	E	California
Butterfly, Smith's blue	*Euphilotes enoptes smithi*	Coastal dune, coastal scrub, chaparral, and grassland	E	California
Button-celery, San Diego	*Eryngium aristulatum var. parishii*	Vernal pools or mima mound areas with vernally moist conditions	E	California
Cactus, Bakersfield	*Opuntia treleasei*	Valley grassland	E	California
Ceanothus, coyote	*Ceanothus ferrisae*	Serpentine chaparral on dry slopes	E	California
Ceanothus, Pine Hill	*Ceanothus roderickii*	Openings in chaparral communities on gabbro-derived soils	E	California
Checker-mallow, Keck's	*Sidalcea keckii*	Grassy slopes	E	California

Checker-mallow, Kenwood Marsh	*Sidalcea oregana ssp. valida*	Freshwater marshes surrounded by grasslands	E	California
Checker-mallow, pedate	*Sidalcea pedata*	Loamy clay of annually-moist pebble plain meadows	E	California

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6.5 ENDANGERED AND THREATENED SPECIES BY STATE, CONTINUED

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Chub, Mohave tui	*Gila bicolor mohavensis*	Highly modified refuge sites in San Bernardino County	E	California
Chub, Owens tui	*Gila bicolor snyderi*	Lakes and quiet, vegetated, mud or sand-bottomed pools of headwaters, creeks and rivers	E	California
Clarkia, Pismo	*Clarkia speciosa ssp. immaculata*	Grasslands between Pismo Beach and Nipomo Mesa	E	California
Clarkia, Presidio	*Clarkia franciscana*	Grassland communities with serpentine soils	E	California
Clarkia, Vine Hill	*Clarkia imbricata*	Open grasslands near a freshwater marsh	E	California
Clover, Monterey	*Trifolium trichocalyx*	Openings in and edges of Monterey pine forest	E	California
Clover, showy Indian	*Trifolium amoenum*	Low, wet swales in grasslands	E	California
Condor, California U.S.A. only	*Gymnogyps californianus*	Large trees or snags, or on isolated rocky outcrops and cliffs	E	California
Crayfish, Shasta	*Pacifastacus fortis*	Rocky, gravelly bottoms, usually volcanic rubble	E	California
Crownscale, San Jacinto Valley	*Atriplex coronata var. notatior*	Playas, vernal-pools	E	California
Cypress, Santa Cruz	*Cupressus abramsiana*	Coastal chaparral communities	E	California
Dudleya, Santa Clara Valley	*Dudleya setchellii*	Rocky outcrops within serpentine grasslands	E	California

Evening-primrose, Antioch Dunes	*Oenothera deltoides ssp. howellii*	Sandy soil type (Oakley or Delhi sand) found at the Antioch dunes	E	California
Evening-primrose, Eureka Valley	*Oenothera avita ssp. eurekensis*	Sandy dunes of the Eureka Valley	E	California
Fairy shrimp, Conservancy	*Branchinecta conservatio*	Turbid, ephemeral water of swales and vernal pools in grassland areas	E	California

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6.5 ENDANGERED AND THREATENED SPECIES BY STATE, CONTINUED

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Fairy shrimp, longhorn	*Branchinecta longiantenna*	Ephemeral water of swales and vernal pools	E	California
Fairy shrimp, Riverside	*Streptocephalus woottoni*	Vernal pools, in earth slump basins, patches of grassland and coastal sage scrub vegetation	E	California
Fairy shrimp, San Diego	*Branchinecta sandiegonensis*	Vernal pools, which are shallow and on chaparral covered mesas	E	California
Fiddleneck, large-flowered	*Amsinckia grandiflora*	Inner coast range grasslands; steep slopes, sandy soil	E	California
Flannelbush, Mexican	*Fremontodendron mexicanum*	Slopes covered with southern mixed chaparral	E	California
Flannelbush, Pine Hill	*Fremontodendron californicum ssp. decumbens*	Serpentine soils near Grass Valley	E	California
Fly, Delhi Sands flower-loving	*Rhaphiomidas terminatus abdominalis*	Sandy soil, known as Delhi series sands	E	California
Flycatcher, southwestern willow	*Empidonax traillii extimus*	Streamside thickets, brushy fields, and willows	E	California
Fox, San Joaquin kit	*Vulpes macrotis mutica*	Dens near freshwater marshes	E	California
Fox, San	*Urocyon*	Southern coastal dune, bluff,		

Miguel Island	*Littoralis littoralis*	sage, scrub, chaparral, woodlands, pine forests and marsh	E	California
Fox, Santa Catalina Island	*Urocyon littoralis catalinae*	Southern coastal dune, bluff, sage, scrub, chaparral, woodlands, pine forests and marsh	E	California
Fox, Santa Cruz Island	*Urocyon littoralis santacruzae*	Southern coastal dune, bluff, sage, scrub, chaparral, woodlands, pine forests and marsh	E	California
Fox, Santa Rosa Island	*Urocyon littoralis santarosae*	Southern coastal dune, bluff, sage, scrub, chaparral, woodlands, pine forests and marsh	E	California
Fringepod, Santa Cruz Island	*Thysanocarpus conchuliferus*	Dry canyon slopes, rocky ridges, and rock outcrops	E	California
Fritillary, Gentner's	*Fritillaria gentneri*	Open, somewhat dry, low elevation, mixed oak-madrone woodlands	E	California

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6.5 ENDANGERED AND THREATENED SPECIES BY STATE, CONTINUED

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Frog, mountain yellow-legged southern California DPS	*Rana muscosa*	Sunny riverbanks, meadow streams, isolated pools and lake borders in the Sierra Nevada	E	California
Gilia, Hoffmann's slender-flowered	*Gilia tenuiflora ssp. hoffmannii*	Dunes, coastal	E	California
Gilia, Monterey	*Gilia tenuiflora ssp. arenaria*	Coastal sand dunes, washes, and canyons	E	California
Goby, tidewater Entire	*Eucyclogobius newberryi*	Small coastal lagoons, lower reaches of streams and uppermost portions of large bays	E	California
Goldfields, Burke's	*Lasthenia burkei*	Meadows (mesic), vernal pools	E	California
Goldfields, Contra Costa	*Lasthenia conjugens*	Vernal pools in open grassy areas	E	California
Grass, Eureka Dune	*Swallenia alexandrae*	Desert dunes	E	California

Grass, Solano	*Tuctoria mucronata*	Germinates in warm, turbid, somewhat alkaline vernal pools	E	California
Grasshopper, Zayante band-winged	*Trimerotropis infantilis*	Sandy parklands among chapparral or ponderosa pine stands on the Zayante sand hills	E	California
Indian paintbrush, San Clemente Island	*Castilleja grisea*	Coastal scrub, steep canyon walls	E	California
Jewelflower, California	*Caulanthus californicus*	Slightly alkaline sandy loam in native grassland or shrub land	E	California
Jewelflower, Metcalf Canyon	*Streptanthus albidus ssp. albidus*	Serpentine outcrops with little soil development	E	California
Jewelflower, Tiburon	*Streptanthus niger*	Rocky serpentine slopes and outcrops in grassland communities	E	California
Kangaroo rat, Fresno	*Dipodomys nitratoides exilis*	Arid, flat plains with sparse vegetation of grasses or sometimes orache	E	California
Kangaroo rat, giant	*Dipodomys ingens*	Open desert grasslands in valleys	E	California

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6.5 ENDANGERED AND THREATENED SPECIES BY STATE, CONTINUED

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Kangaroo rat, San Bernardino Merriam's	*Dipodomys merriami parvus*	Sandy to rocky soils in desert locations with little vegetation	E	California
Kangaroo rat, Stephens'	*Dipodomys stephensi (incl. D. cascus)*	Annual grassland and coastal sage scrub with sparse shrub cover	E	California
Kangaroo rat, Tipton	*Dipodomys nitratoides nitratoides*	Sandy to rocky soils in desert locations with little vegetation	E	California
Larkspur, Baker's	*Delphinium bakeri*	Coastal scrub habitats and valley grasslands	E	California
Larkspur, San	*Delphinium*			

Clemente Island	*variegatum ssp. kinkiense*	San Clemente Island grassland	E	California
Larkspur, yellow	*Delphinium luteum*	Rocky places within coastal scrub and coastal prairie communities	E	California
Layia, beach	*Layia carnosa*	Sparsely vegetated semi-stabilized dunes	E	California
Lessingia, San Francisco	*Lessingia germanorum (=L.g. var. germanorum)*	Dune scrub	E	California
Lily, Pitkin Marsh	*Lilium pardalinum ssp. pitkinense*	Freshwater marshes and wet meadows in Sonoma County	E	California
Lily, Western	*Lilium occidentale*	Pacific coastal wetlands	E	California
Liveforever, Santa Barbara Island	*Dudleya traskiae*	Cliffs and exposed rocky slopes on Santa Barbara Island	E	California
Lizard, blunt-nosed leopard	*Gambelia silus*	Sandy areas, alkali flats, canyon floors, foothills, with sparse, open vegetation	E	California
Lupine, clover	*Lupinus tidestromii*	Coastal dunes	E	California
Lupine, Nipomo Mesa	*Lupinus nipomensis*	Stabilized coastal sand dunes	E	California
Malacothrix, island	*Malacothrix squalida*	Coastal bluffs and rocky areas	E	California

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6.5 ENDANGERED AND THREATENED SPECIES BY STATE, CONTINUED

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Malacothrix, Santa Cruz Island	*Malacothrix indecora*	Dunes, coastal	E	California
Mallow, Kern	*Eremalche kernensis*	Eroded hillsides, alkali flats with shadscale	E	California
Manzanita, Del Mar	*Arctostaphylos glandulosa ssp. crassifolia*	Sandy mesas and bluffs, chaparral	E	California
Manzanita,	*Arctostaphylos hookeri var.*	Serpentine or related soils on the	E	California

Presidio	*ravenii*	San Francisco Peninsula		
Manzanita, Santa Rosa Island	*Arctostaphylos confertiflora*	Chaparral, mixed woodland, and pine woodland communities	E	California
Meadowfoam, Butte County	*Limnanthes floccosa ssp. californica*	Vernal pools	E	California
Meadowfoam, Sebastopol	*Limnanthes vinculans*	Vernally or permanently wet meadows	E	California
Mesa-mint, Otay	*Pogogyne nudiuscula*	Vernal pools	E	California
Mesa-mint, San Diego	*Pogogyne abramsii*	Vernal pools on coastal terraces	E	California
Milk-vetch, Applegate's	*Astragalus applegatei*	Flat seasonally moist remnants of alkaline floodplain grasslands of the Klamath Basin	E	California
Milk-vetch, Braunton's	*Astragalus brauntonii*	Brush/chaparral communities	E	California
Milk-vetch, Clara Hunt's	*Astragalus clarianus*	Openings in manzanita and oak woodlands	E	California
Milk-vetch, Coachella Valley	*Astragalus lentiginosus var. coachellae*	Loose, wind-blown or alluvial sands located on dunes or flats	E	California
Milk-vetch, coastal dunes	*Astragalus tener var. titi*	Coastal dunes	E	California
Milk-vetch, Cushenbury	*Astragalus albens*	Soils derived directly from decomposing limestone bedrock	E	California

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6.5 ENDANGERED AND THREATENED SPECIES BY STATE, CONTINUED

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Milk-vetch, Lane Mountain	*Astragalus jaegerianus*	Granitic soils; shallow, rocky and coarse sands	E	California
Milk-vetch, triple-ribbed	*Astragalus tricarinatus*	Sandy and gravelly soils of dry washes or canyon slopes	E	California
Milk-vetch, Ventura Marsh	*Astragalus pycnostachyus lanosissimus*	Coastal wetlands	E	California

Monardella, willowy	*Monardella linoides ssp. Viminea*	"Rocky washes, coastal sage scrub, chaparral, southwest Peninsular Range"	E	California
Morning-glory, Stebbins'	*Calystegia stebbinsii*	Mixed chaparral communities on gabbro- and serpentine-derived soils	E	California
Mountain balm, Indian Knob	*Eriodictyon altissimum*	Maritime chaparral and oak woodlands, mostly on sandstone ridges	E	California
Mountain beaver, Point Arena	*Aplodontia rufa nigra*	Underground burrow systems or in gullies	E	California
Mountain-mahogany, Catalina Island	*Cercocarpus traskiae*	Slopes of a steep-sided, narrow, dry arroyo within a coastal sage scrub community	E	California
Mouse, Pacific pocket	*Perognathus longimembris pacificus*	Coast on finegrained sandy substrates in coastal sage scrub, coastal strand, and river alluvium	E	California
Mouse, salt marsh harvest	*Reithrodontomys raviventris*	Salt and brackish marshes	E	California
Mustard, slender-petaled	*Thelypodium stenopetalum*	Mesic, alkaline meadows	E	California
Navarretia, few-flowered	*Navarretia leucocephala ssp. pauciflora (=N. pauciflora)*	Vernal pools	E	California
Navarretia, many-flowered	*Navarretia leucocephala ssp. plieantha*	Vernal pools	E	California
Niterwort, Amargosa	*Nitrophila mohavensis*	Playas (clay, mesic)	E	California
Onion, Munz's	*Allium munzii*	Grassy openings in coastal-sage scrub. Soils are moist, heavy clays	E	California

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6.5 ENDANGERED AND THREATENED SPECIES BY STATE, CONTINUED

COMMON NAME	SCIENTIFIC	HABITAT	STATUS	STATE

	NAME			
Orcutt grass, hairy	*Orcuttia pilosa*	Vernal pools	E	California
Orcutt grass, Sacramento	*Orcuttia viscida*	Large, deep vernal pools	E	California
Oxytheca, cushenbury	*Oxytheca parishii var. goodmaniana*	Pinyon-juniper woodland	E	California
Paintbrush, soft-leaved	*Castilleja mollis*	Coastal dunes with coastal scrub associates	E	California
Paintbrush, Tiburon	*Castilleja affinis ssp. neglecta*	Serpentine bunchgrass communities on north to west facing slopes	E	California
Penny-cress, Kneeland Prairie	*Thlaspi californicum*	Serpentine rock outcrops in coastal prairie habitat	E	California
Pentachaeta, Lyon's	*Pentachaeta lyonii*	Small grassland sites that intergrade with shrublands	E	California
Pentachaeta, white-rayed	*Pentachaeta bellidiflora*	Bunchgrass communities associated with serpentine soils	E	California
Phacelia, island	*Phacelia insularis ssp. insularis*	Over island on sea bluffs and inland on dry, rocky slopes and ridges	E	California
Phlox, Yreka	*Phlox hirsuta*	Serpentine talus in lower and upper montane coniferous forest communities	E	California
Pikeminnow(=squawfish, Colorado except Salt and Verde R. drainages, AZ	*Ptychocheilus lucius*	Deep turbid strongly flowing water, eddies, runs, flooded bottoms, or backwaters	E	California
Piperia, Yadon's	*Piperia yadonii*	Monterey pine forest and maritime chaparral communities	E	California
Polygonum, Scotts Valley	*Polygonum hickmanii*	Gently sloping to nearly level shallow soils over outcrops of Santa Cruz mudstone and Purisima sandstone	E	California
Potentilla, Hickman's	*Potentilla hickmanii*	Freshwater marshes, seeps and streamlets in open forested areas near the coast	E	California
Pupfish, desert	*Cyprinodon macularius*	Desert springs and outflow marshes, backwaters, saline pools,	E	California

		and streams		

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6.5 ENDANGERED AND THREATENED SPECIES BY STATE, CONTINUED

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Pupfish, Owens	*Cyprinodon radiosus*	Silt or sand-covered bottom; near margins of bulrush marshes	E	California
Rabbit, riparian brush	*Sylvilagus bachmani riparius*	Riverside shrub and woodland communities	E	California
Rail, California clapper	*Rallus longirostris obsoletus*	Saltmarshes	E	California
Rail, light-footed clapper U.S.A. only	*Rallus longirostris levipes*	Coastal salt and freshwater marshes containing cordgrass, cattails or tules, and rushes	E	California
Rail, Yuma clapper U.S.A. only	*Rallus longirostris yumanensis*	Freshwater and brackish (mixed fresh and salt-water) marshes	E	California
Rock-cress, Hoffmann's	*Arabis hoffmannii*	Cliffs and ledges of loose volcanic rock	E	California
Rock-cress, McDonald's	*Arabis mcdonaldiana*	Rocky serpentine areas	E	California
Rockcress, Santa Cruz Island	*Sibara filifolia*	Sunny, volcanic screes	E	California
Salamander, California tiger U.S.A. (CA - Santa Barbara County)	*Ambystoma californiense*	Subterranean retreats near ponds in grasslands and open woodlands	E	California
Salamander, California tiger U.S.A. (CA - Sonoma County)	*Ambystoma californiense*	Subterranean retreats near ponds in grasslands and open woodlands	E	California
Salamander, desert slender	*Batrachoseps aridus*	Chaparral, coastal live-oak woodlands, canyons, washes at base of grass-govered hills, rural gardens, urban areas, and trash	E	California
	Ambystoma	Chaparral and pine-oak		

Salamander, Santa Cruz long-toed	*macrodactylum croceum*	woodlands; breeds in ephemeral pools	E	California
Salmon, chinook winter Sacramento R.	*Oncorhynchus (=Salmo) tshawytscha*	Mainly oceanic, gravel riffles in main streams	E	California
Salmon, coho central CA coast	*Oncorhynchus (=Salmo) kisutch*	Inshore waters at mid-depths or near surface; spawns in coastal streams, sometimes far inland	E	California
Sandwort, Marsh	*Arenaria paludicola*	Freshwater marshes	E	California

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6.5 ENDANGERED AND THREATENED SPECIES BY STATE, CONTINUED

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Sea turtle, leatherback	*Dermochelys coriacea*	Warm sands of tropical beaches	E	California
Seablite, California	*Suaeda californica*	Upper intertidal zone of a coastal salt marsh along the perimeter of a bay	E	California
Sedge, white	*Carex albida*	Sphagnum bogs	E	California
Sheep, Peninsular bighorn Peninsular CA pop.	*Ovis canadensis nelsoni*	Desert, grasses and shrub mosaic, shrublands	E	California
Sheep, Sierra Nevada bighorn Sierra Nevada	*Ovis canadensis sierrae*	Visually open and contains steep, generally rocky, slopes	E	California
Shrew, Buena Vista Lake ornate	*Sorex ornatus relictus*	Wetlands and riparian forests of Buena Vista Lake	E	California
Shrike, San Clemente loggerhead	*Lanius ludovicianus mearnsi*	Trees and shrubs primarily in the canyon woodlands of the island	E	California
Shrimp, California freshwater	*Syncaris pacifica*	Clean, clear running water, some emergent vegetation	E	California
Skipper, Carson wandering	*Pseudocopaeodes eunus obscurus*	Grassland habitats on alkaline substrates	E	California

Skipper, Laguna Mountains	*Pyrgus ruralis lagunae*	Montane meadows	E	California
Snail, Morro shoulderband (=Banded dune)	*Helminthoglypta walkeriana*	Sandy soils in coastal dune and sage scrub communities	E	California
Snake, San Francisco garter	*Thamnophis sirtalis tetrataenia*	Ponds, marshes, roadside ditches, streams, meadows, and city lots near water	E	California
Spineflower, Ben Lomond	*Chorizanthe pungens var. hartwegiana*	Coastal sandy	E	California
Spineflower, Howell's	*Chorizanthe howellii*	Coastal dunes and adjacent sandy soils of coastal prairies	E	California
Spineflower, Robust (incl. Scotts Valley)	*Chorizanthe robusta incl. vars. robusta and hartwegii*	Sandy/gravelly soils and sandstone or mudstone bedrock	E	California

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6.5 ENDANGERED AND THREATENED SPECIES BY STATE, CONTINUED

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Spineflower, Scott's Valley	*Chorizanthe robusta hartwegii*	Sandy/gravelly soils and sandstone or mudstone bedrock	E	California
Spineflower, slender-horned	*Dodecahema leptoceras*	Old sandy benches or floodplain terraces containing alluvial fan scrub	E	California
Spineflower, Sonoma	*Chorizanthe valida*	Sandy soil of a coastal prairie	E	California
Steelhead southern CA coast	*Oncorhynchus (=Salmo) mykiss*	Small headwater streams, large rivers, lakes, or reservoirs	E	California
Stickleback, unarmored threespine	*Gasterosteus aculeatus williamsoni*	Marine, estuarine, and fresh water, usually in vegetation	E	California
Stonecrop, Lake County	*Parvisedum leiocarpum*	Margins of vernal pools and depressions in bedrock which act as shallow vernal pools	E	California
Sucker, Lost	*Deltistes*	Deep water lakes and impoundments; deep pools of small	E	California

River	*luxatus*	to medium rivers		
Sucker, Modoc	*Catostomus microps*	Shallow mud-bottomed pools of cool creeks	E	California
Sucker, razorback entire	*Xyrauchen texanus*	Slow areas, backwaters, and eddies of medium to large rivers	E	California
Sucker, shortnose	*Chasmistes brevirostris*	Open waters of large shallow lakes and river channels	E	California
Sunburst, Hartweg's golden	*Pseudobahia bahiifolia*	Non-native grasslands; grassland-blue oak woodland community ecotones	E	California
Sunflower, San Mateo woolly	*Eriophyllum latilobum*	Moist, steep slopes of serpentine-influenced rocky soil	E	California
Sunshine, Sonoma	*Blennosperma bakeri*	Vernal pools in valley grassland	E	California
Tadpole shrimp, vernal pool	*Lepidurus packardi*	Vernal pools, swales, ephemeral drainages, stock ponds, reservoirs, and ditches	E	California
Taraxacum, California	*Taraxacum californicum*	Edges of moist meadows	E	California

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6.5 ENDANGERED AND THREATENED SPECIES BY STATE, CONTINUED

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Tarplant, Gaviota	*Deinandra increscens ssp. Villosa*	Annual grassland in associate with coastal sage scrub	E	California
Tern, California least	*Sterna antillarum browni*	Coastal waters, beaches	E	California
Thistle, Chorro Creek bog	*Cirsium fontinale var. obispoense*	Seeps and bogs on serpentine substrates	E	California
Thistle, fountain	*Cirsium fontinale var. fontinale*	Moist clay openings in riparian or serpentine chaparral	E	California
Thistle, La Graciosa	*Cirsium loncholepis*	Wetlands, mesic coastal dunes, and brackish marshes and swamps	E	California

Thistle, Loch Lomond coyote	*Eryngium constancei*	Within the borders of the meadow-like bed of the Loch Lomond lake	E	California
Thistle, Suisun	*Cirsium hydrophilum var. hydrophilum*	Upper reaches of tidal marshes	E	California
Thornmint, San Mateo	*Acanthomintha obovata ssp. duttonii*	Serpentine soils of chaparral, valley and foothill grasslands	E	California
Tiger beetle, Ohlone	*Cicindela ohlone*	Native grasslands with California oatgrass, and purple needlegrass	E	California
Toad, arroyo (=arroyo southwestern)	*Bufo californicus (=microscaphus)*	Washes, streams, and adjacent uplands (desert, shrubland)	E	California
Tuctoria, Greene's	*Tuctoria greenei*	Bottom of dried vernal pools in open grassland of the Sacramento and San Joaquin Valleys	E	California
Vireo, least Bell's	*Vireo bellii pusillus*	Dense willow thickets from southern California into Baja California	E	California
Vole, Amargosa	*Microtus californicus scirpensis*	Bulrush dominated marshes bordering springs or other permanent sources of open water	E	California
Wallflower, Ben Lomond	*Erysimum teretifolium*	Inland pockets of sandstone-derived coarse sandy soils	E	California
Wallflower, Contra Costa	*Erysimum capitatum var. angustatum*	Dry stony banks, slopes, open flats, open hills and plains	E	California

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6.5 ENDANGERED AND THREATENED SPECIES BY STATE, CONTINUED

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Wallflower, Menzies'	*Erysimum menziesii*	Open sand areas, sparsely vegetated dunes, and the borders of lupine scrub	E	California
Watercress, Gambel's	*Rorippa gambellii*	Permanent wetlands, marshes or borders of lakes and slow-flowing streams or ditches	E	California
Whale, blue	*Balaenoptera*	Open seas	E	California

	musculus			
Whale, finback	*Balaenoptera physalus*	Offshore ocean waters	E	California
Whale, humpback	*Megaptera novaeangliae*	Surface of the ocean	E	California
Whale, killer Southern Resident DPS	*Orcinus orca*	Open ocean and coastal waters	E	California
Whale, Sei	*Balaenoptera borealis*	Deep offshore ocean	E	California
Whale, sperm	*Physeter catodon (=macrocephalus)*	Deep waters of all the oceans	E	California
Woodland-star, San Clemente Island	*Lithophragma maximum*	Coastal bluff scrub and coastal scrub	E	California
Woodrat, riparian (=San Joaquin Valley)	*Neotoma fuscipes riparia*	Riparian forests along major streams of the northern San Joaquin Valley	E	California
Woolly-star, Santa Ana River	*Eriastrum densifolium ssp. sanctorum*	Sandy floodplain areas in Southern California	E	California
Wooly-threads, San Joaquin	*Monolopia (=Lembertia) congdonii*	Shadscale scrub, valley grassland	E	California
Yerba santa, Lompoc	*Eriodictyon capitatum*	Sandstone soils in chaparral and coastal sage scrub communities	E	California
Amole, purple	*Chlorogalum purpureum*	Cismontane woodland, valley and foothill grassland	T	California
Baccharis, Encinitas	*Baccharis vanessae*	Steep slopes, sandstone and volcanic substrates	T	California

T - Threatened
E - Endangered

6.5 ENDANGERED AND THREATENED SPECIES BY STATE, CONTINUED

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Beetle, valley elderberry longhorn	*Desmocerus californicus dimorphus*	Elderberry trees in California	T	California
	Trichostema			

Bluecurls, Hidden Lake	*austromontanum ssp. compactum*	Lake-margins edges	T	California
Brodiaea, Chinese Camp	*Brodiaea pallida*	Seeps and springs in serpentine and volcanic soils	T	California
Brodiaea, thread-leaved	*Brodiaea filifolia*	Grasslands, often in association with vernal pools and in floodplains	T	California
Butterfly, bay checkerspot	*Euphydryas editha bayensis*	Serpentine grassland	T	California
Butterfly, Oregon silverspot	*Speyeria zerene hippolyta*	Coastal salt spray meadows, stabilized dunes, montane meadows	T	California
Butterweed, Layne's	*Senecio layneae*	Chaparral communities primarily on gabbro-derived soils	T	California
Ceanothus, Vail Lake	*Ceanothus ophiochilus*	Dry ridgetops, chaparral-covered slopes with phosphorous deficient soils	T	California
Clarkia, Springville	*Clarkia springvillensis*	Open sites, including roadbanks, in blue oak woodland communities	T	California
Crownbeard, big-leaved	*Verbesina dissita*	Rugged coastal hillsides and canyons in dense southern maritime chaparral communities	T	California
Cypress, Gowen	*Cupressus goveniana ssp. goveniana*	Coastal Redwood forests	T	California
Daisy, Parish's	*Erigeron parishii*	Limestone or dolomite on dry rocky slopes and outwash plains	T	California
Dudleya, Conejo	*Dudleya abramsii ssp. parva*	Rock outcrops and soils derived from Miocene Conejo volcanics in grassland and scrubs	T	California
Dudleya, marcescent	*Dudleya cymosa ssp. marcescens*	Lower reaches of sheer volcanic rock surfaces and canyon walls adjacent to perennial streams	T	California
Dudleya, Santa Cruz Island	*Dudleya nesiotica*	Rocky clay soils derived from Quaternary alluvium	T	California

T - Threatened
E - Endangered

6.5 ENDANGERED AND THREATENED SPECIES BY STATE, CONTINUED

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Dudleya, Verity's	*Dudleya verityi*	North-facing volcanic outcrops	T	California
Dudleyea, Santa Monica Mountains	*Dudleya cymosa ssp. ovatifolia*	Shaded rock slopes, chaparral, Santa Monica Mountains	T	California
Dwarf-flax, Marin	*Hesperolinon congestum*	Grasslands and chaparral on serpentine soils	T	California
Evening-primrose, San Benito	*Camissonia benitensis*	Stream terraces whose soils are derived from serpentine rock	T	California
Fairy shrimp, vernal pool	*Branchinecta lynchi*	Ephemeral water of swales and vernal pools	T	California
Frog, California red-legged subspecies range clarified	*Rana draytonii*	Coastal drainages in central California and scattered streams in the Sierra Nevada	T	California
Gnatcatcher, coastal California	*Polioptila californica californica*	Deserts and arid country; dry washes in the low desert	T	California
Grass, Colusa	*Neostapfia colusana*	Vernal pools	T	California
Gumplant, Ash Meadows	*Grindelia fraxino-pratensis*	Saltgrass meadows along streams and pools	T	California
Howellia, water	*Howellia aquatilis*	Shallow water and the edges of deep ponds	T	California
Liveforever, Laguna Beach	*Dudleya stolonifera*	North-facing, sandstone or conglomerate cliffes in coastal sage	T	California
Lizard, Coachella Valley fringe-toed	*Uma inornata*	Sparsely vegetated windblown sand dunes and sandy flats	T	California
Lizard, Island night	*Xantusia riversiana*	Grassland, chaparral, and oak savannah, clumps of cactus, rocky streambeds, cliffs	T	California
Lynx, Canada (Contiguous U.S. DPS)	*Lynx canadensis*	Mature forests with dense undergrowth	T	California
Manzanita, Ione	*Arctostaphylos myrtifolia*	Acidic sandy soil on hard pan	T	California

T - Threatened
E - Endangered

6.5 ENDANGERED AND THREATENED SPECIES BY STATE, CONTINUED

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Manzanita, Morro	*Arctostaphylos morroensis*	Sand dunes	T	California
Manzanita, pallid	*Arctostaphylos pallida*	Maritime chaparral communities	T	California
Mariposa lily, Tiburon	*Calochortus tiburonensis*	Serpentine grassland; open, rocky slopes	T	California
Milk-vetch, Fish Slough	*Astragalus lentiginosus var. piscinensis*	Loamy fine sand of alkali flats and mounds	T	California
Milk-vetch, Peirson's	*Astragalus magdalenae var. peirsonii*	Desert dunes	T	California
Moth, Kern primrose sphinx	*Euproserpinus euterpe*	Open weedy areas in desert scrub	T	California
Murrelet, marbled CA, OR, WA	*Brachyramphus marmoratus*	Coastal, old-growth forests of the Pacific Northwest	T	California
Navarretia, spreading	*Navarretia fossalis*	Freshwater-marsh, vernal pools	T	California
Orcutt grass, San Joaquin	*Orcuttia inaequalis*	Vernal pools	T	California
Orcutt grass, slender	*Orcuttia tenuis*	Valley grassland and blue oak woodland	T	California
Otter, southern sea except where EXPN	*Enhydra lutris nereis*	A narrow band along the coast	T	California
Owl, northern spotted	*Strix occidentalis caurina*	Forest, woodlands	T	California
Owl's-clover, fleshy	*Castilleja campestris ssp. succulenta*	Vernal pools along the rolling lower foothills and valleys along the eastern San Joaquin Valley	T	California
Paintbrush, ash-grey	*Castilleja cinerea*	Pebble plains, dense clay soils, usually covered with a cobble pavement	T	California
Plover, western snowy Pacific coast pop.	*Charadrius alexandrinus nivosus*	Coastal wetlands and coastal dune	T	California

T - Threatened
E - Endangered

6.5 ENDANGERED AND THREATENED SPECIES BY STATE, CONTINUED

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Rush-rose, island	*Helianthemum greenei*	Dry, open, rocky areas, mostly in chaparral vegetation	T	California
Salamander, California tiger U.S.A. (Central CA DPS)	*Ambystoma californiense*	Subterranean retreats near ponds in grasslands and open woodlands	T	California
Salmon, chinook CA Central Valley spring-run	*Oncorhynchus (=Salmo) tshawytscha*	Mainly oceanic, gravel riffles in main streams	T	California
Salmon, chinook CA coastal	*Oncorhynchus (=Salmo) tshawytscha*	Mainly oceanic, gravel riffles in main streams	T	California
Salmon, coho OR, CA pop.	*Oncorhynchus (=Salmo) kisutch*	Inshore waters at mid-depths or near surface; spawns in coastal streams, sometimes far inland	T	California
Sandwort, Bear Valley	*Arenaria ursina*	Pebble plains, dense clay soils	T	California
Sea turtle, green except where endangered	*Chelonia mydas*	Coasts, open sea	T	California
Sea turtle, loggerhead	*Caretta caretta*	Estuaries, coastal streams and salt marshes	T	California
Sea turtle, olive ridley except where endangered	*Lepidochelys olivacea*	Tropical open water, mainland shores and beaches	T	California
Seal, Guadalupe fur	*Arctocephalus townsendi*	Island shores with solid rock and large lava blocks	T	California
Sea-lion, Steller eastern pop.	*Eumetopias jubatus*	Coastal waters near shore and over the continental slope	T	California
Smelt, delta	*Hypomesus transpacificus*	Open waters of bays, tidal rivers, channels, sloughs	T	California
Snake, giant garter	*Thamnophis gigas*	Streams and sloughs, usually with mud bottom	T	California
Sparrow, San Clemente sage	*Amphispiza belli clementeae*	Sagebrush, chaparral, dry foothills	T	California
	Chorizanthe			

Spineflower, Monterey	*pungens var. pungens*	Coastal plain of the Salinas Valley	T	California

T - Threatened
E - Endangered

6.5 ENDANGERED AND THREATENED SPECIES BY STATE, CONTINUED

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Spurge, Hoover's	*Chamaesyce hooveri*	Large, deep vernal pools among the rolling hills	T	California
Steelhead central CA coast	*Oncorhynchus (=Salmo) mykiss*	Small headwater streams, large rivers, lakes, or reservoirs	T	California
Steelhead Central Valley CA	*Oncorhynchus (=Salmo) mykiss*	Small headwater streams, large rivers, lakes, or reservoirs	T	California
Steelhead northern CA	*Oncorhynchus (=Salmo) mykiss*	Small headwater streams, large rivers, lakes, or reservoirs	T	California
Steelhead south central CA coast	*Oncorhynchus (=Salmo) mykiss*	Small headwater streams, large rivers, lakes, or reservoirs	T	California
Sturgeon, North American green U.S.A. (CA) Southern Distinct Population Segment	*Acipenser medirostris*	Freshwater and Saltwater	T	California
Sucker, Santa Ana 3 CA river basins	*Catostomus santaanae*	Pools and runs of small to medium-sized, shallow streams	T	California
Sunburst, San Joaquin adobe	*Pseudobahia peirsonii*	Non-native grasslands; grassland-blue oak woodland community ecotones	T	California
Tarplant, Otay	*Deinandra (=Hemizonia) conjugens*	Clay soils in coastal sage scrub and grassland	T	California
Tarplant, Santa Cruz	*Holocarpha macradenia*	Coastal prairies and grasslands, often with clay or sandy-clay soils	T	California
	Acanthomintha	Heavy clay soils in coastal sage scrub,		

Thornmint, San Diego	*ilicifolia*	grasslands, and chapparral	T	California
Tortoise, desert U.S.A., except in Sonoran Desert	*Gopherus agassizii*	Desert, shrubland/chaparral	T	California
Towhee, Inyo California	*Pipilo crissalis eremophilus*	Shady underbrush, open woods, pinyon-juniper woodlands, and suburban gardens	T	California
Trout, Lahontan cutthroat	*Oncorhynchus clarki henshawi*	Inshore marine and estuarine waters; lakes; coastal, inland, and alpine streams	T	California
Trout, Little Kern golden	*Oncorhynchus aguabonita whitei*	Clear cool streams and lakes above 6,600'	T	California

T - Threatened
E - Endangered

6.5 ENDANGERED AND THREATENED SPECIES BY STATE, CONTINUED

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Trout, Paiute cutthroat	*Oncorhynchus clarki seleniris*	Inshore marine and estuarine waters; lakes; coastal, inland, and alpine streams	T	California
Vervain, Red Hills	*Verbena californica*	Along intermittent and perennial streams with serpentine substrates	T	California
Whipsnake (=striped racer), Alameda	*Masticophis lateralis euryxanthus*	Chaparral, scrubland, open woodlands, rocky hillsides, mostly in the foothills	T	California
Wild-buckwheat, southern mountain	*Eriogonum kennedyi var. austromontanum*	Big Bear and Holcomb Valleys, San Bernardino Mountains	T	California
Kangaroo Rat, Morro Bay	*Dipodomys heemanni morroensis*	Sandy to rocky soils within low, southern maritime chapparral communities	E	California

T - Threatened
E - Endangered

6.6 VULNERABILITY ANALYSIS (DETAILED)

VULNERABILITY ANALYSIS (DETAILED)
Water Intakes:
Schools:
Medical Facilities:

6.6 VULNERABILITY ANALYSIS (DETAILED), CONTINUED

VULNERABILITY ANALYSIS (DETAILED)
Residential Areas:
Businesses:
Much of San Francisco Bay is industrialized.
Wetlands or Other Sensitive Environments:
Much of the bay is industrialized; however, natural mudflats, salt flats, channelized stormwater runoff areas, and rocky shorelines also occur. Additional sensitive environmental protection response priorities for the first 24 hours have been identified by the terminal and listed in SECTION 6.11 of the FRP. These priorities are for guidance purposes only to aid with initial planning and identification of potential risk priorities. The listed priorities should be adjusted as identified by Planning Section and Environmental Unit.

6.6 VULNERABILITY ANALYSIS (DETAILED), CONTINUED

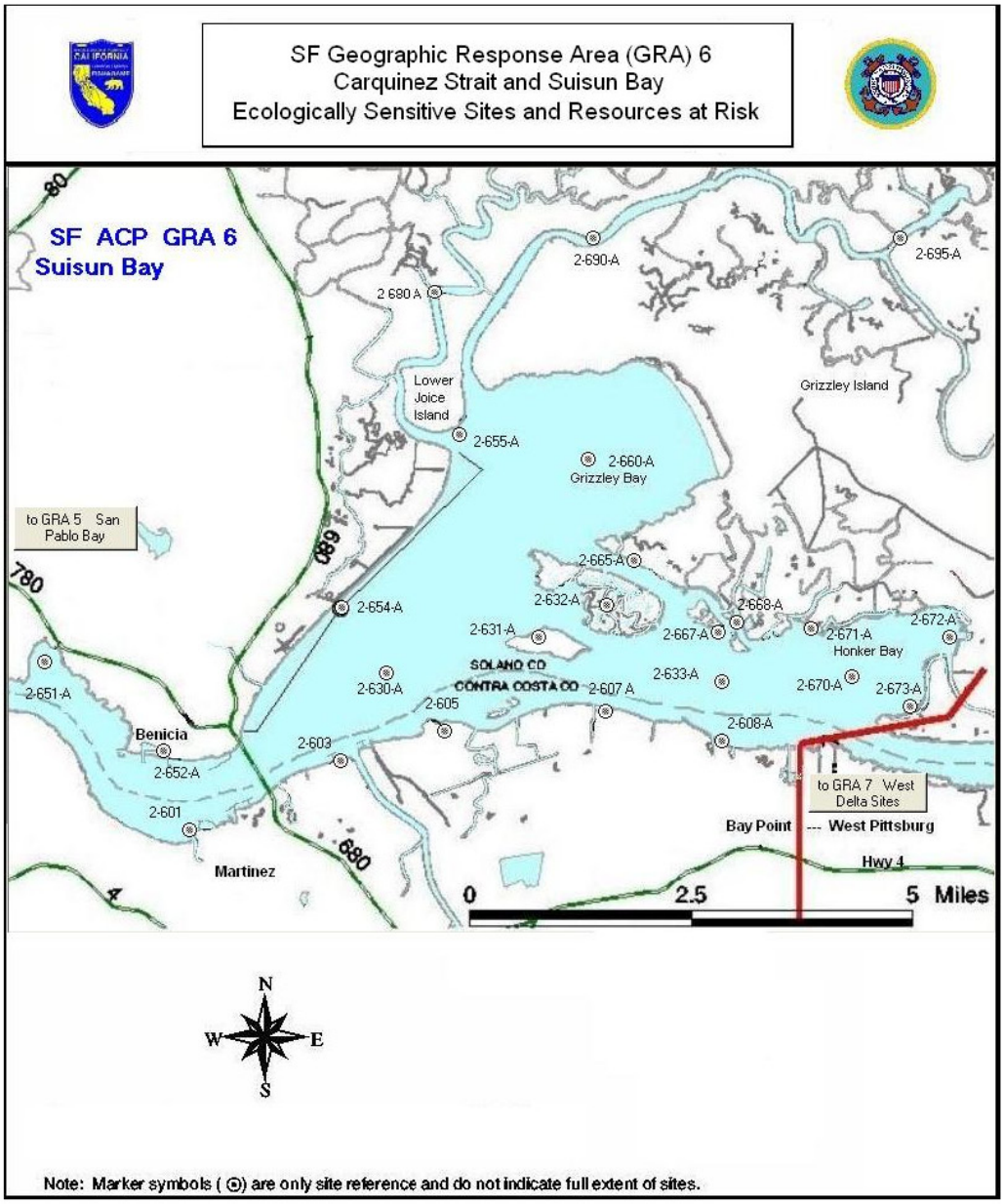
VULNERABILITY ANALYSIS (DETAILED)
Fish and Wildlife:
Much of the "wetland" areas support sensitive biological resources and the shallow, protected nature of the bay provides spawning and nursery habitats for important commercial and sportfish species. Sensitive bird species utilize the open water and wetland habitats for over wintering, resting, and nesting activities and the bay is utilized by the winter run salmon as it migrates up the Sacramento River. In-bay fisheries include the herring roe Shorebased operations. Several

rare, threatened and/or endangered birds, mammals, and plants exist along the shorelines and/or utilize the water areas during various seasons.
Lakes and Streams:
San Francisco Bay, Sacramento River
Endangered Flora and Fauna:
Refer to SECTION 6.5 of the FRP or SECTION 6.0 of the ERAP for a list of endangered and threatened species by state.

6.6 VULNERABILITY ANALYSIS (DETAILED), CONTINUED

VULNERABILITY ANALYSIS (DETAILED)
Recreational Areas:
Recreational areas in the Central San Francisco Bay area that may require special protection in the event of an oil spill follow the guidance provided in the San Francisco Bay ACP sections 4600, 5400, and 9600.
Transportation Routes (Air, Water, Land):
Several ports are present throughout San Francisco Bay; these ports are important economic centers for import and export of material used throughout the world.
Utilities:
Other Applicable Areas:
Economically important areas in the Central San Francisco Bay area that may require special protection in the event of an oil spill follow the guidance provided in the San Francisco Bay ACP sections 4600, 5400, and 9600.

6.7 TACTICAL OVERVIEW MAP



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6.8 TACTICAL PLAN INDEX

SITE #	SITE NAME

6.9 TACTICAL PLANS

No Tactical Plan Uploaded.

6.10 SENSITIVITY MAPS

Click here for Data Sheets

6.10 SENSITIVITY MAPS

Click here for 2-601-A

6.10 SENSITIVITY MAPS

Click here for 2-603-A

6.10 SENSITIVITY MAPS

Click here for 2-605-A

6.10 SENSITIVITY MAPS

Click here for 2-630-B/C

6.11 TRAJECTORY MAPS

Spill Time Contour Map

6.11 TRAJECTORY MAPS

Probability of Surface Oiling - Summer and Winter

6.11 TRAJECTORY MAPS

Weathering and Fates Graph

6.11 TRAJECTORY MAPS

Sensitive Areas at Risk Summary - Summer and Winter

SECTION 7 Last Revised: March 6, 2012

SUSTAINED RESPONSE ACTIONS

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7.1 Response Resources

7.1.1 Facility Response Equipment

Figure 7.1-1 - Regional Company and Response Contractor's Equipment List / Response Time

7.1.2 Response Equipment Inspection and Maintenance

7.1.3 Contracts, Contractor Equipment, and Labor

7.1.4 Command Post

Figure 7.1-2 - Command Post Checklist

7.1.5 Staging Area

7.1.6 Communications Plan

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Figure 7.1-4 - FCC Assigned Communications Frequencies

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Figure 7.2-2 - Fact Sheet Template

Figure 7.2-3 - Media Statement Template

Figure 7.2-4 - Communications Log

Figure 7.2-5 - Guidelines & Tips

SECTION 7
SUSTAINED RESPONSE ACTIONS, CONTINUED

7.3 Site Security Measures

Figure 7.3-1 - Site Security Checklist

Figure 7.3-2 - Facility Security

7.4 Waste Management

Figure 7.4-1 - Waste Management Flow Chart

Figure 7.4-2 - General Waste Containment and Disposal Checklist

7.4.1 Waste Storage

Figure 7.4-3 - Temporary Storage Methods

7.4.2 Waste Transfer

7.4.3 Waste Disposal

Figure 7.4-4 - Facility-Specific Disposal Locations

7.1 RESPONSE RESOURCES

7.1.1 Facility Response Equipment

BOOM					
TYPE/MODEL/YEAR	QUANTITY	SIZE	CONTAINMENT AREA (sq ft)	STORAGE LOCATION	
Containment Boom	1,400 feet	20 in.		Dock	
Absorbent pads / booms	2 Boxes	15"x19"	4,750	Emergency Response Trailers	
SORBENTS					
TYPE/YEAR	QUANTITY	ABSORPTION CAPACITY (gal)	STORAGE LOCATION	OPERATIONAL STATUS	
Sorbent Pads	5		Emergency Response Trailers	Operational	
Sorbent Sweep	3	100 ft. pak	Emergency Response Trailers	Operational	
HAND TOOLS					
TYPE/YEAR	QUANTITY	STORAGE LOCATION	OPERATIONAL STATUS		
Rakes	5	Emergency Response Trailers	Operational		
Shovels	5	Emergency Response Trailers	Operational		
Pitchforks	5	Emergency Response Trailers	Operational		
Brooms	5	Emergency Response Trailers	Operational		
Wheel barrows	2	Emergency Response Trailers	Operational		
FIRE FIGHTING AND PERSONNEL PROTECTIVE EQUIPMENT					
TYPE/YEAR	QUANTITY	STORAGE LOCATION	OPERATIONAL STATUS		
150 lb Capacity Extinguisher	1	Next to the Control Room	Operational		
50 lb Capacity Extinguishers	2	Next to the Control Room	Operational		
One Portable ANSUL	1	Next to the	Operational		

1501b. Wheeled Extinguisher For Types B&C Fires		Technician Shelter			
Portable Sentry 20 Lb. Purple -K- Tri-Class Extinguishers	3	On the Wharf, one at each end of the Main Platform mounted on the Inside Handrail and one inside the Wharf Fire Pump House	Operational		
Permanently Mounted Fire Monitors	4	Monitors around the Loading Arm Area are pointed at locations high on the Loading Arm Supports	Operational		
OTHER					
TYPE/YEAR	QUANTITY	STORAGE LOCATION	OPERATIONAL STATUS		
Stretcher	1	Terminal Shelter	Operational		
2000 GPM Diesel Engine-Driven Pump.	1	Firewater Pump House on the Trestle, 300 feet from the Wharf	Operational		
Oil Snare	3	Emergency Response Trailers	Operational		

***Note:** Response equipment is tested and deployed as described in **FIGURE A.1-2** and **FIGURE A.1-4**.

7.1 RESPONSE RESOURCES

7.1.1 Facility Response Equipment

OTHER					
TYPE/YEAR	QUANTITY	STORAGE LOCATION	OPERATIONAL STATUS		
Open Top Drums	2	Emergency Response Trailers	Operational		
Flashlights	5	Emergency	Operational		

		Response Trailers			
Polypropylene Rope (100 ft)	1	Emergency Response Trailers	Operational		
Rubber Gloves (12/pak)	1	Emergency Response Trailers	Operational		
Large Trash Bags	1 Box	Emergency Response Trailers	Operational		
Visqueen (10 ft x 20 ft)	2	Emergency Response Trailers	Operational		
Rain suits sets	6	Emergency Response Trailers	Operational		
Rubber Boots	5	Emergency Response Trailers	Operational		
Safety Glasses	5	Emergency Response Trailers	Operational		

***Note:** Response equipment is tested and deployed as described in **FIGURE A.1-2** and **FIGURE A.1-4**.

FIGURE 7.1-1 - REGIONAL COMPANY AND RESPONSE CONTRACTOR'S EQUIPMENT LIST / RESPONSE TIME

* USCG Classified OSRO for facility

COMPANY/CONTRACTOR	EQUIPMENT	RESPONSE TIME
Martinez Terminal Martinez, CA		0 hours
Worley Catastrophe Response Hammond, LA	None - Claims Company	0 hours
*NRC Environmental Service Selby, CA	Full Response Capabilities per U.S. Coast Guard Classification, including aerial tracking and dispersants	1 hours
*NRC Environmental Service Martinez, CA	Full Response Capabilities per U.S. Coast Guard Classification, including aerial tracking and dispersants	1 hours

*NRC Environmental Service Richmond, CA	Full Response Capabilities per U.S. Coast Guard Classification, including aerial tracking and dispersants	1 hours
*NRC Environmental Service San Francisco, CA	Full Response Capabilities per U.S. Coast Guard Classification, including aerial tracking and dispersants	1 hours
*NRC Environmental Service Pittsburgh, CA	Full Response Capabilities per U.S. Coast Guard Classification, including aerial tracking and dispersants	1 hours
*So. Cal Ship Services Benicia, CA		1 hours
*NRC Environmental Service Sacramento, CA	Full Response Capabilities per U.S. Coast Guard Classification, including aerial tracking and dispersants	1 hours
*NRC Environmental Service Richmond, CA	Full Response Capabilities per U.S. Coast Guard Classification, including aerial tracking and dispersants Full Response Capability	1 hours
O'Briens Response Management Brea, CA	Spill management company - no response equipment	2 hours
*NRC Environmental Service Alameda, CA	Full Response Capability	2 hours
*NRC Environmental Service Stockton, CA	Full Response Capabilities per U.S. Coast Guard Classification, including aerial tracking and dispersants	2.2 hours
*NRC Environmental Service Eureka, CA	Full Response Capabilities per U.S. Coast Guard Classification, including aerial tracking and dispersants	7.8 hours
*NRC Environmental Service Pt. Hueneme, CA	Full Response Capabilities per U.S. Coast Guard Classification, including aerial tracking and dispersants	11 hours
*NRC Environmental Service Carson, CA	Full Response Capabilities per U.S. Coast Guard Classification, including aerial tracking and dispersants	11.2 hours
*NRC Environmental Service Long Beach, CA	Full Response Capabilities per U.S. Coast Guard Classification, including aerial tracking and dispersants	11.4 hours
C-K Associates, LLC		12 hours

Baton Rouge, LA		
Robert J. Myers and Associates Tomball, TX	None	12 hours

* Note: Response times are based on 35 mph and take into account traffic, weather, and other environmental conditions that could restrict response efforts.

7.1.2 Response Equipment Inspection and Maintenance

Company response equipment is tested and inspected as noted below. The Manager of Operations is responsible for ensuring that the following response equipment and testing procedures are implemented. These consist of:

Containment boom During semiannual boom deployment exercises, boom will be inspected for signs of structural deficiencies. If tears in fabric or rotting is observed, boom will be repaired or replaced. In addition, end connectors will be inspected for evidence of corrosion. If severe corrosion is detected, equipment will be repaired or replaced.

Miscellaneous equipment Other response equipment identified in this Plan will be inventoried and tested on a semiannual basis to ensure that the stated quantities are in inventory and in proper working order. The equipment inspection and deployment exercises are recorded and maintained at the facility and retained for a period of five years. Exercise requirements are listed in **APPENDIX A.1**. A Spill / Exercise Documentation Form is in **FIGURE A.1-3**. **FIGURE A.1-4** provides a log for response equipment testing and deployment drills.

7.1.3 Contractors, Contractor Equipment, and Labor

- The Company's primary response contractors' names and phone numbers, as well as other companies who can provide spill response services are provided in **FIGURE 3.1-6**.
- The Company has ensured by contract the availability of private personnel and equipment necessary to respond, to the maximum extent practicable, to the worst case discharge or the substantial threat of such discharge.
- Contractors without USCG classification deploy and inspect boom to meet PREP guidelines. Company requires that these exercises are completed annually.
- **APPENDIX B** contains evidence of contracts for the Company's primary response contractors and equipment lists of contractors without USCG classification.
- Any equipment and personnel identified in the plan must be available for response. Any necessary maintenance for the equipment, vacation periods for response personnel or other eventuality must be taken into account in relying upon these resources.
- The equipment owner must notify the Administrator when major equipment is removed

from service for a period of 24 hours or more for maintenance or repair. Major equipment is that which, if removed, would affect timely implementation of the plan. Notification must be made prior to removing equipment for regularly scheduled maintenance, and within 24 hours of removing equipment for unscheduled repairs.

- The equipment owner must demonstrate that backup equipment is available during the time that the primary response equipment is out of service. Backup equipment may be provided from the owner's own inventory, or may be made available from another responder.
- A plan shall remain valid during the time that equipment has been removed from service for maintenance or repair if the Administrator has approved such movement.

7.1.4 Command Post

In the event of a major spill or other emergency, both a Company off-site EMT Command Center and a Command Post (located close to but at a safe distance back from the incident scene) may be established. For a minor emergency, only a Command Post may be established. Refer to **FIGURE 7.1-2** for guidelines in establishing a Command Post.

FIGURE 7.1-2 - COMMAND POST CHECKLIST

COMMAND POST CHECKLIST	INITIALS	DATE/TIME STARTED	DATE/TIME COMPLETED
Ensure adequate space for size of staff.			
Ensure 24-hour accessibility.			
Ensure personal hygiene facilities.			
Ensure suitability of existing communications resources (phone/fax/radio).			
Ensure suitability of private conference and briefing rooms.			
Identify Command Post security requirements, safe location.			
Notify other parties of Command Post location; provide maps/driving directions.			
Determine staging areas and incident base locations.			
Identify future need to move, upgrade facilities.			

Command Posts for this facility are located at: Terminal Office or the Emergency Response Trailer located next to the office building. If more space is required, the command center could be located at the Hilton Hotel in Concord, CA.

7.1.5 Staging Area

According to the incident type and magnitude, numerous staging areas may be required to support containment and cleanup operations. The staging area should be located in the cold zone inside the delineated isolation perimeter.

In selecting a suitable staging area, the following criteria should be considered:

- Accessibility to impacted areas;
- Proximity to secure parking, airports, docks, pier, or boat launches; and
- Accessibility to large trucks and trailers which may be used to transfer equipment.

In addition, the staging area should:

- Be in a large open area in order to provide storage for equipment and not interfere with equipment loading and offloading operations.
- Have a dock/pier on-site for deploying equipment.
- Have moorage available for vessels to aid the loading/offloading of personnel.

Staging areas for this facility are located at: Terminal and OSRO facilities, as appropriate. Secondary staging areas may be established closer to working areas.

7.1.6 Communications Plan

Company owned communications equipment and quantities commonly used to address response communications are listed below:

Primary communication will be through the terminal office and cell phones. If required, a supplemental communications center will be established at the PPT Command Center or other designated location.

Radio, cellular and conventional telephone communications will be provided as necessary to support the PPT response. Two-way voice communication between the center and the scene of emergency response activities or emergency will be available at all times.

These communications resources are in addition to those used by Federal, State, and local agencies and emergency services.

PPT can provide additional communications support, such as telephones for agency personnel working in the command center and for the press, if necessary.

Additional communications equipment (satellite phones, VHF portable radios with chargers and accessories, command post with UHF, VHF, single sideband, marine, aeronautical, telephone, and hard-line capability) may be provided by the Company or leased from a communications company in the area. Communications with government agencies, state police,

and contractors can be conducted on portable radios. Refer to **FIGURE 7.1-3** for guidelines to set up communications.

The Communications Plan, written at the time of an incident, will identify telephone numbers and radio frequencies used by responders. This may also involve activation of multiple types of communications equipment and coordination among multiple responding agencies and contractors.

FIGURE 7.1-3 - COMMUNICATIONS CHECKLIST

COMMUNICATIONS CHECKLIST	INITIALS	DATE/TIME STARTED	DATE/TIME COMPLETED
Develop a Communications Plan.			
Ensure adequate phone lines per staff element - contact local provider.			
Ensure adequate fax lines - contact local provider.			
Evaluate need for internet access.			
Ensure recharging stations for cellular phones.			
VHF radio communications: • Establish frequencies • Assign call signs • Distribute radios • Establish communications schedule			
Ensure recharging stations for VHF radios.			
Determine need for VHF repeaters.			
Ensure copy machine available.			
Ensure communications resource accountability.			
Ensure responders have capability to communicate with aircraft.			

Note: Actions on this checklist may not be applicable or may be continuous activities.

FIGURE 7.1-4 - FCC ASSIGNED COMMUNICATION FREQUENCIES

The primary and secondary frequencies are assigned by the Federal Communications Commission (FCC) nationwide for oil spill response use and are as follows:

FCC ASSIGNED COMMUNICATION FREQUENCIES			
Primary Communications - Operations			
UHF	Channel 1	Transmit	459.000 MHz (Repeater)
		Receive	454.000 MHz
	Channel 2	Trans/Rec	

Secondary Communications - Logistics			
VHF	Channel 1	Transmit	158.445 MHz
		Receive	159.480 MHz
	Channel 2	Trans/Rec	159.480 MHz

7.2 PUBLIC AFFAIRS

This section contains guidelines for dealing with the media during an emergency. The Incident Commander will play a key role in providing the initial public assessment and taking the first steps to provide the Company's public response. Information in this section includes:

- Communications For District and Pipeline Managers (**SECTION 7.2.1**)
- Communications For Incident Commanders (**SECTION 7.2.2**)
- You Do Have Rights! (**FIGURE 7.2-1**)
- Fact Sheet Template (**FIGURE 7.2-2**)
- Media Statement Template (**FIGURE 7.2-3**)
- Communications Log (**FIGURE 7.2-4**)
- Guidelines & Tips (**FIGURE 7.2-5**)

7.2.1 Communications For District and Pipeline Managers

Preparing to Communicate With the Media

When to Prepare

Using Good Judgment

Media attention can be expected for many different reasons, but is most likely if the incident is affecting a highly populated area, an environmentally sensitive locale or a natural resource such as a water supply, etc.

Use your good judgment to determine whether an incident is of sufficient significance to justify preparing for media communications. When in doubt, it is always best to be prepared.

Here are some guidelines that may be used to determine if an incident requires reporting to senior management or might attract attention from the media.

Accidental Releases

- >1,000 barrels
- Possibly impacting.
    - Populated areas
    - Environmentally or culturally sensitive areas

  - Drinking water sources
  - Waterways (rivers, lakes, coastal waters, wetlands, etc.)
- Any release that could cause significant impact to
  - Human health or the environment
  - Partnership's financial, operational or public relations efforts

Harm to Employees

- Any accident/situation involving the Company or contractor personnel and assets resulting in
  - Injuries or death
  - Significant damage to property

Threats or Sabotage

- A threatening situation involving Company personnel or assets, such as
  - Kidnapping
  - Terrorist threat
  - Bomb threat

Media Stories

- If the news media calls with questions about Company operations, safety issues, community relations concerns, etc.

What To Do First

Follow the Escalation Path

Typically, you should use the escalation path of your organizational structure to notify Houston of significant operating incidents. If media attention is likely, Roy Lamoreaux or Pat Diamond should also be notified immediately.

7.2.1 Communications For District and Pipeline Managers, Continued

Preparing to Communicate With the Media, Continued

Once engaged, Roy Lamoreaux or Pat Diamond will develop a fact sheet, a media statement, a press release (if necessary), and obtain management sign-off on these prepared materials. They will also take responsibility for responding directly to the news media.

Although it is best to engage Houston and its resources to manage any external communications, in the first moments or hours of a crisis, the task could fall to you.

For example, if news reporters arrive onsite and local officials are providing information on the incident, you may find it necessary to interact with the reporters as well. In that circumstance, you are the best one to make the initial media statement on behalf of the Company.

Required Documentation

Creating The Fact Sheet

The fact sheet should contain the following information if it is available and appropriate:

- Date/time of the incident
- Location of the incident
- Company personnel involved
  - Company personnel injuries
- Company assets involved
  - Company asset damage (estimate if necessary)
- Description of what happened and the timing if known
- Status of emergency response
  - Actions taken and planned
  - Resources mobilized
  - Authorities notified
- Mitigation required to return to normal operations
  - See **FIGURE 7.2-2** for a fact sheet template you can use.

After preparing the fact sheet, contact Roy Lamoreaux or Pat Diamond. If you are not able to notify Roy Lamoreaux or Pat Diamond, you should continue to prepare for initial communication with the news media.

Preparing a Media Statement

See **FIGURE 7.2-3** for a template and sample statements.

Statements should use brief, declarative statements based upon the verified facts contained in the fact sheet. A well-done fact sheet can be quickly reformatted into a statement. Avoid using acronyms or technical industry terms (i.e., refer to "gas" instead of "condensate"; "safety review" instead of "a failure analysis"; or "gasoline" instead of "refined product".

7.2.1 Communications For District and Pipeline Managers, Continued

Preparing to Communicate With the Media, Continued

Do not speculate on the cause of an incident. Extreme care should be taken to segregate what has been verified as fact from that which is assumed. Only verified facts should be shared publicly. Early opinions are often found to be incorrect.

Note: It is better to provide no information than it is to disclose misinformation.

The fact sheet and proposed media statement should be sent to Roy Lamoreaux or Pat Diamond for approval. Their contact information is shown here.

Roy Lamoreaux	**Patrick (Pat) Diamond**
Director, Investor Relations	Vice President
Ofc: 713-646-4222	Ofc: 713-646-4487
Cell: 832-858-4973	Cell: 281-630-9668
rilamoreaux@paalp.com	apdiamond@paalp.com

If for some reason you are unable to reach Roy or Pat or they are not available, review your statement with at least one other senior operations person.

Communicating the Initial Statement to the Media

The Interview

The media statement should be made by the most senior Company manager at the scene. Ideally the speaker will have received Company media training. The statement you develop can be distributed by email or read over the telephone. Most often, in such events, it will be necessary to share the information in a face-to-face interview.

You can read your statement or have it at hand as a reference document when you do the interview. Once you have made the initial statement, you will most certainly be asked questions. Use the same facts and information from the statement to answer the reporter's questions. Use different words or rephrasing to avoid sounding repetitive, but stick to the facts found in your statement, and do not be persuaded to answer questions for which there are no clear answers. Do not speculate.

Reporters will almost certainly continue to raise questions. Listen closely. When their questions either become repetitive, speculative or raise absurd scenarios, it is time to disengage.

Listen politely for a few minutes, but decline to answer questions that go beyond your scope of knowledge and the initial statement.

You can bring the interview to a close with statements such as: "Please excuse me now I must get back to work." Or "That is all the information I have at this time. I need to get back to work now." After a couple of questions, break off the conversation. This can be accomplished with a small hand motion, a raised open palm, and an assurance that "if there is more information, we will get back to you." Maintain a polite, professional air--as you turn and walk away.

See **FIGURE 7.2-5** for guidelines when speaking with the media.

7.2.1 Communications For District and Pipeline Managers, Continued

Preparing to Communicate With the Media, Continued

Non-Management Employees and the News Media

Under no circumstances should a non-management employee play the role of media spokesperson; even if acting as a first responder. If ever a non-management employee is approached by the media for a statement, the employee should respond: "I am a first responder to the current incident. For information you need to contact Roy Lamoreaux at 713-646-4222 or Pat Diamond at 713-646-4487." Alternatively, the non-management employee may refer the reporter to the proper Company spokesperson or the command center that is handling the operational response to the incident. The employee can close the interaction with a simple: "I am sure these people can help you;" "I have to go," or "It is important that I get back to my post. Thank you."

Recording, Monitoring and Reporting

Keep a record of all media interactions and communications. Capture the following information

as soon after an interaction with the media as possible:

- Name and position of the Company representative
- Date/Time/Location of the media interaction
- Name of the reporter
- Name of the media outlet s/he represents
- Type of contact (phone, in person, film, taped)
- Type of the statement given
- Best detail on questions asked and responses given
- Known documents, articles, programs, etc. that may contain information from this interaction or about the Company incident

See **FIGURE 7.2-4** for a media communications log you can use.

Ask the reporter about the timing of his/her report. Work with Houston if necessary to establish a monitoring system. The Company will want to have copies of any news reports that are published or aired.

Incidents of National Significance

Managing Media Communications Through a JIC

The Company has never experienced an incident of national significance. With conscientious, responsible operations and dedicated employees, we hope that we never will.

Should a major incident occur, the Company will send a team of our most capable and most experienced people to the scene. One person will be named the Company Incident Commander (IC). S/he will take charge of the response effort and oversee the external communications. The IC will work in a Unified Command Center/environment with local state and federal agencies who will also have oversight of external statements.

7.2.1 Communications For District and Pipeline Managers, Continued

Preparing to Communicate With the Media, Continued

Consider it a given that many national news organizations will arrive at the scene of such an event in 24 hours or less seeking answers: who, what, where, when, and WHY?

To manage the communications demands of such a situation, the Company will send to the scene a group of public information officers, PIOs, to assist the Incident Commander in managing our media relations. The PIOs will be the interface between the news media and the Unified Command and the Company. The PIOs will prep the ICs for news conferences, manage the news conference as needed, monitor the news media for news reports, prepare draft statements and news releases for IC review, draft likely Q&As for the IC in advance of news conferences, disseminate news releases and media advisories, assist in communications with

elected officials, make contact with organizations the Unified Command wants to reach out to, and keep the ICs informed of important media reports.

The PIOs will work from a Joint Information Center or JIC. The JIC will be located strategically so reporters can be close to events, but not inside the operational boundaries of the response and the actual Unified Command Center.

Government agencies, such as the Coast Guard, EPA, NOAA, state environmental and wildlife agencies, local emergency responders, or sheriff's office, send Incident Commanders to the scene. Frequently they bring with them a PIO to represent them inside the JIC. The Company PIO will interface with those PIOs to meet the needs of the Unified Command and the ICs.

Create and Maintain Credibility

The Words You Choose

The actual words and commentary you choose when communicating are very important in projecting your message. Being well informed is important, but consistently delivering clear and accurate information is critical. Accuracy equates with truth which builds trust and earns credibility.

Clarity

Confusion is a principal source of damaging, incorrect information. Clarity is an ally. As spokespeople, we should strive to bring clarity to any situation. To communicate your information clearly, follow these rules:

- Use simple words and short, declarative sentences.
- Make your key point(s) in 12 seconds or less. (Usually television reporters will use the first decent 12-second comment on tape.)
- Avoid jargon and acronyms.
- Be prepared to repeat statements you have already made. (Try rephrasing, but don't become annoyed or impatient.)

7.2.1 Communications For District and Pipeline Managers, Continued

Create and Maintain Credibility, Continued

Common Pitfalls

Avoid these common pitfalls:

- "No comment" or "I can neither confirm nor deny."
- Passive phrases such as,"It has been suggested that" or "It is believed that"
- Speculative answers such as, "It may be that..."
- Technical descriptions, legal jargon and acronyms that may not be easily understood by

a non-technical audience.

Answering Questions

The news media believe they have a right to information and see themselves as representatives of the public. Often they may appear to us as being demanding and rude. Answering their questions, particularly aggressive or challenging questions, demands discipline. Organize yourself and you can handle even the most challenging interrogator. Consider following this approach for answering questions:

- Listen carefully to each question that is asked. Take a moment or two to compose your thoughts before responding.
- In considering your answer to the question, ask yourself if this is a question that can be answered. (Is the answer contained in the statement?)
- If the answer can be drawn from the statement, answer it using that information. If not, you should probably avoid responding by saying "I don't know" or "that is unclear at this time." Or, "We will review that." "That will be addressed as we learn more."
- When you do answer questions, use one, two or three sentences to respond, then stop speaking.
- Remember, the best responses may be one or two words: "Yes"; "No"; "Maybe"; "We're not sure" are fine.
- When asked a tough question, restate or re-phrase the question in your own words to clarify what is being asked and to give yourself a few extra seconds to decide if you have the information needed to give a response. Feel free to rephrase the question aloud. This provides a few more seconds to assemble your one- two- or three-sentence answer.
- Be comfortable repeating yourself. Reporters often ask the same question using different words. Do not feel pressured to respond to questions for which you do not have solid answers.
- Don't repeat a negative phrase the questioner may have used. For example, "No, the Company is not a risk to the community because..."
- Avoid jargon and overly technical explanations.
- Most importantly, beware of using more than three sentences to answer a question. Any more will be too many.

7.2.1 Communications For District and Pipeline Managers, Continued

Create and Maintain Credibility, Continued

Your Speaking Voice

It is somewhat commonly reported that people fear public speaking over all else. Do not be concerned if your voice is not up to the task or if it should waver. Your normal speaking voice,

tinged perhaps with a little nervousness, will work just fine. Do not try to affect a deeper voice or a more commanding tone that may seem more appropriate to the situation. People do not expect you to sound or look like Charlton Heston or Oprah Winfrey.

Be yourself. People respect those who speak without affectation and convey a degree of earnestness and reality about the situation.

Non-Verbal Communications

Did I Say That?

Your body language, including posture, eye contact and your appearance can convey as much as your words. Your body language and voice should support your message, not undermine it.

Many of us are unaware of the things we may be doing with our bodies that are undermining our message. Worse yet, certain body language and/or affectations can convey feelings that are not there; frustration or impatience, boredom or irritability, etc. This can damage our credibility as a source for information.

Especially watch for excessive nervousness and poor eye contact. Speaking naturally is the best approach. Use a tone that is consistent with the situation or subject at hand. Here are some guidelines to help polish your delivery technique.

Delivery Technique - Do's

Do...

- Stand still if you are speaking into a stationary microphone.
- Modulate your volume, use pauses, emphasize key words.
- If you are comfortable and accustomed to using hand gestures, do so.
- Have good posture.
- Make eye contact. Look directly at the reporter asking the question. Ignore any cameras.
- Turn negative questions or comments by the reporter into your own positive key points.
- Wear your glasses if you're giving a television interview.
- Be prepared to patiently repeat yourself.
- Coordinate and collaborate with other credible sources.
- Speak clearly; speak frankly.
- Speak at your own pace; don't try to match the rapid-fire delivery of some reporters.

Create and Maintain Credibility, Continued

Delivery Technique - Don'ts

Don't...

- Put your hands in your pockets.
- Touch your face or your hair.
- Rock or sway back and forth.
- Cross your arms over your chest.
- Tap your foot.
- Play with change in your pocket.
- Put your hands on your hips.
- Look at the ceiling or floor.
- Look directly into the camera.
- Nod "yes" to comments you disagree with. To a viewing audience it will appear you are in agreement!
- Exaggerate facts with superlatives or try to "spin" the story.
- Get angry -- even if the reporter is hostile or argumentative.
- Speak "off the record" (Nothing is off the record in a news story).

How the Media Operates

News organizations reflect the interests of society. They seek to report stories that will capture the attention of readers and viewers. High profile community events with fires and environmental tragedies to report are big news in smaller communities and, if severe, might make national news stories.

Large media organizations can have sophisticated experts (engineers, doctors, lawyers, and accountants) on staff. But more often, reporters are not technical or scientific. You may find yourself speaking with a general assignment newspaper reporter, a television reporter or possibly a radio reporter who knows little to nothing about the subject. You should try to feel reporters out by speaking very simply and letting them expand the scope of the interview.

Reporters conduct interviews in different ways. Listen carefully to the questions and try to understand the reporter's questioning line. Ask them to clarify questions that are confusing or if the questions suggests a hidden agenda. Speak to them on a level that they will understand.

Reporters often come to interviews and news conferences with information from other sources, and they will ask you to react to that information. They may raise outlandish scenarios. Be patient. Do not be frustrated or angry. Without talking down to them, try to be an educator.

7.2.1 Communications For District and Pipeline Managers, Continued

How the Media Operates, Continued

The News Conference

In a Unified Command setting, there may be several people in the IC or Deputy IC role representing different organizations at the local, state or federal level. After an opening statement by the lead IC, each should be given an opportunity to speak if they so wish.

The responsible party is usually the lead and moderates the session. The PIO can also play a moderator role if so desired. It is always good to support the opening presentation with maps and graphics.

Depending upon the amount of information to be conveyed, the statement may be short. As little as two or three minutes may suffice. Use short, direct and declarative sentences. A question-and-answer period follows the statements.

The IC can direct questions to the appropriate person or answer the question directly.

The Face-To-Face Interview

Before the interview, anticipate the reporter's questions--including the ones you don't want to be asked--and prepare your answers. Practice delivering your answers with a communications professional or a colleague, if possible.

- Flag key points by starting with a phrase, such as, "The critical issue is..."
- If you don't know the answer to a question, say so. Offer to find the answer and report back later.
- Simplify situations and provide perspective so your messages are understandable.

Avoid lengthy, non-responses. Simply say: "We don't know yet"; "That is something we will learn in the days ahead"; or "It is going to take some time for us to know the answer and it would be inappropriate to speculate."

Wire Services (The AP, Dow Jones, Reuters, Bloomberg, et al.)

Wire service reports are often the first source for breaking news. Television, radio and newspaper editors review wire service reports, and decide whether to send their own reporters to the scene. Wire service reporting often influences how a story grows or dies. The wire service staff can place a story on a national wire that is read around the world in a matter of minutes. Wire service reporters will usually call for breaking news.

Newspapers/Newspaper Reporters

Newspaper reporters usually spend more time working and reporting the story. Large newspapers and even small regional newspapers today have websites and report news online first--before it hits the newspaper the next day. The print media covers the events of a controversy or crisis in greater depth. Print reporters produce more comprehensive coverage on a subject and they often influence how television, online reports, and others report the news.

Television/Television Reporters

They may come to an interview alone or with a crew that includes a cameraperson, sound/light technician, and even a producer. Your appearance in their news report may only last 5 to 10 seconds. That is time for two or three sentences!

7.2.2 Communications For Incident Commanders

We all know that despite diligent maintenance schedules, safety protocols and the proper handling of hazardous materials, accidents can still happen. The most spotless of industrial operating records and undoubtedly, the best run petroleum and gas pipeline operations can be disrupted by critical incidents - a fire or explosion, a catastrophic systems failure, an act of terrorism, a major release of contaminants into the environment.

In responding to critical incidents, it is widely accepted that the Incident Command System (ICS) represents "best practices" and, in fact, is the standard for emergency management across the country. The ICS provides for a dynamic organizational structure to effectively assess, plan, respond and resolve emergency situations. At the head of the ICS structure, managing the organization and focusing the response effort, is the Incident Commander (IC).

The response to a crisis situation may be regional or play out on a national stage. And, the scope of a critical situation and how it affects different jurisdictions and organizations will determine whether multiple Incident Commanders and/or Deputy Incident Commanders exist. The resulting leadership group is referred to as the Unified Command (UC). As the Company Incident Commander, you will represent us and likely lead the UC.

The responsibility to respond effectively takes the highest priority for our organization, and the Company is committed to fully supporting the Incident Command structure and the Incident Commander leading the response. While the IC's primary responsibility is the operational response, the IC is also responsible for oversight of pubic communications.

In the event of a major incident, the Incident Commander will supervise the release of information to the news media regarding the incident and explain:

- What has occurred
- What are the environmental and human implications of the incident
- What is the Company doing to address the situation

The Company is committed to fulfilling its public information responsibilities to provide accurate and timely details.

To support you and minimize the time requirements of this communications task, the Company will provide significant resources through the Houston office and dispatch professional communications support to the Command Center. This document outlines the Company communications strategies and tactics. It also provides important personal communication techniques and tips for communicating effectively under stressful conditions.

Overview of Strategies and Tactics for
Communicating with News Media in an ICS Setting

The role of the IC and the PIO

In the event of a significant incident, the Incident Commander will be supported in the development of statements and other external communications by the Houston office and the Public Information Officers sent to the scene. The PIO is a member of the Command Staff.

- The PIO reports to the Unified Command (US) and the Incident Commander(s).
- The PIO takes direction from the UC and the IC.
- The PIO determines, according to direction from the UC and the IC, limits on information release.
- The PIO will draft statements, media advisories, and news release documents for review and approval by the UC and the IC.

7.2.2 Communications For Incident Commanders, Continued

Overview of Strategies and Tactics for Communicating with News Media in an ICS Setting, Continued

- The IC(s) review the documents and makes comments or edits. The PIO will return for a second review if the changes are significant. If the IC is satisfied that the edits are minimal, the PIO may then be authorized to release the statement.

The PIO will share the draft with Houston for review and approval as needed. It is imperative that these documents be returned to the PIO in minutes not hours.

News Conferences

Significant events can attract significant numbers of reporters who stay for long hours or even days. When that happens, a daily news conference usually emerges as the most efficient way to communicate developments to the media and, in turn, the public.

Just as a Unified Command maximizes the effectiveness of the operations response, a Unified News conference adds to the credibility of the communications. It brings together key representatives from local, state, and federal agencies. It also minimizes the chances for factual errors, and demonstrates the cooperative effort that is at work.

If the need for a news conference is established by the Unified Command, the PIO will prepare the IC to play a lead role at the news conference. The PIO will:

- Draft statements for the Company IC
- Develop a list of likely questions and possible answers
- Propose key points for the Company IC

The IC and the PIO should jointly review statements and any Q&A documents in advance of the news conference.

As part of the news conference preparation, the PIO will provide an overview of how the story is being reported and what the public is hearing.

The Company PIO may also play a moderator role at the news conference, if the UC requests such support.

The Joint Information Center or JIC

The PIO will help establish a Joint Information Center that will include PIOs representing other agency responders who are represented in the Incident Command Center. The media will be directed to channel all their inquiries to the JIC. The PIOs in the JIC will manage the news

media requests for information. They will respond to those inquiries for which there are approved answers.

The PIO will note the questions for which they do not have responses. They will try to obtain the answers or wait until the next contact with the IC or the Deputy IC.

The PIO will also establish a media monitoring system to keep the UC informed of pertinent external events and news reports.

The PIO will keep records of any news media interactions, and act as the media relations officer during the event.

Overview of Strategies and Tactics for Communicating with News Media in an ICS Setting, Continued

Stand-up Interviews - One on One With the Media

A news conference is the most-likely scenario requiring the Incident Commander to address the media. However, it is not the only interaction the IC might have with the media.

For example, an enterprising reporter may ask questions or request an interview after a chance encounter with the IC.

Another example might be if the Company deemed it appropriate to have a special briefing for a local or national news outlet, such as a wire service like the Associated Press. In that situation, the IC would have a one-on-one with the reporter. The PIO may be present to assist, and if needed, the IC can bring specific subject matter experts.

The Crisis Seminar

The seminar accompanying this manual was crafted to build specific communication skills for achieving the Company objectives. After reviewing this manual and participating in the crisis communications session, we are confident you will be better prepared to act as a spokesperson in the event a crisis brings the media to the Company's doorstep.

In addition to building your crisis communications skills, the session suggests strategies for making you more comfortable and more effective in fulfilling the duties of other communications roles, such as:

- Working with local officials and regulators, speaking at hearings, etc.
- Leading open house events for public officials or groups
- Making presentations to staff
- Responding to inquiries from local residents

The PIO will note the questions that they do not have responses for. They will try to obtain the answers or wait until the next contact with the IC or the Deputy IC.

Communicating Well in a Crisis

Creating the Message

Draft Your Statement

Any news conference or interview should begin with a statement of the facts that are known at that time.

The PIO or the IC should draft a statement that provides the background that the media will want to know: What has happened? Are there any injuries? How much product has been lost into the environment? Has the leak been halted? What is the environmental impact? How long will the remediation take? Each situation is inevitably unique. The facts on the ground should guide both the operations response and the information being communicated.

The statement should be brief and clear. Basic facts are fine. If there is little to communicate, simply communicate the obvious, and indicate there will be more information as it becomes available.

Communicating Well in a Crisis, Continued

Develop Key Points/Messages

Before planned communications opportunities, take note of the points that you want to make. Organize one to three key points, and write each in the form of a single declarative sentence. Consider them and commit them to memory. You will find that natural opportunities arise to insert your prepared points when answering a question. An additional trick to developing strong key messages is to ask yourself the questions:

- What is the issue?
- Why is it important?
- What is your/the company's position?
- Why is this significant to the general public?
- What do you do and what are your goals?
- Can you relate a historical perspective?

Anticipate Possible Questions and Formulate Best Answers

In most crisis situations it is actually possible to anticipate almost all of the questions that will be asked in an interview or news conference. The questions may come in different forms, but often there are no more than five or six questioning lines — even when there are ten or twenty reporters. Questions will almost always lie close to "Who?" "What?" "When?" "Where?" "How?" and of course, "Why?" These are the familiar bases that will be touched.

"Why?" is often the most challenging question posed and the one that will require the most effort to address. Often the answer to "Why?" must be deferred until more information is available or investigations are completed.

Subject Matter Expertise

Knowing the subject matter is a key to being comfortable in any situation. In a crisis, we are often missing key facts, especially at the outset. Knowing which key elements are unknown and avoiding any speculation are extremely important components of effective crisis communications.

Create and Maintain Credibility

The Words You Choose

The actual words and commentary you choose when communicating are very important in projecting your message. Being well informed is important, but consistently delivering clear and accurate information is critical. Accuracy equates with truth which builds trust and earns credibility.

Clarity

Confusion is a principal source of damaging, incorrect information. Clarity is an ally. As spokespeople, we should strive to bring clarity to any situation. To communicate your information clearly, follow these rules:

- Use simple words and short, declarative sentences.
- Make your key point(s) in 12 seconds or less. (Usually television reporters will use the first decent 12-second comment on tape.)

Communicating Well in a Crisis, Continued

- Avoid jargon and acronyms.
- Be prepared to repeat statements you have already made. (Try rephrasing, but don't become annoyed or impatient.)

Common Pitfalls

- "No comment" or "I can neither confirm nor deny."
- Passive phrases such as, "It has been suggested that" or "It is believed that"
- Speculative answers such as, "It may be that..."
- Technical descriptions, legal jargon and acronyms that may not be easily understood by a non-technical audience.

Answering Questions

The news media believe they have a right to information and see themselves as representatives of the public. Often they may appear to us as being demanding and rude. Answering their questions, particularly aggressive or challenging questions, demands discipline. Organize yourself and you can handle even the most challenging interrogator. Consider following this approach for answering questions:

- Listen carefully to each question that is asked. Take a moment or two to compose your thoughts before responding.

- In considering your answer to the question, ask yourself if this is a question that can be answered. Would it be prudent to rephrase the questions so it makes more sense?

- If it is an issue the response team does not have answers for, do not try to answer. ("We don't know at this time." "We will review that." "That will be addressed as we learn more.")

- When you do answer questions, use one, two or three sentences to respond, then stop speaking. This applies even in a print interview.

- Remember, the best responses may be one or two words: "Yes"; "No"; "Maybe"; "We're not sure" are fine.

- When asked a tough question, restate or re-phrase the question in your own words to clarify what is being asked and to give yourself a few extra seconds to think through your response. Feel free to rephrase the question aloud. This provides a few more seconds to assemble your one- two- or three-sentence answer.

- Provide accurate information by using facts and perspective. Avoid speculation. Voicing professional opinion on certain subjects is ok, but speculating incorrectly on cause, impact, public reaction, etc., can be dangerous.

- State your key point(s) and repeat these at least once or twice during the interview. You may think you sound like a broken record, but the audience will remember a message you repeat.

- Don't repeat a negative phrase the questioner may have used. For example, "No, the Company is not a risk to the community because..."

- Avoid jargon and overly technical explanations. Remember that the reporter is much less knowledgeable on the subject than you are, and that he or she is trying to take notes.

Communicating Well in a Crisis, Continued

Your Speaking Voice

- It is somewhat commonly reported that people fear public speaking over all else. Do not be concerned if your voice is not up to the task or if it should waver. Your normal speaking voice, tinged perhaps with a little nervousness, will work just fine. Do not try to affect a deeper voice or a more commanding tone that may seem more appropriate to the situation. People do not expect you to sound or look like Charlton Heston or Oprah Winfrey.

- Be yourself. People respect those who speak without affectation and convey a degree of earnestness and reality about the situation.

Caution: Non-Verbal Communications Ahead!

When speaking in person, your body language and appearance convey almost as much as your language.

- Watch for poor eye contact or excessive nervousness. These can damage your credibility and undermine your message.

- Speak naturally in a tone that is consistent with the situation or subject at hand.

  - Beware of nodding "yes" to someone else's comments when you disagree with what he or she is saying. To a television audience, it may appear that you are agreeing with an opponent.
  - Beware of showing signs of stress, such as tapping your foot, jingling change in your pocket, or touching your face or hair.
- Beware of using more than three sentences to answer a question. You might need four sentences, but any more will be too many.

Delivery Technique Do's

Your body language and voice must support your key messages, not undermine them. Following these guidelines can help:

- Stand still if you are speaking into a stationary microphone.
- Speak calmly but emphatically.
- Modulate your volume, use pauses, emphasize key words.
- If you are comfortable using hand gestures do so.
- Sit or stand up straight.
- Eye contact: look directly at the reporter asking the question. Ignore any cameras.
- Turn negative questions or comments by the reporter into your own positive key points.

Communicating Well in a Crisis, Continued

- It is fine to wear your glasses if you're giving a television interview.
- Be patient and be prepared to repeat yourself.
- Coordinate and collaborate with other credible sources.
- Speak clearly; speak frankly.
- Speak at your own pace; don't try to match the rapid-fire delivery of some reporters.

Delivery Technique Don'ts

In public speaking, many of us are unaware that we may be falling victim to common pitfalls.

- Don't put your hands in your pockets.
- Don't rock or sway back and forth.

- Don't cross your arms over your chest.
- Don't look at the ceiling or floor.
- Don't look directly into the camera.
- Don't exaggerate the facts with superlatives or try to create your own "spin" on the story.
- Don't get angry – even if the reporter is hostile or argumentative.
- Don't speak "off the record." Nothing is off the record in a news story.

How the Media Operates

News organizations reflect the interests of society. They seek to report stories that will capture the attention of readers and viewers. High profile community events with fires and environmental tragedies to report are big news in smaller communities and, if severe, might make national news stories.

Large media organizations can have sophisticated experts (engineers, doctors, lawyers, and accountants) on staff. But more often, reporters are not technical or scientific. You may find yourself speaking with a general assignment newspaper reporter, a television reporter or possibly a radio reporter who knows little to nothing about the subject. You should try to feel reporters out by speaking very simply and letting them expand the scope of the interview.

Reporters conduct interviews in different ways. Listen carefully to the questions and try to understand the reporter's questioning line. Ask them to clarify questions that are confusing or if the questions suggests a hidden agenda. Speak to them on a level that they will understand.

Reporters often come to interviews and news conferences with information from other sources, and they will ask you to react to that information. They may raise outlandish scenarios. Be patient. Do not be frustrated or angry. Without talking down to them, try to be an educator.

How the Media Operates, Continued

<u>The News Conference</u>

In a Unified Command setting, there may be several people in the IC or Deputy IC role representing different organizations at the local, state or federal level. After an opening statement by the lead IC, each should be given an opportunity to speak if they so wish.

The responsible party is usually the lead and moderates the session. The PIO can also play a moderator role if so desired. It is always good to support the opening presentation with maps and graphics.

Depending upon the amount of information to be conveyed, the statement may be short. As little as two or three minutes may suffice. Use short, direct and declarative sentences. A question-and-answer period follows the statements.

The IC can direct questions to the appropriate person or answer the question directly.

The Face-To-Face Interview

Before the interview, anticipate the reporter's questions—including the ones you don't want to be asked—and prepare your answers. Practice delivering your answers with a communications professional or a colleague, if possible.

- Flag your key points by starting with a phrase, such as, "The critical issue is..."
- If you don't know the answer to a question, say so – and offer to pursue the answer and get back to the reporter later.
- Simplify situations and provide perspective so your messages are understandable.

Avoid lengthy, non-responses. Simply say: "We don't know yet. That is a question we are going to be studying in the days ahead"; "It is going to take some time for us to understand precisely what happened and it would be inappropriate to speculate further about causes."

Wire Services (The AP, Dow Jones, Reuters, Bloomberg, et. al.)

Wire service reports are often the first source for breaking news. Television, radio and newspaper editors review wire service reports, and decide whether to send their own reporters to the scene. Wire service reporting often influences how a story grows or dies. The wire service staff can place a story on a national wire that is read around the world in a matter of minutes. Wire service reporters will usually call for breaking news.

Newspapers/Newspaper Reporters

Newspaper reporters usually spend more time working and reporting the story Large newspapers and even small regional newspapers today have websites and report news online first—before it hits the newspaper the next day. The print media covers the events of a controversy or crisis in greater depth. Print reporters produce more comprehensive coverage on a subject and they often influence how television, online reports, and others report the news.

How the Media Operates, Continued

Television/Television Reporters

They may come to an interview alone or with a crew that includes a cameraperson, sound/light technician, and even a producer. Your appearance in their news report may only last 5 to 10 seconds. Time for two or three sentences!

You Do Have Rights!

Refer to **FIGURE 7.2-1** for more information.

Conclusion

We should never rush our communications, but it is imperative that we issue them in a timely manner lest others fill the void.

Our communications must be accurate if they are to be effective and not undermine our message.

Needless to say, those words are also closely scrutinized by government agencies, political leaders, as well as the public.

Even the best run companies may find themselves suddenly thrust into the public eye as a result of an operational incident, tragic accident or environmental disaster. Should the Company be thrust into such a situation, its external communications should reflect the Company commitment to professional behavior. We believe this manual will help us work together to achieve our goals.

FIGURE 7.2-1 - YOU DO HAVE RIGHTS!

To know whom is interviewing you. And what newspaper, magazine television or radio station they represent.

To be treated courteously. The questions can be tough, but the reporter should not be abusive to you.

To physical comfort. During the filming or taping of a TV interview, you have the right to an appropriate setting, chair, make-up, as well as the cooperation of the director and the floor manager.

To personal space. You shouldn't be physically threatened by the looming presence of hand-held lights or have microphones shoved in your face. This is not appropriate.

To make your own recording of the interview. Although you must tell the reporter you are doing so before the interview begins, this technique can have the effect of disarming the reporter slightly making them more careful about the interview process. Alternatively, you may request an unedited tape from the TV or radio station after the interview.

To be heard. You have the right to answer without the constant harassment of interruptions. However, it's your responsibility to be brief and to the point.

To get some points across in the interview. Don't just answer the reporter's questions; transition into your key points.

To have an accurate on-air introduction. This will put the interview in its proper perspective. If that does not happen, you have a responsibility to correct the introduction.

To be quoted accurately. Remember that you also have a responsibility to communicate clearly.

To have the basic intent and flavor of your answers come through in the final story.

To establish ground rules. You can establish ground rules even in a spontaneous interview.

To terminate the interview if your rights are being violated.

FIGURE 7.2-2 - FACT SHEET TEMPLATE

Date/Time:	**Location:**
What Happened:	
Injuries? YES / NO	
Describe:	
Potential Damage to Environment/Wildlife? YES / NO	
Describe:	
Company Personnel and Assets Involved:	
Status of Emergency Response	
Actions Taken:	
Actions Planned:	
Resources Mobilized:	
Authorities Notified:	
Impact to Operations:	
Mitigation Required for Return Normal Operations:	
Status of Media Inquiries (calls, onsite presence, etc.):	

FIGURE 7.2-3 - MEDIA STATEMENT TEMPLATE

At approximately, _____am/pm at _____ [facility/pipeline/injection station] _____ occurred. As a result __[an unspecified amount of x-type of product was released] _____. [There were no injuries] and [all appropriate authorities were notified]. [The Partnership response plans have been implemented and response efforts are underway.] [Once we have completed our initial response, we will investigate the cause of this incident and move to [clean up] or [repair] operations.] Though we will make reasonable efforts to return the facility to service as quickly as possible, we do not yet know how long it will take to complete the initial response and repair operations. That is all the information that I have at this time. If you will excuse me, I need to help with the response efforts.

Example Media Statements

Example 1. "At approximately 2 o'clock this afternoon, we experienced a [refined petroleum product, crude oil, etc.] leak at our [] facility. The appropriate authorities were notified, the initial response has been completed and clean up is underway. No employees were injured or exposed to product and all of the product was contained within the terminal facility. We are still in the response stage of this event and thus we are still investigating the cause of the release, and we do not have an estimate of the volume of product released nor an expected date of bringing this facility back into full service. That is all the information that I have at this time. If you will excuse me, I need to help with the response efforts."

Example 2. "At approximately 2:00 this afternoon, we experienced a [refined petroleum product, crude oil, etc.] release at our [X] dock facility. A portion of refined product was released into the water and a portion of the product was released onto a pump in the facility. The product subsequently caught fire, burning the pump facility and injuring two Partnership employees who have been taken to the hospital for evaluation. The appropriate agencies have been notified and the [X fire station] has responded and put out the fire. Two boom barges are on the way to the help contain and clean up the product on the water. We are still in the response stage of this event and thus we are still investigating the cause of the release. Further, we do not have an estimate of the volume of product released nor an expected date of bringing this facility back into full service. Our thoughts and prayers are with the families of the employees affected. We are making all diligent efforts to mitigate the impact(s) of this incident. That is all the information that I have at this time. If you will excuse me, I need to help with the response efforts."

FIGURE 7.2-4 - COMMUNICATIONS LOG

	Date/Time	Location and nature of interaction (in Person?), filmed or taped	Name & Contact Info of Media Representative	Statement given	Questions asked, and responses given	Resulting Media Story
1						
2						
3						
4						
5						
6						
7						
8						

9						

FIGURE 7.2-5 - GUIDELINES & TIPS

1. Ask for the name and company of the media representative. (They will generally ask for your name and title as well.)

2. Always be professional and polite. Anything you say or do can be quoted by the reporter, so don't forget that you are always "on the record." Do not say anything that you wouldn't want on the 5:00 news.

3. Project confidence, but not arrogance. The Partnership is committed to being a first-class asset operator and our communications should reflect confidence in our operations, regulatory compliance and environmental responsibility.

4. Speak in simple, widely-recognized terms - media representatives may not know the energy industry, related industry acronyms or jargon and may even mischaracterize events if not described in easily understood terms.

5. Speak slowly. Everyone tends to speak faster than normal when being interviewed.

6. Avoid usage of superlative adjectives or adverbs, such as "extremely," "very," "huge", "large" or "significant" when describing emergency occurrences.

7. Avoid aggrandizing events by characterizing them in inflammatory language. (i.e. state: "there was a fire at our facility" rather than "there was an explosion.")

8. If possible, do not wear company-logo apparel (hard-hat, etc.) while being filmed and be aware of your appearance.

9. If you don't know, say so. It's okay to tell a reporter you don't know the answer to a question. Don't speculate or guess about something that could turn out to be incorrect.

10. Do not mention the names of businesses, employees, contractors, customers or other operators. (Often media will ask questions, such as "who owns that line, or that facility, or whose oil is it?") - You can respond that "I'm sorry, but customer contracts are confidential." Or "We have not disclosed the name of that contractor."

11. Express concern, compassion for any individuals or the community that have been impacted.

12. Communications with the media should be brief and factual and should be limited to the information drafted in the prepared statement.

13. Follow up questions can lead to disclosing more information than is currently verified and may lead to First Responders giving speculative projections.

FIGURE 7.2-5 - GUIDELINES & TIPS, CONTINUED

14. Do not promise to provide additional information. There may be circumstances that we elect not to provide additional follow-up information. When asked follow-up questions, you can indicate, "This is all of the information that I have at this time. If you will excuse me I need to respond to this event." Or "This is all of the information that I have at this time. If you will give me your contact information, I will have someone contact you if we have additional information to disclose."

15. Care should be taken not to draw undue attention to a story that does not have significance. If this is a very minor or routine issue, this should come out in the statement. Initially, media representatives will try to ascertain whether or not the event in question merits further coverage. It will save time for both us and the media if small issues are appropriately categorized.

16. Do not comment on estimated volumes until we have a verified estimate.

17. Do not comment on expected cause (this can have legal implications); state, "We are still investigating the cause."

18. Do not comment on market impact. The market reactions to these events are dynamic and, without very specific knowledge, are often difficult to predict.

19. Do not comment on costs or lost business until verifying with Houston.

7.3 SITE SECURITY MEASURES

(b) (7)(F)

[redacted]

FIGURE 7.3-1 - SITE SECURITY CHECKLIST

(b) (7)(F)

[redacted]

(b) (7)(F)

[redacted]

(b) (7)(F)

[redacted]

(b) (7)(F)

[redacted]

(b) (7)(F)

[redacted]

7.4 WASTE MANAGEMENT

Initial oil handling and disposal needs may be overlooked in the emergency phase of a response, which could result in delays and interruptions of cleanup operations. Initially, waste management concerns should address:

- Equipment capacity,
- Periodic recovery of contained oil, and
- Adequate supply of temporary storage capacity and materials.

The following action items should be conducted during a spill response:

- Development of a Site Safety and Health Plan (**SECTION 5.4**) addressing the proper PPE and waste handling procedures.
- Development of a Disposal Plan (**SECTION 5.6**) in accordance with any federal, state, and/or local regulations. Facility-specific disposal locations for different types of materials are listed in **FIGURE 7.4-4**.

Continuous tracking of oil disposition in order to better estimate amount of waste that could be generated over the short and long-term.

- Organization of waste collection, segregation, storage, transportation, and proper disposal.
- Minimization of risk of any additional pollution.
- Regulatory review of applicable Federal, State, and Local laws and ensure compliance, and, if appropriate, obtain permits.
- Documentation of all waste handling and disposal activities.
- Disposal of all waste in a safe and approved manner.

Good hazardous waste management includes:

- Reusing materials, when possible,
- Recycling or reclaiming waste, and
- Treating waste to reduce hazards or reducing amount of waste generated.

7.4 WASTE MANAGEMENT, CONTINUED

- The management of the wastes generated in cleanup and recovery activities must be conducted with the overall objective of ensuring:
    - Worker safety,
    - Waste minimization,
    - Cost effectiveness, and
    - Minimization of environmental impacts.
- Proper disposal.
- Minimization of present and future environmental liability.

Solid wastes such as sorbents, PPE, debris, and equipment will typically be transported from the collection site to a designated facility for:

- Storage,
- Waste segregation,
- Packaging, and
- Transportation.

Once this process is complete, the waste will be shipped off-site to an approved facility for required disposal.

A general flow chart for waste management guidelines is provided in **FIGURE 7.4-1**. An overall checklist for containment and disposal is provided in **FIGURE 7.4-2**.

FIGURE 7.4-1 - WASTE MANAGEMENT FLOW CHART

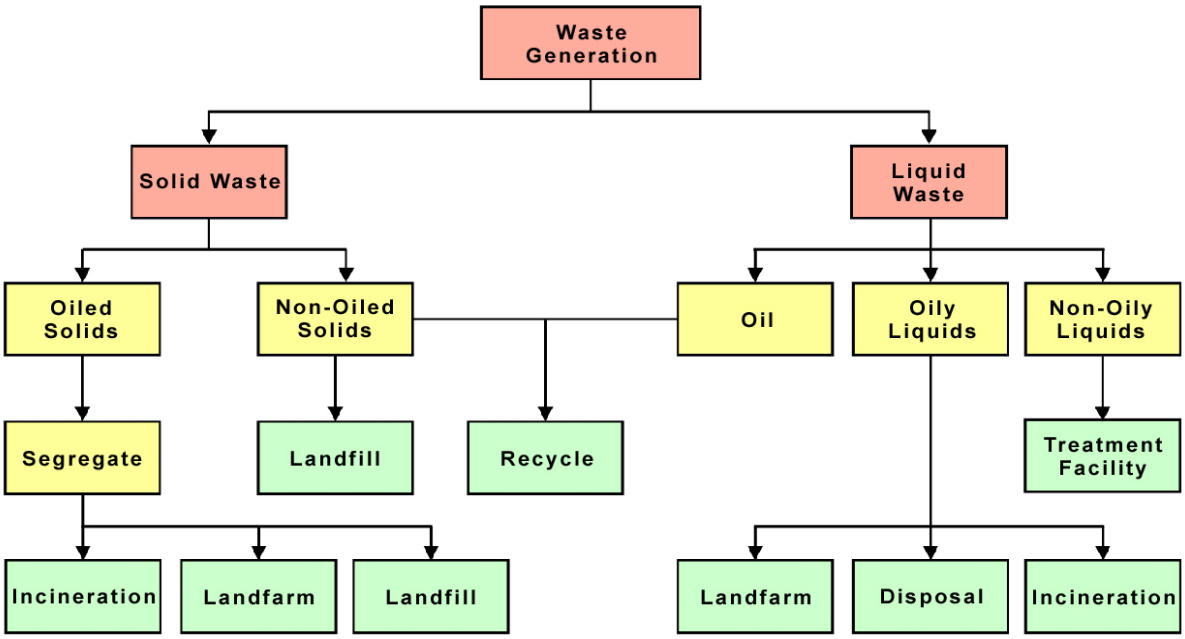

FIGURE 7.4-2 - GENERAL WASTE CONTAINMENT AND DISPOSAL CHECKLIST

CONSIDERATION	YES/NO/NA
Is the material being recovered a waste or reusable product?	
Has all recovered waste been containerized and secured so there is no potential for further leakage while the material is being stored?	
Has each of the discrete waste streams been identified?	
Has a representative sample of each waste stream been collected?	
Has the sample been sent to an approved laboratory for the appropriate analysis, (i.e., hazardous waste determination)?	
Has the appropriate waste classification and waste code number(s) for the individual waste streams been received?	
Has a temporary EPA identification number and generator number(s) been received, if they are not already registered with EPA?	
Have the services of a registered hazardous waste transporter been contracted, if waste is hazardous?	
If the waste is nonhazardous, is the transporter registered?	
Is the waste being taken to an approved disposal site?	
Is the waste hazardous or Class I nonhazardous?	
If the waste is hazardous or Class I nonhazardous, is a manifest being used?	
Is the manifest properly completed?	
Are all federal, state, and local laws/regulations being followed?	

Are all necessary permits being obtained?	
Has a Disposal Plan been submitted for approval/review?	
Has PPE and waste-handling procedures been included in the Site Safety and Health Plan to protect the health and safety of waste handling personnel?	

7.4.1 Waste Storage

During an oil spill, the volume of oil that can be recovered depends on the storage capacity available. Typical short-term (temporary) storage methods are provided in FIGURE 7.4-3. If storage containers such as bags or drums are used, the container should be clearly marked and/or color-coded to indicate the type of material or waste contained and/or the ultimate disposal option.

Use of any site for storage is dependent on the approval of local authorities. The following elements affect the choice of a potential storage site:

- Geology
- Soil
- Surface water
- Covered materials
- Climatic factor
- Toxic air emissions
- Access
- Ground water
- Flooding
- Slope
- Capacity
- Land use
- Security
- Public contact

FIGURE 7.4-3 - TEMPORARY STORAGE METHODS

CONTAINMENT	PRODUCT						
	OIL	OIL/WATER	OIL/SOIL	OIL/DEBRIS (Small)	OIL/DEBRIS (Medium)	OIL/DEBRIS (Large)	CAPACITY
Drums	X	X	X				0.2-0.5 yd^3
Bags		X	X	X			1.0-2.0 yd^3
Boxes		X	X	X			1-5 yd^3
Open top rolloff	X	X	X	X	X	X	8-40 yd^3
Roll top rolloff	X	X	X	X	X	X	15-25 yd^3
Vacuum box	X	X					15-25 yd^3
Frac tank	X	X					500-20,000 gal
Poly tank	X	X					200-4,000

							gal
Vacuum truck	X	X	X				2,000-5,000 gal
Tank trailer	X	X					2,000-4,000 gal
Barge	X	X					3,000+ gal
Berm, 4 ft		X	X	X	X	X	1 yd^3
Bladders	X	X					25-1,500 gal

7.4.2 Waste Transfer

In most oil spill response operations, it would be necessary to transfer recovered oil and oil debris from one point to another several times before the oil and oily debris are ultimately disposed of at a state approved disposal site. Depending on the location of response operations, any or all of the following transfer operations may occur:

- Directly into the storage tank of a vacuum device.
- Directly in to impermeable bags that, in turn, are placed in impermeable containers.
- From a vacuum device storage tank to a truck.
- From containers to trucks.
- From trucks to lined pits.
- From lined pits to incinerators and/or landfills.
- From a tank truck to a processing system (i.e., oil/water separator).
- From a processing system to a recovery system and or incinerator.
- From a skimming vessel or flexible bladder to a barge.
- From a barge to a tank truck.
- Directly into the storage tank on a dredge.
- From portable or vessel mounted skimmers into flexible bladder tanks, the storage tanks of the skimming vessel itself, or a barge.

There are four general classes of transfer systems that could be employed to effect oily waste transfer operations. The following is a brief description of the four transfer systems:

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.

7.4.2 Waste Transfer, Continued

Vacuum Systems
Vacuum systems, such as air conveyors, vacuum trucks, and portable vacuum units, may be used to transfer viscous oils and debris, but they usually pick up a very high water/oil ratio.

Belt / Screw Conveyors
Conveyor 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 but are bulky and difficult to operate.

Wheeled Vehicles
Wheeled vehicles may be used to transfer liquid waste of oily debris to storage or disposal sites. These vehicles are readily available but have a limited rate (i.e., 100 bbls) and require good site access.

7.4.3 Waste Disposal

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 techniques are employed.

The following is a brief description of some disposal techniques available for recovered oil and oily debris.

Recycling
Recycling involves processing discarded materials for another use.

Incineration
This technique entails the destruction of the recovered oil by high temperature thermal oxidation reactions. There are licensed incineration facilities as well as portable incinerators that may be brought to a spill site. Incineration may require the approval of the local Air Pollution Control Authority.

In-Situ Burning / Open Burning
Burning techniques entail igniting oil or oiled debris allowing it to burn under ambient conditions. These disposal techniques are subject to restrictions and permit requirements established by federal, state, and local laws. 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.

Landfill Disposal
This technique entails burying the recovered oil in a approved landfill in accordance with

regulatory procedures. Landfill disposal of free liquids is prohibited by federal law in the United States.

FIGURE 7.4-4 - FACILITY-SPECIFIC DISPOSAL LOCATIONS

MATERIAL	DISPOSAL FACILITY	LOCATION
Recovered Product	Demenno Kerdoon	Compton, CA
	Clean Harbors	Phoenix, AZ
	Clean Harbors	Los Angeles, CA
	Clean Harbors	Buttonwillow, CA
	Evergreen Environmental	Carson, CA
	TPS Technologies Soil Recycling	Adelanto, CA
	U.S. Filter	Parker, AZ
Contaminated Soil	Same as Above	Same as Above
Contaminated Equipment	Same as Above	Same as Above
Personnel Protective Equipment	Same as Above	Same as Above
Decontamination Solutions	Same as Above	Same as Above
Adsorbents and Spent Chemicals	Same as Above	Same as Above

SECTION 8 Last Revised: May 2008

DEMOBILIZATION / POST-INCIDENT REVIEW

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8.1 Terminating the Response

8.2 Demobilization

Figure 8.2-1 - Demobilization Checklist

8.3 Post-Incident Review

Figure 8.3-1 - Standard Incident Debriefing Form

8.3.1 Final Spill Cleanup Report

8.1 TERMINATING THE RESPONSE

- A team of federal, state, and Company personnel must certify that each area is clean before halting cleanup operations.
- Demobilize equipment and personnel at the first opportunity in order to reduce cost.
- Consider which resources should be demobilized first; for example, berthing expenses can be saved by demobilizing out-of-area contractors before local ones.
- Equipment may need both maintenance and decontamination before being demobilized.
- All facilities (staging area, Command Post, etc.) should be returned to their pre-spill condition before terminating operations.
- Determine what documentation should be maintained, where, and for how long.
- Contract personnel may be more susceptible to "suffering" injuries as they approach termination.
- Some activities will continue after the cleanup ends; examples include incident debriefing, bioremediation, NRDA studies, claims, and legal actions.
- Consider expressing gratitude to the community, police department, fire department, and emergency crews for their work during the response.

8.2 DEMOBILIZATION

The Company can reduce costs considerably by developing a Demobilization Plan (**SECTION 5.8**). Therefore, emphasis must be placed on establishing efficient demobilization procedures. A Demobilization Checklist is provided in **FIGURE 8.2-1**.

FIGURE 8.2-1 - DEMOBILIZATION CHECKLIST

DEMOBILIZATION CHECKLIST	INITIALS	DATE/TIME STARTED	DATE/TIME COMPLETED
Assign personnel to identify surplus resources and probable release times.			
Establish demobilization priorities.			
Develop decontamination procedures.			
Initiate equipment repair and maintenance.			
Develop a Disposal Plan.			
Identify shipping needs.			
Identify personnel travel needs.			
Develop impact assessment and statements.			
Obtain concurrence of Planning and Operations Group Leaders before release of			

personnel or equipment.			

8.3 POST-INCIDENT REVIEW

All Facility personnel involved in the incident shall be debriefed (by the Company) within two weeks after termination of operations. A Standard Incident Debriefing Form is provided in **FIGURE 8.3-1**. The primary purpose of the post-incident review is to identify actual or potential deficiencies in the Plan and determine the changes required to correct the deficiencies. The post-incident review also is intended to identify which response procedures, equipment, and techniques were effective and which were not and the reason(s) why. This type of information is very helpful in the development of a functional Plan by eliminating or modifying those response procedures that are less effective and emphasizing those that are highly effective. This process should also be used for evaluating training drills or exercises. Key agency personnel that were involved in the response will be invited to attend the post-incident review.

Debriefs with the Washington Department of Ecology and other participating agencies and organizations may be appropriate if unified command has been established during a spill and are required when significant Plan updates are identified or significant lessons can be recorded and implemented.

FIGURE 8.3-1 - STANDARD INCIDENT DEBRIEFING FORM

Name of incident:
Date:
PERSONNEL DEBRIEFED
Name:
Normal duty:
Summary of duties performed during incident (list date, time, and location):
Positive aspects of the response:

Aspects of the response which could be improved:
Name:
Title:
Signature:

8.3.1 Final Spill Cleanup Report

A final, comprehensive report shall be prepared by the Incident Commander or designee and forwarded to the Administrator within 90 days after completion of spill cleanup activities for internal use. It should be written in the narrative form and include the information listed below (as appropriate):

- Name, address, and telephone number of the owner or operator.
- Name, address, and telephone number of the Facility.
- Time, location, and date of discharge.
- Type of material discharged.
- Quantity discharged (indicate volume, color, length and width of slick, and rate of release, if continuous).
- Source of spill (tank, flowline, etc.) in which the oil was originally contained, path of discharge, and impact area.
- Detailed description of what actually caused the discharge and actions taken to control or stop the discharge.
- Estimated quantity and disposition of recovered material that resulted from the incident.
- Description of actual or potential hazards to human health or the environment.
- Steps taken to clean up the spilled oil along with dates and times steps were taken.
- The equipment used to remove the spilled oil, dates, and number of hours equipment was

used.

- The number of persons employed in the removal of oil from each location, including their identity, employer, and the number of hours worked at that location.
- The extent of injuries, if any.
- Actions by the Company or contractors to mitigate damage to the environment.
- Measures taken by the Company or contractors to prevent future spills.
- The federal and state agencies to which the Company or contractors reported the discharge; show the agency, its location, the date and time of notification, and the official contacted.
- Description of the effectiveness of equipment and cleanup techniques and recommendations for improvement.
- The names, addresses, and titles of people who played a major role in responding to the event.
- A section identifying problems and deficiencies noted during the response event; a follow-up section should include recommended procedure modifications to make a future response more effective and efficient.

8.3.1 Final Spill Cleanup Report, Continued

- All other relative information.
- A final signature as follows:

The above information is true to the best of my knowledge and belief:

Name:
Title:
Signature:
Date:

Martinez Terminal

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APPENDICES

A. **TRAINING / EXERCISES**

B. **CONTRACTOR RESPONSE EQUIPMENT**

C. TANK TABLES, COMPANY FORMS, PLOT PLANS

D. **HAZARD EVALUATION AND RISK ANALYSIS**

E. **CROSS-REFERENCES**

F. **ACRONYMS AND DEFINITIONS**

G. **ADDITIONAL INFORMATION**

APPENDIX A Last Revised: May 2008

TRAINING / EXERCISES

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A.1 Exercise Requirements and Schedules

Figure A.1-1 - PREP Response Plan Core Components

Figure A.1-2 - Exercise Requirements

Figure A.1-3 - Spill / Exercise Documentation Form

Figure A.1-4 - EPA Required Response Equipment Testing and Deployment Drill Log

Figure A.1-5 - Qualified Individual Notification Drill Log

Figure A.1-6 - Emergency Management Team Tabletop Exercise Log

A.2 Training Program

Figure A.2-1 - Training Requirements

Figure A.2-2 - PREP Training Program Matrix

Figure A.2-3 - Personnel Response Training Log

A.3 Additional Programs

A.3.1 Alcohol and Drug Program

A.3.2 Safety Incentive Program

A.1 EXERCISE REQUIREMENTS AND SCHEDULES

- The Company participates in the National Preparedness for Response Exercise Program (PREP).
- During each triennial cycle, all components of the Plan (**FIGURE A.1-1**) must be exercised at least once.
- The Environmental Regulator and Compliance (ERC) Directors or designee, is responsible for the following activities:
    - Scheduling,
    - Maintaining records,
    - Implementing,
    - Evaluation of the Company's training and exercise program, and
    - Post-drill evaluation improvements.
- FIGURE A.1-2 provides descriptions of exercise requirements, FIGURE A.1-3 provides a Spill / Exercise Documentation form (a corresponding Company form may be used instead), and **FIGURE A.1-4** provides a log for response equipment testing and deployment drill.

FIGURE A.1-1 - PREP RESPONSE PLAN CORE COMPONENTS

CORE COMPONENTS	DESCRIPTION
1. Notifications	Test the notifications procedures identified in the Area Contingency Plan (ACP) and the Spill Response Plan.
2. Staff mobilization	Demonstrate the ability to assemble the spill response organization identified in the ACP and the Spill Response Plan.
3. Ability to operate within the response management system described in the Plan: • Unified Command • Response management system	Demonstrate the ability of the spill response organization to work within a unified command. Demonstrate the ability of the response organization to operate within the framework of the response management system identified in their respective plans.
4. Discharge control	Demonstrate the ability of the spill response organization to control and stop the discharge at the source.
5. Assessment	Demonstrate the ability of the spill response organization to provide initial assessment of the discharge and provide continuing assessments of the effectiveness of the tactical

	operations.
6. Containment	Demonstrate the ability of the spill response organization to contain the discharge at the source or in various locations for recovery operations.
7. Recovery	Demonstrate the ability of the spill response organization to recover the discharged product.
8. Protection	Demonstrate the ability of the spill response organization to protect the environmentally and economically sensitive areas identified in the ACP and the respective industry response plan.
9. Disposal	Demonstrate the ability of the spill response organization to dispose of the recovered material and contaminated debris.
10. Communications	Demonstrate the ability to establish an effective communications system for the spill response organization.
11. Transportation	Demonstrate the ability to establish multi-mode transportation both for execution of the discharge and support functions.
12. Personnel support	Demonstrate the ability to provide the necessary support of all personnel associated with response.
13. Equipment maintenance and support	Demonstrate the ability to maintain and support all equipment associated with the response.
14. Procurement	Demonstrate the ability to establish and effective procurement system.
15. Documentation	Demonstrate the ability of the spill response organization to document all operational and support aspects of the response and provide detailed records of decisions and actions taken.

FIGURE A.1-2 - EXERCISE REQUIREMENTS

EXERCISE TYPE	EXERCISE CHARACTERISTICS
Facility/QI notification	• Conducted quarterly • The HSE Department initiates mock spill notification to QI • The HSE Department documents time/date of notification, and name of individual contacted • Document in accordance with form in **FIGURE A.1-3**
Equipment deployment	• Conducted semiannually • Response contractors listed in the plan must participate in annual deployment exercise • Document in accordance with form in **FIGURE A.1-3**
EMT tabletop	• Conducted annually • Tests EMT's response activities/responsibilities • Documents Plan's effectiveness • Must exercise worst case discharge scenario once every three years

	• Must test all Plan components at least once every three years • Document in accordance with form in **FIGURE A.1-3**
Unannounced	• Company will either participate in unannounced tabletop exercise or equipment deployment exercise on an annual basis, if selected • Company may take credit for participation in government initiated unannounced drill in lieu of drill required by PREP guidelines • Plan holders who have participated in a PREP government-initiated unannounced exercise will not be required to participate in another one for at least 36 months from the date of the exercise
Area	• An industry plan holder that participates in an Area Exercise would not be required to participate in another Area Exercise for a minimum of six years
OTHER EXERCISE CONSIDERATIONS	
Drill program evaluation procedures	• Company conducts post-exercise meetings to discuss positive items, areas for improvement, and to develop action item checklist to be implemented later
Records of drills	• Company will maintain exercise records for five years following completion of each exercise • Records are maintained at the division offices. Please contact division Environmental and Regulatory Compliance Directors for a copy of the records. • Company will verify appropriate records are kept for each spill response contractor listed in Plan as required by PREP guidelines (annual equipment deployment drill, triennial unannounced drill, etc.)

FIGURE A.1-3 - SPILL / EXERCISE DOCUMENTATION FORM

Retain this form for a minimum of five years.

Note: This is only a sample form. Records are maintained at the division offices. Please contact division Environmental and Regulatory Compliance Directors for a copy of the records.

1. Date(s) performed:
2. ☐ Exercise ☐ Actual spill
If exercise: ☐ Announced ☐ Unannounced ☐ Deployment ☐ Notification ☐ Tabletop

If exercise, frequency:

☐ Quarter ☐ 1st ☐ 2nd ☐ 3rd ☐ 4th ☐ Annual

3. Location of exercise/spill:

4. Time started:

5. Description of scenario or spill including volume and content (crude oil, condensate, etc.)

6. Describe how the following objectives were exercised:

Team's knowledge of the Oil Spill Response Plan:		
	Yes	**No**
Was briefing meeting conducted	☐	☐
Established field Command Post	☐	☐
Confirmed source was stopped	☐	☐
Developed Site Safety and Health Plan	☐	☐
Prepared ICS 201	☐	☐
Established work zones and perimeter security	☐	☐
Developed short range tactical plan	☐	☐
Developed long range tactical plan	☐	☐
Proper Notifications:		
Qualified Individual (or designee)	☐	☐
EHS&T Department	☐	☐
Release/Spill Report Form completed	☐	☐
Notification to agencies completed (attach log)	☐	☐
Transportation/Communication System:		
Established primary/secondary communication system	☐	☐

Primary: ☐ cellular phone ☐ two way radio ☐ land telephone line

Secondary: ☐ cellular phone ☐ two way radio ☐ land telephone line
☐ Other

FIGURE A.1-3 - SPILL / EXERCISE DOCUMENTATION FORM, CONTINUED

Transportation/Communication System, Continued:		
	Yes	**No**
Motor vessel deployed:	☐	☐
Provider name:		
Helicopter/Sea plane deployed:	☐	☐
Call sign:		
Describe function (i.e., transportation, surveillance, dispersant application):		
Ability to access contracted Oil Spill Removal Organizations (OSROs):		
Who contacted - (name of individual and OSRO):		
When contacted:		
Response time projection for deployment:		
Type and amount of containment used:		
Spill material recovered:	☐	☐
Spilled material disposed:	☐	☐
Where?		
Ability to coordinate spill response with on-scene coordinator, state, and applicable agencies:		
Was regulatory on-scene coordinator(s) contacted:	☐	☐
List person and agency represented:		

Ability to access sensitive site and resource information in the Area Contingency Plan (ACP):		
Was pre-impact assessment conducted:	☐	☐
Were pre-impact samples taken:	☐	☐
Were pre-impact photographs taken:	☐	☐
Were NRDA specialists mobilized:	☐	☐
Were deficiencies identified:	☐	☐
If yes, changes implemented:	☐	☐
If no, why were changes not implemented?		

LESSONS LEARNED	PERSON RESPONSIBLE FOR FOLLOW-UP OF CORRECTIVE MEASURES
	Name:
	Position:
	Certifying Signature:

FIGURE A.1-4 - EPA REQUIRED RESPONSE EQUIPMENT TESTING AND DEPLOYMENT DRILL LOG

(Other versions of this form may be used)

Item:	Date of Last Update:
ACTIVITY	**INFORMATION**
Last inspection or response equipment test date	
Inspection frequency	
Last deployment drill date	
Deployment frequency	
OSRO Certification* (if applicable)	

Item:	Date of Last Update:
ACTIVITY	**INFORMATION**

Last inspection or response equipment test date	
Inspection frequency	
Last deployment drill date	
Deployment frequency	
OSRO Certification* (if applicable)	

Item:	Date of Last Update:
ACTIVITY	**INFORMATION**
Last inspection or response equipment test date	
Inspection frequency	
Last deployment drill date	
Deployment frequency	
OSRO Certification* (if applicable)	

Item:	Date of Last Update:
ACTIVITY	**INFORMATION**
Last inspection or response equipment test date	
Inspection frequency	
Last deployment drill date	
Deployment frequency	
OSRO Certification* (if applicable)	

*__Note:__ The Company will rely on the contracted OSRO's to maintain their equipment per their USCG Certification requirements.

FIGURE A.1-5 - QUALIFIED INDIVIDUAL NOTIFICATION DRILL LOG

(Other versions of this form may be used)

Company:	Date:
ACTIVITY	**INFORMATION**
Qualified Individual(s) Contacted	
Evaluation	
Changes to be Implemented	
Time Table for Implementation	

Company:	Date:

ACTIVITY	INFORMATION
Qualified Individual(s) Contacted	
Evaluation	
Changes to be Implemented	
Time Table for Implementation	

Company:	Date:
ACTIVITY	**INFORMATION**
Qualified Individual(s) Contacted	
Evaluation	
Changes to be Implemented	
Time Table for Implementation	

Company:	Date:
ACTIVITY	**INFORMATION**
Qualified Individual(s) Contacted	
Evaluation	
Changes to be Implemented	
Time Table for Implementation	

FIGURE A.1-6 - EMERGENCY MANAGEMENT TEAM TABLETOP EXERCISE LOG

(Other versions of this form may be used)

Company:	Date:
ACTIVITY	**INFORMATION**
Emergency Scenario	
Evaluation	
Changes to be Implemented	
Time Table for Implementation	

Company:	Date:
ACTIVITY	**INFORMATION**
Emergency Scenario	
Evaluation	
Changes to be Implemented	
Time Table for Implementation	

Company:	Date:

ACTIVITY	INFORMATION
Emergency Scenario	
Evaluation	
Changes to be Implemented	
Time Table for Implementation	

Company:	Date:
ACTIVITY	**INFORMATION**
Emergency Scenario	
Evaluation	
Changes to be Implemented	
Time Table for Implementation	

A.2 TRAINING PROGRAM

FIGURE A.2-1 provides training requirements for responders. **FIGURE A.2-2** provides the program matrix. **FIGURE A.2-3** provides a personnel response training log.

FIGURE A.2-1 - TRAINING REQUIREMENTS

TRAINING TYPE	TRAINING CHARACTERISTICS
Training in use of emergency response plan	• All field personnel will be trained to properly report/monitor spills. • Plan will be reviewed periodically with employees. • The Personnel Response Training Log is located in **FIGURE A.2-3**.
OSHA training requirements	• All Company responders designated in Plan must have 24 hours of initial spill response training. • Laborers having potential for minimal exposure must have 24 hours of initial oil spill response instruction and eight hours of actual field experience. • Responders having potential exposure to hazardous substances at levels exceeding permissible exposure limits must have 40 hours of initial training off-site and 24 hours of actual field experience. • On-site management/supervisors required to receive same training as equipment operators/general laborers plus eight hours of specialized hazardous waste management training. • Managers/employees require eight hours of annual refresher training.
Emergency management team personnel training	• See recommended PREP Training Matrix (FIGURE A.2-2).

Training for casual laborers or volunteers	• Company will not use casual laborers/volunteers for operations requiring HAZWOPER training.
Wildlife	• Only trained personnel approved by USFWS and appropriate state agency will be used to treat oiled wildlife.
Training documentation and record maintenance	• Training activity records will be retained five years for all personnel following completion of training. • Company will retain training records for individuals assigned specific duties in the Plan. • Training records will be maintained at the Corporate Headquarters.

FIGURE A.2-2 - PREP TRAINING PROGRAM MATRIX

TRAINING ELEMENT	QUALIFIED INDIVIDUAL (QI)	EMERGENCY MANAGEMENT TEAM (EMT)	FACILITY PERSONNEL
Captain of the Port (COTP) Zones or Environmental Protection Agency (EPA) Regions in which the facility is located	x	x	x
Notification procedures and requirements for facility owners or operators; internal response organizations; federal and state agencies; and contracted oil spill removal organizations (OSROs) and the information required for those organizations	x	x	x
Communication system used for the notifications	x	x	x
Information on the products stored, used, or transferred by the facility, including familiarity with the material safety data sheets (MSDS), special handling procedures, health and safety hazards, spill and fire fighting procedures	x	x	x
Procedures the facility personnel may use to mitigate or prevent any discharge or a substantial threat of a discharge of oil resulting from facility operational activities associated with internal or external cargo transfers, storage, or use	x	x	x
Facility personnel responsibilities and procedures for use of facility equipment which may be available to mitigate or	x	x	x

prevent an oil discharge			
Operational capabilities of the contracted OSRO's to respond small, medium, and large discharges	x	x	x
Responsibilities and authority of the Qualified Individual (QI) as described in the Spill Response Plan and Company response organization	x	x	x
The organization structure that will be used to manage the response actions including: • Command and control • Public information • Safety • Liaison with government agencies • Emergency response operations • Planning • Logistics support • Finance	x	x	x
The responsibilities and duties of each Emergency Management Team (EMT) within the organization structure	x	x	x
The drill and exercise program to meet federal and state regulations as required under Oil Pollution Act of 1990 (OPA 90)	x	x	x
The role of the QI in the post discharge review of the Plan to evaluate and validate its effectiveness	x		
The Area Contingency Plan (ACP) for the area in which the facility is located	x	x	x
The National Contingency Plan (NCP)	x	x	x
Roles and responsibilities of federal and state agencies in pollution response	x	x	x

FIGURE A.2-2 - PREP TRAINING PROGRAM MATRIX, CONTINUED

TRAINING ELEMENT	QUALIFIED INDIVIDUAL (QI)	EMERGENCY MANAGEMENT TEAM (EMT)	FACILITY PERSONNEL
Available response resources identified in the Plan	x	x	x
Contracting and ordering procedures to acquire OSRO resources identified in the Plan	x	x	x

OSHA requirements for worker health and safety (29 CFR 1910.120)	x	x	x
Incident Command System/Unified Command System	x	x	x
Public affairs	x	x	x
Crisis management	x	x	
Procedures for obtaining approval for dispersant use or in-situ burning of the spill	x		
Oil spill trajectory analyses	x		
Sensitive biological areas	x	x	x
This training procedure as described in the Plan for members of the EMT		x	
Procedures for the post discharge review of the plan to evaluate and validate its effectiveness	x	x	x
Basic information on spill operations and oil spill cleanup technology including: • Oil containment • Oil recovery methods and devices • Equipment limitations and uses • Shoreline cleanup and protection • Spill trajectory analysis • Use of dispersants, in-situ burning, bioremediation • Waste storage and disposal considerations	x	x	
Hazard recognition and evaluation	x	x	x
Site safety and security procedures	x	x	x
Personnel management, as applicable to designated job responsibilities	x	x	
Procedures for directing the deployment and use of spill response equipment, as applicable to designated job responsibilities	x	x	x
Specific procedures to shut down effected operations			x
Procedures to follow in the event of discharge, potential discharge, or emergency involving the following equipment or scenarios: • Tank overfill • Tank rupture • Piping or pipeline rupture • Piping or pipeline leak, both under pressure or not under pressure, if	x	x	x

applicable • Explosion or fire • Equipment failure • Failure of secondary containment system			
QI's name and how to contact him or her		x	x

FIGURE A.2-3 - PERSONNEL RESPONSE TRAINING LOG

NAME	RESPONSE TRAINING/DATE AND NUMBER OF HOURS	PREVENTION TRAINING/DATE AND NUMBER OF HOURS

*Qualified Individual

A.3 ADDITIONAL PROGRAMS

A.3.1 Alcohol and Drug Program

The Company has developed and implemented a Drug and Alcohol Program. It provides for the testing of all DOT employees. The program also offers rehabilitation, treatment and follow-up testing for workers who seek assistance or who are found to be out of compliance. The program is run under complete confidentiality and is aimed at providing a drug-free workplace.

A.3.2 Safety Incentive Program

A Safety Incentive Program has been developed to encourage safe work practices.

APPENDIX B Last Revised: March 6, 2012

CONTRACTOR RESPONSE EQUIPMENT

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B.1 Cooperatives and Contractors

B.1.1 OSRO Classification

Figure B.1-1 - Evidence of Contracts and Equipment Lists

Figure B.1-2 - On-Water Response Equipment Inventory

B.1 COOPERATIVES AND CONTRACTORS

The Company has contracted with additional Oil Spill Removal Organizations (OSROs) to provide personnel and equipment in the event of a spill. The USCG classification, response capabilities, and equipment capabilities are described below.

B.1.1 OSRO Classification

The OSRO classification process was developed by the U.S. Coast Guard (USCG) to provide guidelines to enable USCG and plan preparers to evaluate an OSRO's potential to respond to oil spills. Plan holders that utilize USCG classified OSRO services are not required to list response resources in their plans.

The following is a listing of the USCG classified OSROs that may respond to incidents for areas listed in this Plan. For a detailed listing of USCG classified OSROs and other contractors by terminal, refer to **FIGURE 3.1-6** and **FIGURE 7.1-1**.

COMPANY / CONTRACTOR / TERM	APPLICABLE COTP ZONE(S)	USCG CLASSIFICATIONS								RESPONSE TIME
NRC Environmental Service 90 San Pablo Ave. Selby CA 94572 Term of contract: To	San Francisco		Facilities				Vessels				1 hours
			MM	W1	W2	W3	MM	W1	W2	W3	
		River/Canal	✓	✓	✓	✓	✓	✓	✓	✓	
		Inland	✓	✓	✓	✓	✓	✓	✓	✓	
		Open Ocean			✓	✓	✓	✓	✓	✓	
		Offshore			✓	✓	✓	✓	✓	✓	
		Nearshore			✓	✓	✓	✓	✓	✓	
		Great Lakes									
NRC Environmental Service 7 N. Court Martinez CA 94553 Term of contract: To	San Francisco		Facilities				Vessels				1 hours
			MM	W1	W2	W3	MM	W1	W2	W3	
		River/Canal	✓	✓	✓	✓	✓	✓	✓	✓	
		Inland	✓	✓	✓	✓	✓	✓	✓	✓	
		Open Ocean			✓	✓	✓	✓	✓	✓	
		Offshore			✓	✓	✓	✓	✓	✓	
		Nearshore			✓	✓	✓	✓	✓	✓	
		Great Lakes									
NRC Environmental Service 255 Parr Blvd. Richmond CA 94801 Term of contract: To	San Francisco		Facilities				Vessels				1 hours
			MM	W1	W2	W3	MM	W1	W2	W3	
		River/Canal	✓	✓	✓	✓	✓	✓	✓	✓	
		Inland	✓	✓	✓	✓	✓	✓	✓	✓	
		Open Ocean			✓	✓	✓	✓	✓	✓	
		Offshore			✓	✓	✓	✓	✓	✓	
		Nearshore			✓	✓	✓	✓	✓	✓	
		Great Lakes									

NRC Environmental Service 321 A Ave. San Francisco CA 94130 Term of contract: To	San Francisco		1 hours

	Facilities				Vessels			
	MM	W1	W2	W3	MM	W1	W2	W3
River/Canal	✓	✓	✓	✓	✓	✓	✓	✓
Inland	✓	✓	✓	✓	✓	✓	✓	✓
Open Ocean			✓	✓	✓	✓	✓	✓
Offshore			✓	✓	✓	✓	✓	✓
Nearshore			✓	✓	✓	✓	✓	✓
Great Lakes								

NRC Environmental Service 2121 Piedmont Way Pittsburgh CA 94565 Term of contract: To	San Francisco		1 hours

	Facilities				Vessels			
	MM	W1	W2	W3	MM	W1	W2	W3
River/Canal	✓	✓	✓	✓	✓	✓	✓	✓
Inland	✓	✓	✓	✓	✓	✓	✓	✓
Open Ocean			✓	✓	✓	✓	✓	✓
Offshore			✓	✓	✓	✓	✓	✓
Nearshore			✓	✓	✓	✓	✓	✓
Great Lakes								

B.1.1 OSRO Classification

COMPANY / CONTRACTOR / TERM	APPLICABLE COTP ZONE(S)	USCG CLASSIFICATIONS	RESPONSE TIME
So. Cal Ship Services 201 East 5th St. Benicia CA Term of contract: To	San Francisco - DISTRICT 11		1 hours

	Facilities				Vessels			
	MM	W1	W2	W3	MM	W1	W2	W3
River/Canal	✓	✓	✓	✓	✓	✓	✓	✓
Inland	✓		✓	✓	✓	✓	✓	✓
Open Ocean								
Offshore								
Nearshore								
Great Lakes								

NRC Environmental Service 2700 Rice Way Sacramento CA 95691 Term of contract: To	San Francisco		1 hours

	Facilities				Vessels			
	MM	W1	W2	W3	MM	W1	W2	W3
River/Canal	✓	✓	✓	✓	✓	✓	✓	✓
Inland	✓	✓	✓	✓	✓	✓	✓	✓
Open Ocean			✓	✓	✓	✓	✓	✓
Offshore			✓	✓	✓	✓	✓	✓
Nearshore			✓	✓	✓	✓	✓	✓
Great								

		Lakes	
NRC Environmental Service 1316 Canal Blvd. Richmond CA 94850 Term of contract: To	San Francisco		1 hours
NRC Environmental Service 1605 Ferry Point Alameda CA 94501 Term of contract: To	San Francisco		2 hours
NRC Environmental Service Port Rd. G Stockton CA 95298 Term of contract: To	San Francisco		2.2 hours

	Facilities				Vessels			
	MM	W1	W2	W3	MM	W1	W2	W3
River/Canal	✓	✓	✓	✓	✓	✓	✓	✓
Inland	✓	✓	✓	✓	✓	✓	✓	✓
Open Ocean			✓	✓	✓	✓	✓	✓
Offshore			✓	✓	✓	✓	✓	✓
Nearshore			✓	✓	✓	✓	✓	✓
Great Lakes								

	Facilities				Vessels			
	MM	W1	W2	W3	MM	W1	W2	W3
River/Canal	✓	✓	✓	✓	✓	✓	✓	✓
Inland	✓	✓	✓	✓	✓	✓	✓	✓
Open Ocean			✓	✓	✓	✓	✓	✓
Offshore			✓	✓	✓	✓	✓	✓
Nearshore			✓	✓	✓	✓	✓	✓
Great Lakes								

	Facilities				Vessels			
	MM	W1	W2	W3	MM	W1	W2	W3
River/Canal	✓	✓	✓	✓	✓	✓	✓	✓
Inland	✓	✓	✓	✓	✓	✓	✓	✓
Open Ocean			✓	✓	✓	✓	✓	✓
Offshore			✓	✓	✓	✓	✓	✓
Nearshore			✓	✓	✓	✓	✓	✓
Great Lakes								

B.1.1 OSRO Classification

COMPANY / CONTRACTOR / TERM	APPLICABLE COTP ZONE(S)	USCG CLASSIFICATIONS	RESPONSE TIME
NRC Environmental Service 1090 West Waterfront Eureka CA 95501	San Francisco		7.8 hours

	Facilities				Vessels			
	MM	W1	W2	W3	MM	W1	W2	W3
River/Canal	✓	✓	✓	✓	✓	✓	✓	✓
Inland	✓	✓	✓	✓	✓	✓	✓	✓
Open Ocean			✓	✓	✓	✓	✓	✓
Offshore			✓	✓	✓	✓	✓	✓
			✓	✓	✓	✓	✓	✓

Term of contract: To		Nearshore									
		Great Lakes									
NRC Environmental Service 417 E. Hueneme Rd. # 131, Dock # 2 Pt. Hueneme CA 93041 Term of contract: To	San Francisco		Facilities				Vessels				11 hours
			MM	W1	W2	W3	MM	W1	W2	W3	
		River/Canal	✓	✓	✓	✓	✓	✓	✓	✓	
		Inland	✓	✓	✓	✓	✓	✓	✓	✓	
		Open Ocean			✓	✓	✓	✓	✓	✓	
		Offshore			✓	✓	✓	✓	✓	✓	
		Nearshore			✓	✓	✓	✓	✓	✓	
		Great Lakes									
NRC Environmental Service 2250 E. Dominguez St Carson CA 90810 Term of contract: To	San Francisco		Facilities				Vessels				11.2 hours
			MM	W1	W2	W3	MM	W1	W2	W3	
		River/Canal	✓	✓	✓	✓	✓	✓	✓	✓	
		Inland	✓	✓	✓	✓	✓	✓	✓	✓	
		Open Ocean			✓	✓	✓	✓	✓	✓	
		Offshore			✓	✓	✓	✓	✓	✓	
		Nearshore			✓	✓	✓	✓	✓	✓	
		Great Lakes									
NRC Environmental Service Pier D, Berth - D47 Long Beach CA 90802 Term of contract: To	San Francisco		Facilities				Vessels				11.4 hours
			MM	W1	W2	W3	MM	W1	W2	W3	
		River/Canal	✓	✓	✓	✓	✓	✓	✓	✓	
		Inland	✓	✓	✓	✓	✓	✓	✓	✓	
		Open Ocean			✓	✓	✓	✓	✓	✓	
		Offshore			✓	✓	✓	✓	✓	✓	
		Nearshore			✓	✓	✓	✓	✓	✓	
		Great Lakes									

B.1.1 OSRO Classification, Continued

The following contractors are retained by the Company, but are not USCG classified OSROs within this Area:

- O'Briens Response Management
  2929 E. Imperial Hwy, Suite 290
  Brea,CA
  92821
  Response Time:2 hours
  Term of contract:
  To

- Martinez Terminal
  2801 Waterfront Road
  Martinez,CA
  94553
  Response Time:0 hours
  Term of contract:
  To
- Worley Catastrophe Response
  303 Timber Creek
  Hammond,LA
  70403
  Response Time:0 hours
  Term of contract:
  To
- C-K Associates, LLC
  17170 Perkins Road
  Baton Rouge,LA
  70810
  Response Time:12 hours
  Term of contract:
  To
- Robert J. Myers and Associates
  31430 Capella Circle
  Tomball,TX
  77375
  Response Time:12 hours
  Term of contract:
  To

FIGURE 7.1-1 provides both OSRO- and non-OSRO-summarized equipment lists and response times.

FIGURE B.1-1 provides evidence of contracts with OSROs and equipment lists for contractors without USCG classification.

FIGURE B.1-1 - EVIDENCE OF CONTRACTS AND EQUIPMENT LISTS

(Only print one copy of each companies contract)

- **C-K Associates, LLC, Baton Rouge,LA**
- Martinez Terminal, Martinez,CA
- **NRC Environmental Service, Richmond,CA**
- **NRC Environmental Service, San Francisco,CA**
- **NRC Environmental Service, Pittsburgh,CA**
- **NRC Environmental Service, Alameda,CA**
- **NRC Environmental Service, Eureka,CA**
- **NRC Environmental Service, Sacramento,CA**

NRC Environmental Service, Stockton,CA

- **NRC Environmental Service, Richmond,CA**
- **NRC Environmental Service, Carson,CA**
- **NRC Environmental Service, Long Beach,CA**
- **NRC Environmental Service, Pt. Hueneme,CA**
- **NRC Environmental Service, Selby,CA**
- **NRC Environmental Service, Martinez,CA**
- **O'Briens Response Management, Brea,CA**
- **Robert J. Myers and Associates, Tomball,TX**
- **So. Cal Ship Services, Benicia,CA**
- **Worley Catastrophe Response, Hammond,LA**

FIGURE B.1-2 - ON-WATER RESPONSE EQUIPMENT INVENTORY

EQUIPMENT	DE-RATED SKIMMING CAPACITY (BBL/DAY)	OIL/WATER WASTE CAPACITY (BBL)	BOOM (FEET)	SORBENT BOOM (BALES) 40'/BALE	SORBENT PADS (BALES) 100/BALE	DEPLOY TIME	EST TIME O/S
NRC Environmental Service, Alameda **(San Francisco)**							
Barges / Tanks / Pumps							
Action Petroleum Model 60 (Drum)	4114						
Boom							
21" boom			23,100				
Boom - 42"			6,000				
Boom - 21"			1,500				
Boom - 21"			4,000				
Skimming Systems							

Skimmer - VTU-Petro-24-6857 (Floating Weir)	6,857						
Skimmer - Cascade-5765 (Floating Weir)	5,465						
NRC Environmental Service, Eureka **(San Francisco)**							
Boom							
Boom - 21"			2,500				
Boom - 43"			2,500				
Skimming Vessels							
Oleophilic Belt - Skimmer-Belt-Marco-24000	24,000						
NRC Environmental Service, Sacramento **(San Francisco)**							
Boom							
Boom - 21"			1,500				
NRC Environmental Service, Stockton **(San Francisco)**							
Boom							
Boom - 21"			1,500				
NRC Environmental Service, Richmond **(San Francisco)**							
Barges / Tanks / Pumps							
Storage-Canflex-Bladder-100		100					
Barge - Portable-238		238					
NRC Environmental Service, Carson **(San Francisco)**							
Boom							
Boom - 18"			7,300				
NRC Environmental Service, Long Beach **(San Francisco)**							
Boom							
Boom - 20"			6,500				
Boom - 42"			4,000				
NRC Environmental Service, Pt. Hueneme **(San Francisco)**							
Boom							
Boom - 42"			4,000				

NRC Environmental Service, Selby **(San Francisco)**							
Barges / Tanks / Pumps							
Storage-Canflex-Bladder-100		100					
Boom							
Boom - 21"			2,500				

FIGURE B.1-2 - ON-WATER RESPONSE EQUIPMENT INVENTORY

EQUIPMENT	DE-RATED SKIMMING CAPACITY (BBL/DAY)	OIL/WATER WASTE CAPACITY (BBL)	BOOM (FEET)	SORBENT BOOM (BALES) 40'/BALE	SORBENT PADS (BALES) 100/BALE	DEPLOY TIME	EST TIME O/S
NRC Environmental Service, Selby **(San Francisco)**							
Skimming Systems							
Skimmer - VTU-Petro-24-6857	6,857						
Skimmer-fasflo-3154	3,154						
NRC Environmental Service, Martinez **(San Francisco)**							
Barges / Tanks / Pumps							
Barge-Portable-238		238					
Storage-Canflex-Bladder-100		100					
Boom							
Boom - 21"			2,500				
Boom - 21"			1,200				
Skimming Systems							
Action Petroleum Model 24 (Drum)	1,954						
Action Petroleum Model 60 (Drum)	4,114						
Martinez Terminal, Martinez **()**							
Barges / Tanks / Pumps							
23 Tanks							

w/2,800,000 bbls Total Capacity		560,000					
Boom							
Boom - 20"			1,400				
NRC Environmental Service, Richmond **(San Francisco)**							
Barges / Tanks / Pumps							
Storage-Barge-Nooner		22,000					
NRC Environmental Service, San Francisco **(San Francisco)**							
Barges / Tanks / Pumps							
Storage-LBM1-Barge-4761		4,761					
Portable Tank - Storage-Baker/ Frac tank		496					
NRC Environmental Service, Pittsburgh **(San Francisco)**							
Barges / Tanks / Pumps							
Portable Tank - Storage-Baker/ Frac tank		496					
Portable Tank - Storage-Baker/ Frac tank		496					
Portable Tank - Storage-Baker/ Frac tank		496					
Portable Tank - Storage-Baker/ Frac tank		496					
Portable Tank - Storage-Baker/ Frac tank		496					
Portable Tank - Storage-Baker/ Frac tank		496					
Portable Tank - Storage-							

Baker/ Frac tank		496					

FIGURE B.1-2 - ON-WATER RESPONSE EQUIPMENT INVENTORY

EQUIPMENT	DE-RATED SKIMMING CAPACITY (BBL/DAY)	OIL/WATER WASTE CAPACITY (BBL)	BOOM (FEET)	SORBENT BOOM (BALES) 40'/BALE	SORBENT PADS (BALES) 100/BALE	DEPLOY TIME	EST TIME O/S
NRC Environmental Service, Pittsburgh **(San Francisco)**							
Barges / Tanks / Pumps							
Portable Tank - Storage- Baker/ Frac tank		496					
Portable Tank - Storage- Baker/ Frac tank		496					
Portable Tank - Storage- Baker/ Frac tank		496					

APPENDIX C Last Revised: May 2008

TANK TABLES, COMPANY FORMS, PLOT PLANS

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Figure C-1 - Tank Tables

Figure C-2 - Drainage Diagram

Figure C-3 - Evacuation Diagram

Figure C-4 - Discharge Prevention Meeting Log

Figure C-5 - Inspection Procedures

Figure C-6 - Annual Inspection Record

Figure C-7 - Secondary Containment Drainage Log

Figure C-8 - Reportable Spill History

Figure C-9 - Containment and Drainage Planning

FIGURE C-1 - TANK TABLES

Container/ Source	Failure/Cause	Total Capacity (gal)	Secondary Containment Volume Type (gal)	Tank Type	Year Constructed/ Installed	Quantity Stored (gal)	Direction of Flow/Rate (See Plot Plan)	Product Stored
ABOVEGROUND CONTAINERS -			(b) (7)(F) [redacted]					
8101	Overfill / Rupture / Leakage	(b) (7)(F) [redacted]		CR	1973	(b) (7)(F) [redacted]	North / nstantaneous	Refined Product
8102	Overfill / Rupture / Leakage			CR	1973		North / nstantaneous	Refined Product
5003	Overfill / Rupture / Leakage			CR	1973		North / nstantaneous	Refined Product
5004	Overfill / Rupture / Leakage			CR	1973		North / nstantaneous	Refined Product
5005	Overfill / Rupture / Leakage			CR	1973		North / nstantaneous	Refined Product
5006	Overfill / Rupture / Leakage			CR	1973		North / nstantaneous	Refined Product
5007	Overfill / Rupture / Leakage			CR	1973		North / nstantaneous	Refined Product
2008	Overfill / Rupture / Leakage			CR	1973		North / nstantaneous	Refined Product
1109	Overfill / Rupture / Leakage			CR	1973		North / nstantaneous	Refined Product
310	Overfill / Rupture / Leakage			CR	1973		North / nstantaneous	Slop Tank
11	Overfill / Rupture / Leakage			CR	1973		North / nstantaneous	Petroleum Products
12	Overfill / Rupture / Leakage			CR	1973		North / nstantaneous	Petroleum Products
500-13	Overfill / Rupture / Leakage			EFR	1974		East / nstantaneous	Dark Oils
500-14	Overfill / Rupture / Leakage			EFR	1974		East / nstantaneous	Dark Oils

500-15	Overfill / Rupture / Leakage	(b) (7)(F) [redacted]	EFR	1974	(b) (7)(F) [redacted]	East / Instantaneous	Dark Oils

Containment Type: 1=Earthen Berm and Floor, 2=Concrete Berm and Floor, 3=Earthen Berm and Concrete Floor, 4=Metal Berm and Floor, 5=Portable Containment or Inside Building, 6=Double Walled, 7=Coated Asphalt Materials, 8=Concrete Berm and Earthen, 9=Asphalt, Soil, and Concrete walls and Earthen Floor * Not in Containment Area, ** Curbing and containment system

FIGURE C-1 - TANK TABLES , CONTINUED

Container/ Source	Failure/Cause	Total Capacity (gal)	Secondary Containment Volume Type (gal)	Tank Type	Year Constructed/ Installed	Quantity Stored (gal)	Direction of Flow/Rate (See Plot Plan)	Product Stored
ABOVEGROUND CONTAINERS - Total: (b) (7)(F) [redacted]								
500-16	Overfill / Rupture / Leakage	(b) (7)(F) [redacted]		EFR	1974	(b) (7)(F) [redacted]	East / Instantaneous	Dark Oils
17	Overfill / Rupture / Leakage			CR	1974		East / Instantaneous	N/A
34	Overfill / Rupture / Leakage			CR	1973		East / Instantaneous	Water
35	Overfill / Rupture / Leakage			CR	1973		East / Instantaneous	Water
170-39	Overfill / Rupture / Leakage			CR	1980		East / Instantaneous	Light Oils
170-40	Overfill / Rupture / Leakage			CR	1980		East / Instantaneous	Light Oils
100-38	Overfill / Rupture / Leakage			IFR	2003		East / Instantaneous	Light Oils
100-45	Overfill / Rupture / Leakage			IFR	2003		East / Instantaneous	Light Oils
100-44	Overfill / Rupture / Leakage			IFR	2003		East / Instantaneous	Light Oils
200-43	Overfill / Rupture / Leakage			IFR	2006		East / Instantaneous	Light Oils
200-42	Overfill /			IFR	2006		East /	Light

	Rupture / Leakage	(b) (7)(F) [redacted]			(b) (7)(F) [redacted]	nstantaneous	Oils
150-52	Overfill / Rupture / Leakage	[redacted]	IFR	2007	[redacted]	East / nstantaneous	Light Oils
150-53	Overfill / Rupture / Leakage	[redacted]	IFR	2007	[redacted]	East / nstantaneous	Light Oils
150-54	Overfill / Rupture / Leakage	[redacted]	IFR	2007	[redacted]	East / nstantaneous	Light Oils
150-55	Overfill / Rupture / Leakage	[redacted]	IFR	2007	[redacted]	East / nstantaneous	Light Oils

Containment Type: 1=Earthen Berm and Floor, 2=Concrete Berm and Floor, 3=Earthen Berm and Concrete Floor, 4=Metal Berm and Floor, 5=Portable Containment or Inside Building, 6=Double Walled, 7=Coated Asphalt Materials, 8=Concrete Berm and Earthen, 9=Asphalt, Soil, and Concrete walls and Earthen Floor * Not in Containment Area, ** Curbing and containment system

FIGURE C-1 - TANK TABLES , CONTINUED

Container/ Source	Failure/Cause	Total Capacity (gal)	Secondary Containment Volume Type (gal)	Tank Type	Year Constructed/ Installed	Quantity Stored (gal)	Direction of Flow/Rate (See Plot Plan)	Product Stored
ABOVEGROUND CONTAINERS - Total: (b) (7)(F) [redacted]								
150-41	Overfill / Rupture / Leakage	(b) (7)(F) [redacted]		IFR	2007	(b) (7)(F) [redacted]	East / Instantaneous	Light Oils
100-37	Overfill / Rupture / Leakage	[redacted]		IFR	2007	[redacted]	East / Instantaneous	Light Oils
100-56	Overfill / Rupture / Leakage	[redacted]		IFR	2007	[redacted]	East / Instantaneous	Light Oils
100-57	Overfill / Rupture / Leakage	[redacted]		IFR	2007	[redacted]	East / Instantaneous	Light Oils
100-58	Overfill / Rupture / Leakage	[redacted]		IFR	2007	[redacted]	East / Instantaneous	Light Oils
150-51	Overfill / Rupture / Leakage	[redacted]		IFR	2007	[redacted]	East / Instantaneous	Light Oils
Facility Total: (b) [redacted]								

Containment Type: 1=Earthen Berm and Floor, 2=Concrete Berm and Floor, 3=Earthen Berm and Concrete Floor, 4=Metal Berm and Floor, 5=Portable Containment or Inside Building, 6=Double Walled, 7=Coated Asphalt Materials, 8=Concrete Berm and Earthen, 9=Asphalt, Soil, and Concrete walls and Earthen Floor * Not in Containment Area, ** Curbing and containment system

FIGURE C-2 - DRAINAGE DIAGRAM

Click here for Drainage Plan

FIGURE C-3 - EVACUATION DIAGRAM

Click here for Terminal Evacuation Plan

FIGURE C-4 - DISCHARGE PREVENTION MEETING LOG

Spill Prevention Briefing

- Company personnel are kept knowledgeable of equipment, safety factors, and operating conditions.
- Annual training sessions are conducted by the Division Safety Representative to assure oil handling personnel understand the SPCC Plan for the facility. These documented sessions keep personnel informed of their obligation to prevent pollution incidents and to improve spill control and response techniques.

Note: This form is a sample.

DATE	ATTENDEES

Subject/Issue Identified	Required Action	Implementation Date

FIGURE C-5 - INSPECTION PROCEDURES

INSPECTION PROCEDURE	DATE
A. ROUTINE VISUAL INSPECTION	
• Check tank connections for leaks and localized dead vegetation	
• Inspect drains for accumulation of oil	
• Check tanks for gaps between tank and foundation and damage caused by vegetation roots	
• Check valves and packing for leaks	
• Check drains and sumps for accumulation of oil and proper operation of level controls and pumps	
• Check tank seams for leaks, including drips, puddles, discolored area or localized dead vegetation	
• Check all tank and piping surfaces for signs of external corrosion	
• Check base of tanks for evidence of settling, leaks, including drips, puddles or discolored areas	
• Check piping for bowing between supports, leaks, including drips, puddles, discolored area, or localized dead vegetation	
• Check vent system outlets to ensure that they are not obstructed	

• Check secondary containment for discoloration and cracks or holes. Special attention should be given to seams and locations where piping goes through the deck, curbing or dikes. Ensure dike valves are closed and sealed	
• Check secondary containment for permeability, debris, erosion, location/status of pipes, inlets, drainage beneath tanks, and level of precipitation in dike vs. available capacity	
• Check secondary containment for presence of water in diked area. Follow appropriate Company procedures after visual inspection of the water to determine if sheen is present on the water	
• Check all gates to ensure that only the entrances/exits currently in use by authorized personnel are open and unlocked	
B. ANNUAL INSPECTIONS	
• Check facility lighting to ensure all are functioning	
• Check facility fencing for damages that would allow unauthorized entry	
• Inspect sumps for the accumulation of oil	
• Inspect diked/curbed areas for the accumulation of oil	
• Inspect drip pans on lift stations for the accumulation of oil	
• Inspect all tanks for proper operation including gauges, sight glasses, level controls and pressure controls	
• Inspect valves and valve glands for proper operation and ensure complete valve closure (leak proof)	
• Inspect sump for proper operation. Manually gauge sump and pump out if level is high	
• Examine the outside of the tank for signs of corrosion, damaged paint surfaces and signs of leaking	
• Inspect pipelines for signs of leaking or damage	
• Inspect flanges for signs of leaking or damage	
• Inspect joints for signs of leaking or damage	

FIGURE C-6 - ANNUAL INSPECTION RECORD

(Other versions of this form may be used)

YEAR	MONTH	DATE	INITIALS	COMMENTS

FIGURE C-7 - SECONDARY CONTAINMENT DRAINAGE LOG

(Other versions of this form may be used)

DATE	TIME STARTED	TIME ENDED	OPERATOR NAME	SIGNATURE	COMMENTS

SECONDARY CONTAINMENT DRAINAGE PROCEDURES
1. Inspect water inside containment for sheen. Indicate sheen/no sheen in comments. 2. Open valve or start pump. 3. Monitor drainage. 4. Close valve and secure with seal or lock/secure pump. 5. Fill out drainage log and sign.

FIGURE C-8 - REPORTABLE SPILL HISTORY*

Date of Discharge(s):	11/02/2001
List of Discharge Causes:	Flange on Loading arm broke
Material(s) Discharged:	Fuel Oil
Amount of Discharges in Gallons:	10 (gals)
Amount That Reached Navigable Waters (if applicable):	N/A
Effectiveness and Capacity of Secondary Containment:	N/A
Cleanup Actions Taken:	N/A
Steps Taken to Reduce Possibility of Reoccurrence:	New Procedure
Total Oil Storage Capacity of Tank(s) or Impoundment(s) From Which Material Discharged:	N/A
Enforcement Actions:	N/A
Effectiveness of Monitoring Equipment:	N/A
Spill Detection:	N/A

*Reportable spill, as defined in 40 CFR Part 110, is a discharge of oil that violates applicable water quality standards or cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

FIGURE C-8 - REPORTABLE SPILL HISTORY*

Date of Discharge(s):	11/14/2002

List of Discharge Causes:	Gasket Failure
Material(s) Discharged:	Gas Oil
Amount of Discharges in Gallons:	1 (gals)
Amount That Reached Navigable Waters (if applicable):	N/A
Effectiveness and Capacity of Secondary Containment:	N/A
Cleanup Actions Taken:	Repaired Gasket
Steps Taken to Reduce Possibility of Reoccurrence:	N/A
Total Oil Storage Capacity of Tank(s) or Impoundment(s) From Which Material Discharged:	N/A
Enforcement Actions:	N/A
Effectiveness of Monitoring Equipment:	N/A
Spill Detection:	N/A

*Reportable spill, as defined in 40 CFR Part 110, is a discharge of oil that violates applicable water quality standards or cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

FIGURE C-8 - REPORTABLE SPILL HISTORY*

Date of Discharge(s):	01/13/2006
List of Discharge Causes:	Leak in electric sump pump discharge elbow
Material(s) Discharged:	Oil Water mix
Amount of Discharges in Gallons:	Less than 2 (gals)
Amount That Reached Navigable Waters (if applicable):	N/A
Effectiveness and Capacity of Secondary Containment:	N/A
Cleanup Actions Taken:	Replace elbow and revised procedure to use the air powered pump for draining of all oil lines and use the electric pump only for removing rainwater from the sump.
Steps Taken to Reduce Possibility of Reoccurrence:	N/A

Total Oil Storage Capacity of Tank(s) or Impoundment(s) From Which Material Discharged:	N/A
Enforcement Actions:	N/A
Effectiveness of Monitoring Equipment:	N/A
Spill Detection:	N/A

*Reportable spill, as defined in 40 CFR Part 110, is a discharge of oil that violates applicable water quality standards or cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

FIGURE C-8 - REPORTABLE SPILL HISTORY*

Date of Discharge(s):	04/23/2007
List of Discharge Causes:	External corrosion
Material(s) Discharged:	Crude oil
Amount of Discharges in Gallons:	1 (gals)
Amount That Reached Navigable Waters (if applicable):	N/A
Effectiveness and Capacity of Secondary Containment:	N/A
Cleanup Actions Taken:	Investigating maintenance history of pipeline. Clamp put on pipe and it was taken out of service until repairs can be made.
Steps Taken to Reduce Possibility of Reoccurrence:	N/A
Total Oil Storage Capacity of Tank(s) or Impoundment(s) From Which Material Discharged:	N/A
Enforcement Actions:	N/A
Effectiveness of Monitoring Equipment:	N/A
Spill Detection:	N/A

*Reportable spill, as defined in 40 CFR Part 110, is a discharge of oil that violates applicable water quality standards or cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

FIGURE C-8 - REPORTABLE SPILL HISTORY*

Date of Discharge(s):	09/08/2007
List of Discharge Causes:	Incorrect operation
Material(s) Discharged:	Gasoline Reformate
Amount of Discharges in Gallons:	168 (bbls)
Amount That Reached Navigable Waters (if applicable):	N/A
Effectiveness and Capacity of Secondary Containment:	N/A
Cleanup Actions Taken:	Operator was trained and placed on probation.
Steps Taken to Reduce Possibility of Reoccurrence:	N/A
Total Oil Storage Capacity of Tank(s) or Impoundment(s) From Which Material Discharged:	N/A
Enforcement Actions:	N/A
Effectiveness of Monitoring Equipment:	N/A
Spill Detection:	N/A

*Reportable spill, as defined in 40 CFR Part 110, is a discharge of oil that violates applicable water quality standards or cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

FIGURE C-8 - REPORTABLE SPILL HISTORY*

Date of Discharge(s):	03/05/2008
List of Discharge Causes:	Heat expansion
Material(s) Discharged:	Gasoline
Amount of Discharges in Gallons:	10 (gals)
Amount That Reached Navigable Waters (if applicable):	N/A
Effectiveness and Capacity of Secondary Containment:	N/A
Cleanup Actions Taken:	Cleaned up soil, closed valve and drained down pipeline.
Steps Taken to Reduce	N/A

Possibility of Reoccurrence:	
Total Oil Storage Capacity of Tank(s) or Impoundment(s) From Which Material Discharged:	N/A
Enforcement Actions:	N/A
Effectiveness of Monitoring Equipment:	N/A
Spill Detection:	N/A

*Reportable spill, as defined in 40 CFR Part 110, is a discharge of oil that violates applicable water quality standards or cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

FIGURE C-8 - REPORTABLE SPILL HISTORY*

Date of Discharge(s):	04/20/2008
List of Discharge Causes:	Contractor forgot to replace plug in the bleeder line after repairs.
Material(s) Discharged:	Gasoline
Amount of Discharges in Gallons:	12 (gals)
Amount That Reached Navigable Waters (if applicable):	N/A
Effectiveness and Capacity of Secondary Containment:	N/A
Cleanup Actions Taken:	Cleaned up soil and replaced the plug in the bleeder line.
Steps Taken to Reduce Possibility of Reoccurrence:	N/A
Total Oil Storage Capacity of Tank(s) or Impoundment(s) From Which Material Discharged:	N/A
Enforcement Actions:	N/A
Effectiveness of Monitoring Equipment:	N/A
Spill Detection:	N/A

*Reportable spill, as defined in 40 CFR Part 110, is a discharge of oil that violates applicable water quality standards or cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

FIGURE C-8 - REPORTABLE SPILL HISTORY*

Date of Discharge(s):	6/24/2008
List of Discharge Causes:	Gasket failure on pipeline during a hydrotest of Line 1083.
Material(s) Discharged:	Crude oil
Amount of Discharges in Gallons:	21 (gals)
Amount That Reached Navigable Waters (if applicable):	N/A
Effectiveness and Capacity of Secondary Containment:	N/A
Cleanup Actions Taken:	Replaced gasket and re-tested the line. Replaced vehicle sprayed with oil.
Steps Taken to Reduce Possibility of Reoccurrence:	N/A
Total Oil Storage Capacity of Tank(s) or Impoundment(s) From Which Material Discharged:	N/A
Enforcement Actions:	N/A
Effectiveness of Monitoring Equipment:	N/A
Spill Detection:	N/A

*Reportable spill, as defined in 40 CFR Part 110, is a discharge of oil that violates applicable water quality standards or cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

FIGURE C-8 - REPORTABLE SPILL HISTORY*

Date of Discharge(s):	7/23/08
List of Discharge Causes:	Equipment failure
Material(s) Discharged:	Crude oil
Amount of Discharges in Gallons:	2 ()
Amount That Reached Navigable Waters (if applicable):	()
Effectiveness and Capacity of Secondary Containment:	

Cleanup Actions Taken:	Mostly contained in secondary containment under the valve.
Steps Taken to Reduce Possibility of Reoccurrence:	
Total Oil Storage Capacity of Tank(s) or Impoundment(s) From Which Material Discharged:	()
Enforcement Actions:	
Effectiveness of Monitoring Equipment:	
Spill Detection:	

*Reportable spill, as defined in 40 CFR Part 110, is a discharge of oil that violates applicable water quality standards or cause a film or sheen upon or discoloration of the surface of the water or adjoining shorelines or cause a sludge or emulsion to be deposited beneath the surface of the water or upon adjoining shorelines.

FIGURE C-9 - CONTAINMENT AND DRAINAGE PLANNING

FACTORS
Available Volume of Containment
Refer to FIGURE C-5.
Route(s) of Drainage
Refer to FIGURE C-7.
Construction Materials Used in Drainage Troughs
Dirt
Type and Number of Valves Separators
2 - 4 inch gate, 9 - 12 inch gate
Sump Pump Capacities
Dock sump - 40 gpm, FOT sump - 40 gpm
Containment Capacity of Weirs and Booms
None
Other Clean Up Materials
Refer to SECTION 7.1.1 and APPENDIX B.

APPENDIX D Last Revised: May 2008

HAZARD EVALUATION AND RISK ANALYSIS

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D.1 Introduction

D.2 California OSPR Site-Specific Risk and Hazard Analysis

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D.1 INTRODUCTION

The Risk and Hazard Analysis on the Terminal was conducted using the methodology described below.

The Hazard Evaluation addresses the potential for crude oil and petroleum product releases and can assist in the identification and implementation of spill prevention measures, planning for potential spills, and reduction of spill impacts. For convenience, the analysis is presented in both State of California and federal formats.

A list of potential spill sources is identified in **FIGURE C-1**. This figure describes type and volumes of secondary containment areas along with tank manufacturer dates. All liquid storage tanks are visually inspected on a weekly basis. A description of facility operations is included in **FIGURE 1-2**.

D.2 CALIFORNIA OSPR SITE-SPECIFIC RISK AND HAZARD ANALYSIS

D.2.1 Qualitative Analysis

Tank Farm

There are seven potential risks of spillage in the tank farm:

1. During normal operations, tanks are filled with oil delivered by pipeline, or tank vessel.

2. There is a potential for the pipelines to rupture or the associated valves, flanges, meters, etc., to fail, which could result in a loss of oil.

3. There is a potential for overfilling a tank during delivery.

4. A catastrophic failure of a tank might occur.

5. Due to corrosion or fatigue, small leaks can develop in piping or in the tank sides and bottoms which can, over long time periods, discharge measurable quantities of product.

6. For external floating-roof tanks, a failure of a roof drain piping system may create a spill during roof draining.

7. There is a potential for hose rupture during tank-to-tank transfers that rely on portable pumps and hoses.

D.2.2 Quantitative Analysis

This section describes the major Facility equipment and operations that may present potential risk of spillage.

In accordance with the EPA OPA Model Plan, *The Handbook of Chemical Hazard Analysis Procedures* (EPA, FEMA, DOT) was used as a reference for estimating frequencies. The document provides worksheets that apply frequency factors to the number of tanks, hoses, transfers, and feet of pipe for a “fixed facility ” and do not specifically include wharf loading arm transfers.

Results of the worksheets are based on the Facility’s number of storage tanks, amount of piping (over 8 inches in diameter), and the average number of truck transfers per day. The quantitative

analysis will show which of the three will pose a greater risk and by how much. The relative risk involved, however, is minimized by the Facility's sophisticated instrumentation, procedures, and containment systems.

Estimated Facility Release Frequencies (spills per year)

Loading/Unloading Hoses	
Loading/Unloading Hoses	0.02
Piping Total	
Piping, Total	0.085
1" hole	0.077
full pipe diameter	0.008
Storage Tanks Total	
Storage Tanks, Total	0.0021
10% of contents (1" hole)	0.0019
100% of contents	0.0002

Overall, the qualitative analysis of the potential for a spill will determine the probability for an uncontrolled release to occur at the Facility.

The potential source of a significant oil spill at the Facility is evaluated below using both qualitative and quantitative approaches. A general layout of the Facility is shown in **FIGURE 1-5**. Control features, maintenance, and operation are designed to prevent potential spills. Immediate response measures to be carried out to control a spill are outlined in **SECTION 2**.

This section presents the risk and hazard analysis information in accordance with California OSPR requirements in Section 817.02(c). The analysis was conducted utilizing *Guidelines for Hazard Evaluation Procedures* developed by the American Institute of Chemical Engineers. A description of the methodology is provided in **SECTION D.2.5**.

D.2.3 History of Significant Spills 817.02(c)(1)(A)(1) through (4)

See **FIGURE C-8** for a list of spills one barrel or greater that have occurred at the Terminal.

D.2.4 Expertise of the Risk and Hazard Analysis Group 817.02(c)(1)(C)(1)

The following table (**FIGURE D.2-1**) describes the expertise of the qualified individuals who developed the Facility hazard evaluation and site risk analysis.

FIGURE D.2-1 - RISK AND HAZARD ANALYSIS WORKING GROUP QUALIFICATIONS

NAME	TITLE	EXPERIENCE
Peter M. Hendricks, P.E.	Chemical Engineer	He has work experience as a refinery process engineer, an oil processing facility project engineer, and an environmental engineer designing waste treatment systems. This experience includes performing risk and hazard

		analyses for complex process facilities, including what if analyses, fault tree analyses, and failure mode and effect analyses. Mr. Hendricks participated in an initial review of operating procedures and facility diagrams, and he then participated in the facility "What-if/Checklist" review at the facility.
Lisa M. Swanson, P.E.	Chemical Engineer	She has work experience in environmental engineering and regulatory compliance. She participated in the initial review of operating procedures and facility diagrams, and generated the initial what-if questions and associated checklist for use in the facility hazard evaluation. She conducted the "What if/Checklist" review at the facility and documented the results.
Wallace R. Johnson	Former Terminal Manager for Wickland Oil Terminals	Wallace R. Johnson is specifically familiar with the facility design, operations, and history. He had been at this facility for 1-1/2 years, and has over 30 years of experience in petroleum operations. He conducted a facility walkthrough for Peter Hendricks and Lisa Swanson and participated in the "What if/Checklist" evaluation that was structured around the preliminary "what if" questions and checklist.
Richard W. Brown	Former Terminal Superintendent	Richard W. Brown had been associated with the Martinez Terminal for approximately 20 years. He is thoroughly familiar with transfer operations. He participated in the "What if/Checklist" hazard evaluation.

D.2.5 Risk and Hazard Analysis - What-If / Checklist Method 817.02(c)(1)(B)

Demonstration that the Analysis is Appropriate and Adequate 817.02(c)(1)(C)(2)

The What-If / Checklist analysis technique as described in the American Institute of Chemical

Engineers (AIChE) *Guidelines for Hazard Evaluation Procedures* was utilized for the conduct of the Risk and Hazard Analysis and determined to be appropriate for this Facility. Factors that lead to a What-If / Checklist analysis being determined to be appropriate and adequate include the lack of a need for a quantitative risk assessment; the focus of the total procedure being on oil spills, and not fires, toxicity, or other potential spill related hazards; the existence of specific operating procedures and known history of spill events; and the simplicity of the facility and its operations.

Risks Posed by the Facility and Facility Changes 817.02(c)(1)(C)(3) and (4)

The What-If / Checklist hazard analysis addresses the risks of oil spills posed by the current facility and its operating procedures and practices. Significant changes to the Facility could affect the applicability of this hazard evaluation.

The Hazard Analysis Method Used 817.02(c)(1)(D)(1)

The What-If / Checklist hazard evaluation method was used. A specific list of "what-if" questions was developed based on Facility-specific diagrams and operating manuals. What-if questions were supplemented by a Facility-specific checklist, which was generated from Facility operating procedures. Complete documentation of the hazard analysis is on file at the Facility.

D.2.6 Inventory of Hazards Identified 817.02(c)(1)(D)(2) through (5)

The AIChE guidelines define a hazard, in part, as "the combination of a hazardous material, an operating environment, and certain unplanned events that could result in an accident." For the purposes of this hazard evaluation, the hazards considered were limited to those that may result in an oil discharge. Those hazards are summarized in **FIGURE D.2-2**. This table also contains:

- An analysis of the potential oil discharges (817.02(c)(1)(D)(3)), including actual historic spills.
- Control measures to mitigate or eliminate the hazards identified. (817.02(c)(1)(D)(4))
- Oil spills that might occur after any mitigating controls have been implemented. (817.02(c)(1)(D)(5))

FIGURE D.2-2 - RESULTS OF THE RISK AND HAZARD ANALYSIS

HAZARDS IDENTIFIED	POTENTIAL OIL DISCHARGE	CONTROL MEASURES TO MITIGATE / ELIMINATE HAZARDS	POTENTIAL OIL SPILLS THAT MAY STILL OCCUR
Tank(s) rupture due to seismic event	Tank(s) inventory to containment, potential spill to soil or water if containment fails	Existing containment, API650 seismic design standards, internal inspection when tank is emptied	Reduced probability of tank(s) inventory to containment, soil or water

Piping failure during transfer	Transfer rate until shutdown, and pipeline inventory, to water:	Existing annual testing, operating and inspection procedures, check valve prevents flow if failure is in loading arm or hose	Reduced probability of spill to water
Vessel crashes into dock	Vessel and dock pipeline inventory to water	Existing procedures and conditions including tug escorts, observed landings, warning lights, shoreside limited by water depth, site access limited by bridge during fog	Existing procedures and conditions including tug escorts, observed landings, warning lights, shoreside limited by water depth, site access limited by bridge during fog
Power failure during a storm event	Potential sump or o/w separator overflow	Existing procedures to check sumps and OWS during storms and after power failures, existing ability to manually operate transfer systems	Reduced probability of sump or o/w separator overflow

D.2.7 Documentation 817.02(c)(1)(E)

The documentation and materials (drawings, diagrams, plot plans, etc.) used in the Risk and Hazard Analysis are maintained within the Terminal.

D.2.8 Off-Site Consequences / Resources at Risk 817.02(c)(2)

This Offsite Consequence Analysis (OCA) is intended to supplement the Hazard Analysis for identifying the impact area from the Reasonable Worst Case Discharge (RWCD) at the Facility. The hazard analysis, which is documented separately, focused on the identification of possible hazards that may result in an oil spill from the Facility. The goal of the OCA is to identify from a given spill scenario the credible impact area and the potentially impacted sensitive environmental sites over a 72-hour period.

The OCA involved a progressive study of the spill site involving evaluation of the sensitivity of spill trajectories to pessimistic seasonal weather and environmental conditions, 72-hour spill trajectory for the identified pessimistic conditions, and identification of the area at risk from a spill and the potential impacted sensitive sites.

The results of the trajectory analyses are shown on color maps (**SECTION 6.11**) delineating time contours for the extent and impact of oil discharged from the Terminal location. The trajectory plots display the differences with seasonal conditions and types of products.

The impact areas have been correlated to the sites identified by the ACP (12/97 ed.) The planned protection and recovery strategies would follow the recommendations contained in the ACP. This information includes a description of the area, shoreline characteristics, identification of sensitive marine resources, and strategy for deployment of resources.

FIGURE D.2-3 has oil spill modeling scenario information for this Facility. See **SECTION 6** for a detailed discussion of sensitive areas and response tactics, including a detailed vulnerability analysis, tactical plans,

sensitivity maps, and trajectory maps.

FIGURE D.2-3 OIL SPILL MODELING SCENARIO INFORMATION

Facility:	Martinez Terminal
Product:	Group 3 oil (Prudhoe Bay Crude Oil)
Quantity:	5,830 bbls
Source Location:	Rupture of line at dock, Considering: Line pumping rate (20,000 bph), Time for discovery, and S/D (30 min.)
Seasonal Considerations:	Scenario during both summer and winter conditions

D.3 HAZARD EVALUATION AND IDENTIFICATION (EPA)

Hazard identification, as defined by 40 CFR 112, requires a list of the petroleum and hazardous material storage tanks, surface impoundments, related information on technical specifications, loading and unloading operations, day to day operations, secondary containment volumes, and normal daily throughput for the facility that could potentially release oil to the environment.

A description and listing of facility equipment and storage is provided in **FIGURE C-1**. In addition, a hazard analysis was conducted at the facility, according to California OSPR regulation, which evaluated potential sources that could potentially release oil into the environment. This information may be found in **APPENDIX D.2**.

D.4 VULNERABILITY ANALYSIS

A vulnerability analysis was performed to address the potential effects of an oil spill within the planning distance of this facility. Refer to **SECTION 6.6** for a detailed list of vulnerabilities. The following features may be impacted by a spill:

Water Intakes	Schools	Medical Facilities	Residential Areas	Businesses	Wetlands or other Sensitive Environments	Fish and Wildlife	Lakes and Streams	Endangered Flora and Fauna	Recreational Areas	Transportation Routes (air, land, water)	Utilities	Other Applicable Areas
				x	x	x	x	x	x			x

D.4.1 Analysis of the Potential for a Spill

The probability of a spill occurring at this facility is minimal for the following reasons:

- Tanks are constructed in accordance with applicable engineering standards.
- Tank age is reviewed as a potential factor (refer to **FIGURE C-1**).
- Truck loading facilities are equipped with concrete pads with a spill collection drain system which returns spills to the recovery system.
- All trucks are monitored during tank unloading procedures.
- Non-SCADA product transfers are monitored and only conducted when facilities are manned.

- SCADA product transfers are monitored via pipeline Control Center SCADA (if applicable).
- Facilities are inspected frequently for evidence of corrosion and leaks according to applicable API standards.
- Personnel are trained in procedures to prevent pollution.
- The horizontal range of a spill is dependent upon the topography and distance to the nearest water body described in more detail in **FIGURE D.6-1**.
- Natural disasters are not likely at these facilities; however, these facilities may experience flooding, tornadoes or a lightning strike.

D.4.1 Analysis of the Potential for a Spill**, Continued**

- Company personnel prepare for natural disasters by monitoring weather reports and warnings and taking appropriate safety precautions.
- The potential for a natural disaster is acknowledged, as appropriate, during drills and exercises.

D.5 INSPECTION AND SPILL DETECTION

Inspection

In accordance with 40 CFR 112.7 (e)(8), each facility includes written procedures and records of inspection. The inspection shall include tanks, secondary containment, and response equipment at the facility.

Facility self-inspection requires two steps:

- Checklist of items to inspect
- Method of recording the actual inspection and its findings; records must be maintained for five years.

Facility specific procedures for transfer and secondary containment inspections are provided in **APPENDIX C**. Response equipment inspection information is provided in **SECTION 7.1.2**. **FIGURE D.5-1** may be used to record equipment inspection information.

Detection

Detection of a discharge from the Company facility or pipeline may occur in a number of ways including:

- Automated detection by the Supervisory Control and Data Acquisition (SCADA) system

(if applicable)

- Local alarm notification
- Visual detection by Company personnel
- Visual detection by the public

(b) (7)(F)

[redacted]

D.5 INSPECTION AND SPILL DETECTION, CONTINUED

(b) (7)(F)

[redacted]

Maintenance Manual.

(b) (7)(F)

[redacted]

- **Training**

  All operators are required to take training modules including emergency responses.

Visual detection by Company personnel

Aerial patrol flights or land based pipeline patrols will be made 26 times a year not to exceed 21 days apart for pipelines subject to 49 CFR 194 and 195. If unable to fly area personnel will walk or drive the right-of-way. The intent of the patrol is to observe the area directly over the pipeline right-of-way for leaks, exposed pipes, washes, missing markers and other unusual conditions. Construction on either side of the pipeline right-of-way is also monitored.

Discharges to the land or surface waters may also be detected by Company personnel during regular operations and inspections. If a leak is detected, the appropriate actions are taken including but not limited to:

- Notifications as per **SECTION 3**
- A preliminary assessment of the incident area
- If appropriate, initiate initial response actions per **SECTION 2**

FIGURE 2.1-1 provides a checklist for initial response actions.

D.5 INSPECTION AND SPILL DETECTION, CONTINUED

Visual detection by the public

Right-of-way marker signs are installed and maintained at road crossing and other noticeable points and provide an Operations Control 24-hour number for reporting emergency situations. Also, facility signs are installed and maintained on perimeter fencing. The Company also participates in the "call before you dig" or "One Call" utility notification services which can be contacted to report a leak and determine the owner/operator of the pipeline. If the notification is made to a local office or pump station, the Company representative receiving the call will generally implement the following actions:

- Notify the Operations Control Center and regional/designated office (as applicable)
- Dispatch Company field personnel to the site to confirm discharge and conduct preliminary assessment
- Notify their immediate area supervisor and provide assessment results

FIGURE D.5-1 - RESPONSE EQUIPMENT INSPECTION

(Other versions of this form may be used.)

ITEM	QUANTITY	LOCATION	TIME TO ACCESS/RESPOND	CONDITION	DATE USED/TESTED	SHELF LIFE	INSPECTION DATE

Inspector's Signature

D.6 PLANNING DISTANCE CALCULATIONS

To evaluate the potential risk to sensitive resources in the area, should a spill occur, a planning distance was calculated based on the following characteristics of this Facility and vicinity according to 40 CFR 112, Attachment C-III. Factors utilized include distance to the nearest body of moving water/storm sewer/drainage ditch or swale, geology, and topography of the area.

FIGURE D.6-1 provides the planning distance calculation worksheets for this Facility.

FIGURE D.6-1 - PLANNING DISTANCE CALCULATIONS

Intermediate Calculations

$\propto$ = elevation (in feet) = [stream elevation @ facility] - [stream elevation @ receptor (or 20 mile point)]

ß = horizontal distance from facility to receptor (or 20 mile point) in miles

s = average steam slope = $\propto$ / ß / 5280

r = hydraulic radius (in feet) = average mid channel depth x 0.667

n = Manning's roughness coefficient from Table B

To calculate stream velocity (in ft./sec.), use: $v = 1.5/n \times r^{2/3} \times s^{1/2}$

Calculation of **PLANNING DISTANCE**

d = calculated planning distance (miles)

v = Chezy-Manning based stream velocity (ft./Sec.)

t = spill response time interval (from Table A)

c = 0.68 (sec-mile/hr-ft conversion factor)

d = v x t x c = planning distance equation

Table A	
Substantial Harm Planning Time (hours) Port Areas as Identified in 40 CFR § 112	
Boston, MA	15
New York, NY	15
Delaware Bay and River to Philadelphia	15
St. Croix, VI	15
Pascagoula, MS	15
Mississippi River from Southwest Pass, LA to Baton Rouge, LA	15
Louisiana Offshore Oil Port (LOOP)	15
Lake Charles, LA	15
Sabine-Natchez River, TX	16
Galveston Bay and Houston Ship Channel	16
Corpus Christi, TX	16
Los Angeles/Long Beach Harbor, CA	16
San Francisco Bay, San Pablo Bay, Carquinez Strait, and Suisun Bay to Antioch, CA	16
Straits of Juan de Fuca from Port Angeles, WA to and including Puget Sound	16
Prince William Sound, AK	16
Others are specified by RA for EPA Region	16
Allow other lakes, rivers canals inland and near shore areas	27

Table B	
Manning's Roughness Coefficient for Various Natural Stream Types (n)	
Minor Streams (Top width < 100 ft.)	
Clean:	
Straight	.03
Winding	.04
Sluggish (woody, deep pools):	
No trees/brush	.06
Trees and/or brush	.10
Major Streams (Top width > 100 ft.)	
Regular section:	
No boulders/brush	.036
Irregular section:	
Brush	.06

FIGURE D.6-1 - PLANNING DISTANCE CALCULATIONS, CONTINUED

Site Investigation

The following information is utilized to calculate the planning distance for each Facility.

From USGS Quad/Topo Sheets

- Delineate watershed and downgradient receptor streams for runoff/release.
- Determine whether navigable water is within 0.5 miles of the facility (or would be in worst case discharge scenario).

From Facility

- Identify alternate drainage pathways to navigable waters; namely storm drainage system/piping.
- Establish list of soil or other factors effecting transport of oil over land.

From maps, local/state authorities or investigation

- Identify fish/wildlife sensitivities and habitats in downgradient areas along with public drinking water intake locations.
- Determine stream pool elevations at Facility and at receptor points or at 20 miles downstream (maximum) for more distant receptors.
- Characterize stream properties for accurate determination of roughness coefficient (n) and average mid-channel depth or hydraulic radius (r).

The total planning distance equals d.

	Martinez Terminal - Suisin Bay - Tidally Influenced
First receptor	n/a
First receptor location (miles)	n/a
∝ (feet)	n/a
ß (miles)	n/a
s (feet/mile)	n/a
Avg. mid-channel depth (feet)	n/a
r (feet)	n/a
n	n/a
v (feet/second)	n/a
t (hours)	n/a
c (seconds per mile/hours per foot)	n/a
d (total planning distance)	15 mile radius

FIGURE D.6-1 - PLANNING DISTANCE CALCULATIONS, CONTINUED

If Tidally Influenced

Planning distance calculations are based on the following factors and guidelines in accordance with 40 CFR Part 112 Attachment C-III, 4.2:

- The horizontal range of a potential oil spill is influenced by the wind direction and tidal stage, however, it is expected to spread quickly.
- Tidally influenced waters.
- Persistent and non-persistent product.
- Resulting planning distance is 15 miles persistent oils or 5 miles for non-persistent oils from each Facility down current during ebb tide and to the point of maximum tidal influence or 15 miles persistent oils or 5 miles for non-persistent oils, whichever is less, during flood tide.

D.7 DISCHARGE SCENARIOS

The equipment and personnel to respond to a spill are available from several sources and are provided with the equipment and contractors in **SECTION 7.1.1** and **APPENDIX B.1.1**. The following sections are discussions of these scenarios.

D.7.1 Small and Medium Discharge Scenarios **(EPA and USCG/OSPR)**

- The purpose of this section is to identify the sources and sizes of small and medium discharges as defined by OPA 90 regulations.
- Potential spill scenarios may include tank overflow, valve failure, tank failure, pipe failure, hose failure, or pump seal failure; these spills would likely be in contained areas and would be unlikely to travel off-site.
- The Company would respond to these types of incidents in the same manner as a worst case discharge, but at a level appropriate to the incident size; differences in response are described in the worst case scenario discussion described in this Appendix. The Company's response in such an event would in no way obviate the liability of any other responsible parties.
- Resources are identified in **FIGURE 3.1-6**, **SECTION 7.1.1**, and **APPENDIX B.1.1**.
- All resources shall be capable of arriving at the Facility within the applicable response tier requirements (Tier 1 = 12 hours; Tier 2 = 36 hours; Tier 3 = 60 hours).

The following table lists various facility operations and corresponding components which might be the source of a small, medium, and worst case discharge:

FACILITY OPERATIONS AND COMPONENTS	SMALL DISCHARGE (up to 2,100 gallons)	MEDIUM DISCHARGE (2,100 to 36,000 gallons)	WORST CASE DISCHARGE (volume largest tank)
Oil transfer operations	Hose failure	Hose failure	Not applicable
Facility maintenance operations	Leak from periodic maintenance, line not completely drained when opened	Seal failure Overfill	Not applicable
Facility piping	Flange, gasket, threaded connection	Seal failure Overfill	Not applicable
Pumps and sumps	Seal failure Overfill	Seal failure Overfill	Not applicable
Oil storage tanks	Overfill	Overfill	Catastrophic failure of largest tank
Age and condition of facility and components	Flange, gasket, threaded connector	Pipeline failure Seal failure	Catastrophic failure of largest tank

D.7.1 Small and Medium Discharge Scenarios (EPA and USCG/OSPR), Continued

The following table describes the Facility-specific small discharge scenario.

SMALL DISCHARGE SCENARIO
The average most probable (small) discharge could result from: - tank overflow - small hose or pipeline leak or rupture - human error during product handling. The average most probable discharge is defined by EPA as less than or equal to 50 barrels, not to exceed the worst-case discharge. The USCG average most probable discharge is the lesser of 50 barrels or 1 percent of the volume of the worst cast discharge (USCG) which calculates as 75 bbls. For the Martinez Terminal the Average Most Probable Discharge planning volume is 50 barrels.

Note: Equipment and manpower resources are detailed in **FIGURE 3.1-4**, **FIGURE 3.1-5**, **SECTION 7.1.1**, and **APPENDIX B.1.1**.

D.7.1 Small and Medium Discharge Scenarios (EPA and USCG/OSPR), Continued

The following table describes the Facility-specific small discharge response resource.

SMALL DISCHARGE RESPONSE RESOURCE
Rehabilitation of oiled wildlife will be coordinated through activation of the California Oiled Wildlife Network. DO NOT DEPLOY BOOM IF THE SPILLED PRODUCT IS GASOLINE OR A GASOLINE COMPONENT. The initial response contractor on-call is So. Cal Ship Services. They would mobilize the on-call boom boat to deploy containment boom at the dock or spill site. Additional resources would be mobilized from NRC Environmental Services. A listing of contracted OSRO resources is provided in APPENDIX B. This Plan will utilize the strategies for response and cleanup identified within the ACP as appropriate to the specific response conditions. If oil impacts the shoreline, mudflats, marsh, other vegetation or soils, the clean-up procedures must consider these sensitive areas because some clean-up measures can do substantial harm to these sensitive areas. Specific measures to be taken to minimize damage to the environment during cleanup operations are discussed in the ACP. Non-mechanical methods for clean-up operations could involve the use of chemical cleaning products or appropriate bioremediation products. Through association with OSROs, the Martinez Terminal has available inventory including aircraft, dispersants, re-applying methods, and application gear. Bioremediation and natural recovery are two non-mechanical methods that could provide high success rates. Specific details regarding the use of non-mechanical methods for response operations, including the approval process, are presented in the ACP. Temporary berm material (soil) could be placed along the eastern margin of the terminal prior to the wharf and docking facilities in response to a spill scenario, if warranted. The material would be collected from various areas of the facility and nearby areas to accommodate the berm construction. Deployment methods would include mechanical and manual methods.

Note: Equipment and manpower resources are detailed in **FIGURE 3.1-4**, **FIGURE 3.1-5**, **SECTION 7.1.1**, and **APPENDIX B.1.1**.

D.7.1 Small and Medium Discharge Scenarios (EPA and USCG/OSPR), Continued

The following table describes the Facility-specific medium discharge scenario.

Medium Discharge Scenario
The maximum most probable (medium) discharge (MMPD) could result from: - Equipment/valve/leak detection system malfunction - Intra-facility pipeline leak or rupture - Small tank leak or rupture - Minor collision at the dock. EPA defines the maximum most probable discharge as 857 barrels or 10% of the capacity of the single largest aboveground storage tank, whichever is less. With the largest storage tank volume of (b) (7)(F) [redacted] s which is greater than the EPA cap.

Thus, the EPA MMPD would be 857 bbls.

USCG defines this discharge as the lesser of 1,200 barrels or 10 percent of the volume of the worst case (USCG) discharge, which consists of the ovum of the marine piping from the dock header to the "first valve" in secondary containment. The marine pipeline discharge (based on the 30 Inch Dark Oil wharf line) is (b) (7)(F) [redacted] which is less than the USCG planning volume cap of 1200 bbls.

Thus, for the Martinez Terminal, the greater of the MMPD volumes is (b) (7)(F) [redacted]

Note: Equipment and manpower resources are detailed in **FIGURE 3.1-4**, **FIGURE 3.1-5**, **SECTION 7.1.1**, and **APPENDIX B.1.1**.

D.7.1 Small and Medium Discharge Scenarios (EPA and USCG/OSPR), Continued

The following table describes the Facility-specific medium discharge response resource.

Medium Discharge RESPONSE RESOURCE
Rehabilitation of oiled wildlife will be coordinated through activation of the California Oiled Wildlife Network. DO NOT DEPLOY BOOM IF THE SPILLED PRODUCT IS GASOLINE OR A GASOLINE COMPONENT. The initial response contractor on-call is So. Cal Ship Services. They would mobilize the on-call boom boat to deploy containment boom at the dock or spill site. Additional resources would be mobilized from NRC Environmental Services. A listing of contracted OSRO resources is provided in APPENDIX B. This Plan will utilize the strategies for response and cleanup identified within the ACP as appropriate to the specific response conditions. If oil impacts the shoreline, mudflats, marsh, other vegetation or soils, the clean-up procedures must consider these sensitive areas because some clean-up measures can do substantial harm to these sensitive areas. Specific measures to be taken to minimize damage to the environment during cleanup operations are discussed in the ACP. Non-mechanical methods for clean-up operations could involve the use of chemical cleaning products or appropriate bioremediation products. Through association with OSROs, the Martinez Terminal has available inventory including aircraft, dispersants, re-applying methods, and application gear. Bioremediation and natural recovery are two non-mechanical methods that could provide high success rates. Specific details regarding the use of non-mechanical methods for response operations, including the approval process, are presented in the ACP. Temporary berm material (soil) could be placed along the eastern margin of the terminal prior to the wharf and docking facilities in response to a spill scenario, if warranted. The material would be collected from various areas of the facility and nearby areas to accommodate the berm construction. Deployment methods would include mechanical and manual methods.

Note: Equipment and manpower resources are detailed in **FIGURE 3.1-4**, **FIGURE 3.1-5**, **SECTION 7.1.1**, and **APPENDIX B.1.1**.

D.7.2 Worst Case Discharge (WCD) Scenario Discussion

APPENDIX D.8 provides worst case discharge calculations. Discussion of this scenario is as follows:

Upon discovery of a spill, the following procedures would be followed:

1. The First Responder would notify Supervisory Personnel and notifications would be initiated in accordance with **FIGURE 2.1-1**.

2. The Facility Manager would assume the role of Incident Commander until relieved and would initiate response actions and notifications in accordance with **SECTION 2**. If this were a small spill, the local/company personnel may handle all aspects of the response. Among those actions would be to:

    - Conduct safety assessment in accordance with **FIGURE 2.1-1** and evacuate personnel as needed in accordance with **SECTION 2.2**.

    - Direct Facility responders to shut down ignition sources.

    - Direct Facility personnel to position resources in accordance with **SECTION 6.9**.

    - Complete spill report form in accordance with **FIGURE 3.1-2**.

    - Ensure regulatory agencies are notified (**FIGURE 3.1-6**).

3. If this were a small or medium spill, the Qualified Individual/Incident Commander may elect for the First Responder to remain the Incident Commander or to activate selected portions of the Emergency Management Team. However, for a large spill, the Qualified Individual would assume the role of Incident Commander and would activate the entire Emergency Management Team in accordance with activation procedures described in **SECTION 4.2**.

4. The Incident Commander would then initiate spill assessment procedures including surveillance operations, trajectory calculations, and spill volume estimating in accordance with **SECTION 2.1.3**. The QI would implement the terminal's safety and health plan developed under 29 CFR 1910.120 and designed to identify, evaluate, and control safety and health hazards during emergency response operations.

5. The Incident Commander would then utilize checklists in **SECTION 4.6** as a reminder of ICS position responsibilities. The primary focus would be to establish incident priorities and objectives and to brief staff accordingly.

6. The Emergency Management Team would develop the following plans, as appropriate (some of these plans may not be required during a small or medium spill):

    - Site Safety and Health (**SECTION 5.4**)
    - Site Security (**SECTION 5.7**)
    - Incident Action (**SECTION 5.2.6**)
    - Decontamination (**SECTION 5.5**)

- Disposal (**SECTION 5.6**)
- Demobilization (**SECTION 5.8**)

7. The response would continue until an appropriate level of cleanup is obtained.

D.7.2 Worst Case Discharge (WCD) Scenario Discussion, Continued

The following table describes the Facility-specific worst case discharge scenario.

WORST CASE Discharge Scenario
The Worst-Case Discharge (WCD) could result from catastrophic tank failure in adverse weather conditions. Under EPA requirements, the worst-case discharge is defined as follows: 1) The capacity of all aboveground storage tanks at the facility without adequate secondary containment, plus 2) 100% of the capacity of the largest single above ground storage tank within a secondary containment area or 100% of the combined capacity of a group of above ground storage tanks permanently manifolded together, whichever is greater if the facility is adjacent (within 1 mile) to a navigable water; or 3) 100% of the capacity of the largest single above ground storage tank within a secondary containment area or 100% of the combined capacity of a group of above ground storage tanks permanently manifolded together, whichever is greater if the facility is not adjacent to a navigable water. The facility is a multitank facility. The tanks are not permanently manifolded together. Pursuant to the requirements set forth by the EPA, the Worst Case Discharge Planning Volume Calculations for onshore storage facilities are located at the end of the section. The largest tank (Tank 150-51) within secondary containment used to store Group I oils has a maximum capacity of (b) (7)(F) [redacted]. The EPA Worst Case Discharge therefore is (b) (7)(F) [redacted]. The largest tank (Tank 100-45) within secondary containment used to store Group 2 oils has a maximum capacity of (b) (7)(F) [redacted] The Worst Case Discharge for Group 2 oil therefore is (b) (7)(F) [redacted] The largest tank (Tank 16) used to store Group 3 oils has a maximum capacity of (b) (7)(F) [redacted] bbls. The Worst Case Discharge for Group 3 oil therefore is (b) (7)(F) [redacted]. The largest tank (Tank 13) within secondary containment used to store Group 4 oils has a maximum capacity of (b) (7)(F) [redacted]. The Worst Case Discharge for Group 4 oil therefore is (b) (7)(F) [redacted]. In summary, the potential WCD according to the EPA regulations is as follows:

(b) (7)(F)

[redacted]

Note: Equipment and manpower resources are detailed in **FIGURE 3.1-4**, **FIGURE 3.1-5**, **SECTION 7.1.1**, and **APPENDIX B.1.1**.

D.7.2 Worst Case Discharge (WCD) Scenario Discussion, Continued

The following table describes the Facility-specific worst case discharge response resource.

WORST CASE Discharge RESPONSE RESOURCE
Rehabilitation of oiled wildlife will be coordinated through activation of the California Oiled Wildlife Network. DO NOT DEPLOY BOOM IF THE SPILLED PRODUCT IS GASOLINE OR A GASOLINE COMPONENT. The initial response contractor on-call is So. Cal Ship Services. They would mobilize the on-call boom boat to deploy containment boom at the dock or spill site. Additional resources would be mobilized from NRC Environmental Services. A listing of contracted OSRO resources is provided in APPENDIX B. This Plan will utilize the strategies for response and cleanup identified within the ACP as appropriate to the specific response conditions. If oil impacts the shoreline, mudflats, marsh, other vegetation or soils, the clean-up procedures must consider these sensitive areas because some clean-up measures can do substantial harm to these sensitive areas. Specific measures to be taken to minimize damage to the environment during cleanup operations are discussed in the ACP. Non-mechanical methods for clean-up operations could involve the use of chemical cleaning products or appropriate bioremediation products. Through association with OSROs, the Martinez Terminal has available inventory including aircraft, dispersants, re-applying methods, and application gear. Bioremediation and natural recovery are two non-mechanical methods that could provide high success rates. Specific details regarding the use of non-mechanical methods for response operations, including the approval process, are presented in the ACP. Temporary berm material (soil) could be placed along the eastern margin of the terminal prior to the wharf and docking facilities in response to a spill scenario, if warranted. The material would be collected from various areas of the facility and nearby areas to accommodate the berm construction. Deployment methods would include mechanical and manual methods.

Note: Equipment and manpower resources are detailed in **FIGURE 3.1-4**, **FIGURE 3.1-5**, **SECTION 7.1.1**, and **APPENDIX B.1.1**.

D.7.3 Description of Factors Affecting Response Efforts

There are many factors which may affect the ability to respond to an incident. These factors are described in the following table:

FACTORS	CONSIDERATIONS AFFECTING RESPONSE EFFORTS
Size of spill	• Location of spill in relation to identified sensitivities and/or sensitive areas • Spread and spill movement
Proximity to down gradient water intakes	• Refer to **SECTION 6.7** for maps showing proximity to down gradient water intakes
Proximity to fish and wildlife and sensitive environments	• A release could impact fish, wildlife and sensitive environments as described in **SECTION 6.4** and **SECTION 6.5**
Likelihood that discharge will travel offsite	• A small spill is unlikely to travel offsite • A medium spill has the potential to travel offsite via adjacent waterways • A worst case discharge has the greatest potential to travel offsite if secondary containment is breached
Location of material spilled	• See facility information and drainage located in **FIGURE 1-2**, **FIGURE C-2** and **FIGURE C-9**. Facility tankage, piping, and transfer areas are displayed on drawings provided in **FIGURE 1-5**, **FIGURE 1-6** and **FIGURE C-2**
Material discharged	• Typically Gasoline, Crude Oil, #2 Fuel Oil, #6 Fuel Oil (Black Oil), Naphtha, #5 Fuel Oil, Vacuum Gas Oil • Product is considered non-persistent but not volatile
Weather or aquatic conditions	• The areas have the potential to be affected by tornadoes, flooding, and lightning strikes
Available remediation equipment	• The Company has response equipment available • Resources are available through oil spill response contractors in quantities sufficient to meet applicable planning standards
Probability of a chain reaction or failures	• Potential for a chain reaction or failure is remotely possible but not anticipated; secondary containment, response contractors and trained personnel minimize the potential of such events
Direction of spill pathway	• Refer to sensitivity maps in **SECTION 6.10** • Wind direction and speed combined with currents, will determine spill trajectory

D.8 PLANNING VOLUME CALCULATIONS

Once the worst case discharge volume has been calculated, response resources must be identified to meet the requirements of 40 CFR 112.20(h). Calculations to determine sufficient amount of response equipment necessary to respond to a worst case discharge is described below. A demonstration of the planning volume calculations is provided below.

The Terminal is also regulated by OSPR under the California Oil Spill Prevention and Response Act (OSPRA). Calculations are presented in **APPENDIX D.10**.

For purposes of this Plan, the terms, "Worst Case Discharge" (as defined under OPA 90) and "Reasonable Worst Case Spill" (as defined under OSPR) are considered synonymous.

D.8.1 EPA Planning Volume Calculations

STEP	PARAMETER	Martinez Terminal
(A)	WCD (bbls)	(b) (7) (F)
(B)	Oil group	III
(C)	*Geographic area	Nearshore / Inland
(D1)	Percent lost to natural dissipation	30
(D2)	Percent recovered floating oil	50
(D3)	Percent oil onshore	50
(E1)	On water recovery (bbls)	(b) (7)(F)
(E2)	Shoreline recovery (bbls)	
(F)	Emulsification Factor	2.0
(G)	On water recovery resource mobilization factor	
(G1)	Tier I	0.15
(G2)	Tier II	0.25
(G3)	Tier III	0.40
Part II	On water recovery capacity (bbls/day)	
	Tier I	67,500
	Tier II	112,500
	Tier III	180,000
Part III	Shoreline cleanup volume (bbls/day)	450,000
Part IV	On water response capacity by operating area (bbls/day)	
(J1)	Tier I	12,500

(J2)	Tier II	25,000
(J3)	Tier III	50,000
Part V	On water amount needed to be identified, but not contracted for in advance	
	Tier I	55,000
	Tier II	87,500
	Tier III	130,000

* R = Rivers and canals
N = Nearshore/Inland

D.8.1 EPA Planning Volume Calculations

STEP	PARAMETER	Martinez Terminal
(A)	WCD (bbls)	(b) (7) (F)
(B)	Oil group	IV
(C)	*Geographic area	Nearshore/Inland
(D1)	Percent lost to natural dissipation	10
(D2)	Percent recovered floating oil	50
(D3)	Percent oil onshore	70
(E1)	On water recovery (bbls)	(b) (7)(F)
(E2)	Shoreline recovery (bbls)	
(F)	Emulsification Factor	1.4
(G)	On water recovery resource mobilization factor	
(G1)	Tier I	0.15
(G2)	Tier II	0.25
(G3)	Tier III	0.40
Part II	On water recovery capacity (bbls/day)	
	Tier I	47,250
	Tier II	78,750
	Tier III	126,000
Part III	Shoreline cleanup volume (bbls/day)	441,000
Part IV	On water response capacity by operating area (bbls/day)	
(J1)	Tier I	12,500
(J2)	Tier II	25,000
(J3)	Tier III	50,000

Part V	On water amount needed to be identified, but not contracted for in advance	
	Tier I	34,750
	Tier II	53,750
	Tier III	76,315

* R = Rivers and canals
N = Nearshore/Inland

D.8.1 EPA Planning Volume Calculations

STEP	PARAMETER	Martinez Terminal
(A)	WCD (bbls)	(b) (7) (F)
(B)	Oil group	II
(C)	*Geographic area	Nearshore/Inland
(D1)	Percent lost to natural dissipation	50
(D2)	Percent recovered floating oil	50
(D3)	Percent oil onshore	30
(E1)	On water recovery (bbls)	(b) (7)(F)
(E2)	Shoreline recovery (bbls)	
(F)	Emulsification Factor	1.8
(G)	On water recovery resource mobilization factor	
(G1)	Tier I	0.15
(G2)	Tier II	0.25
(G3)	Tier III	0.40
Part II	On water recovery capacity (bbls/day)	
	Tier I	12,960
	Tier II	21,600
	Tier III	34,646
Part III	Shoreline cleanup volume (bbls/day)	51,840
Part IV	On water response capacity by operating area (bbls/day)	
(J1)	Tier I	12,500
(J2)	Tier II	25,000
(J3)	Tier III	50,000
Part V	On water amount needed to be identified, but not contracted for in advance	

	Tier I	460
	Tier II	0
	Tier III	0

* R = Rivers and canals
N = Nearshore/Inland

D.8.1 EPA Planning Volume Calculations

STEP	PARAMETER	Martinez Terminal
(A)	WCD (bbls)	(b) (7) [redacted]
(B)	Oil group	I
(C)	*Geographic area	Nearshore/Inland
(D1)	Percent lost to natural dissipation	80
(D2)	Percent recovered floating oil	20
(D3)	Percent oil onshore	10
(E1)	On water recovery (bbls)	(b) (7)(F) [redacted]
(E2)	Shoreline recovery (bbls)	
(F)	Emulsification Factor	1.0
(G)	On water recovery resource mobilization factor	
(G1)	Tier I	0.15
(G2)	Tier II	0.25
(G3)	Tier III	0.40
Part II	On water recovery capacity (bbls/day)	
	Tier I	4,500
	Tier II	7,500
	Tier III	12,030
Part III	Shoreline cleanup volume (bbls/day)	15,000
Part IV	On water response capacity by operating area (bbls/day)	
(J1)	Tier I	12,500
(J2)	Tier II	25,000
(J3)	Tier III	50,000
Part V	On water amount needed to be identified, but not contracted for in advance	
	Tier I	0
	Tier II	0

	Tier III	0

* R = Rivers and canals
N = Nearshore/Inland

D.8.2 OSPR Response Planning Volume Calculations

GIVEN	
Worst Case Discharge Volume of Oil:	(b) (7)(F) [redacted]
Type of Petroleum Handled:	Oil Group 3
Facility's Risk Zone:	Nearshore/Inland
Persistence Factor:	0.5
Emulsification Factor:	2
CALCULATIONS	
Response Planning Volumes for On Water Containment and Recovery	
(Worst Case Discharge) (Persistence Factor) (Emulsification Factor)	
(b) (7)(F) [redacted]	
Response Planning Volume for Shoreline Cleanup	
(Worst Case Discharge) (Persistence Factor) (Emulsification Factor)	
(b) (7)(F) [redacted]	
CONCLUSIONS	
Based on the planning volumes above, equipment needs and tier is provided APPENDIX D.10. These tables are based on the Company's on-site equipment and contractor equipment and personnel. Equipment lists and written verification of existing service agreements between the facility owner and these contractors are provided in SECTION 7.1.1 and APPENDIX B. The governing planning volumes used in these tables are based on Group III oil because this oil type has the largest planning volume with specific planning scenario requirements of any oil handled at the facility.	

D.9 SPILL VOLUME CALCULATIONS

D.9.1 **USCG Portion of Facility**

The Worst Case Discharge was formulated assuming a release from the Marine Transportation Related portion of the Facility, as directed by 33 CFR 154.1029.

The Worst Case Discharge is based on a catastrophic failure of all piping carrying oil between the marine transfer manifold(s) and the non-transportation related portion(s) of the Facility. For the Martinez Terminal, this volume is calculated as noted below. Actual Worst Case Discharge volumes for all facilities are provided in **FIGURE D.7-1**. Oil spill response equipment available to respond to this spill is included in **SECTION 7.1.1**, and **APPENDIX B.1.1**.

- **Worst Case Discharge (WCD)** = [(maximum time to discover + maximum time to

shutdown flow) x maximum flow rate] + piping capacity = (b) (7)(F) [redacted].

- **Average Most Probable Discharge**

  The Average Most Probable Discharge (AMPD) is defined by 33 CFR 154 as the lesser of 50 barrels or 1% of the Worst Case Discharge. One percent of the Worst Case Discharge is approximately (b) (7)(F) [redacted], therefore, the average most probable discharge is 50 **barrels**.

- **Maximum Most Probable Discharge**

  The Maximum Most Probable Discharge (MMPD) is defined by 33 CFR 154 as the discharge of the lesser of 1,200 barrels or 10% of the volume of the Worst Case Discharge. Ten percent of the Worst Case Discharge is approximately (b) (7)(F) [redacted], therefore, the maximum most probable discharge is (b) (7)(F) [redacted].

D.9.2 EPA / OSPR Portion of the Facility (non-transportation related)

The WCD for the EPA portion of the facility, as defined in 40 CFR 112, Appendix D, Part A, is calculated as:

- For multiple tank facilities with adequate secondary containment, the WCD is calculated as the capacity of the largest single aboveground oil storage tank within an adequate secondary containment area or the combined capacity of a group of aboveground oil storage tanks permanently manifolded together, whichever is greater.

TYPE	DESCRIPTION	PRODUCT	WCD VOLUME (BBLs)
Multiple Tank with Secondary Containment	Catastrophic Failure of Largest Tank #13, 14, 15 or 16.	Dark Oils	(b) (7) [redacted]

OSPR Pipeline Portion of the Facility

LINE NAME	MAX TIME TO DISCOVER RELEASE + MAX TIME TO SHUT DOWN FLOW (hr)	MAXIMUM FLOW RATE (bbl/hr)	TOTAL LINEFILL DRAINAGE VOLUME (bbl)
30-Inch Dark Oil	(b) (7)(F) [redacted]		

* Distance from isolation valve at tank to wharf

FIGURE D.9-1 - WORST CASE DISCHARGE (WCD) CALCULATIONS (IN BBLS)

	EPA

USCG					
Product	Group	WCD	Avg. Most Probable	Max. Most Probable	(b) (7)(F) [redacted]
Dark Oil	3 or 4	(b) (7)(F) [redacted]	50	1,200	
Gasoline, Diesel, or Jet Fuel	1 or 2		12.46	1,200	

D.9.3 DOT / PHMSA Portion of Pipeline / Facility

The worst case discharge (WCD) for the DOT portion of the pipeline and/or facility, as defined in 49 CFR 194.105(b), as the largest volume of the following:

1. The pipeline's maximum shut-down response time in hours (based on historic discharge data or in the absence of such data, the operators best estimate), multiplied by the maximum flow rate expressed in barrels per hour (based on the maximum daily capacity of the pipeline), plus the largest drainage volume after shutdown of the line section(s) in the response zone expressed in barrels; or

2. The largest foreseeable discharge for the line section(s) within a response zone, expressed in barrels (cubic meters), based on the maximum historic discharge, if one exists, adjusted for any subsequent corrective or preventative action taken; or

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.

Under PHMSA's current policy, operators are allowed to reduce the worst case discharge volume derived from 49 CFR 194.105(b)(3) by no more than 75% if an operator is taking certain spill prevention measures for their breakout tanks and presents supporting information in the response plan. An operator can reduce the worst case discharge volume based on breakout tanks in the response zones as follows:

SPILL PREVENTION MEASURES	PERCENT REDUCTION ALLOWED
Secondary containment capacity greater than 100% capacity of tank and designed according to NFPA 30	50%
Tank built, rebuilt, and repaired according to API Std 620/650/653	10%
Automatic high-level alarms/shutdowns designed according to NFPA/API RP 2350	5%
Testing/cathodic protection designed according to API Std 650/651/653	5%
Tertiary containment/drainage/treatment per NFPA 30	5%*
Maximum allowable credit or reduction	75%

* Note: The facilities do not have tertiary containment.

The worst case discharge for each response zone was based on the largest volume of the three criteria given above.

The Company has determined the worst case discharge volume to be a catastrophic line failure of the largest line section with the greatest drainage capacity in each response zone or 50% of the volume of the largest tank in each zone.

The worst case tank volume is calculated as follows:

Largest tank x Credit for containment tank standards = Tank standards credit

The Company has implemented all of the spill prevention measures, listed on the previous page, except tertiary containment. Therefore, the percent reduction allowed for credit equals 50% and the worst case discharge volume is 50% of the total volume.

Not Applicable - There are no breakout tanks associated with the pipeline. (0.00) x .50 = 0.00 bbls.

The worst case discharge for the pipeline segment is calculated at the 930 (16-inch dark line) .

WCD = [(DT + ST) x MF] + DD

Where:

WCD = worst case discharge (bbl)

DT + ST = maximum detection time + maximum shut down time in adverse weather (generally five minutes except where noted)

MF = maximum flow rate (bph) (using 10000 bph)

DD = drain down volume (bbl) (internal diameter)

(b) (7)(F)

[redacted]

D.10 DAILY RECOVERY RATES AND TOTAL EQUIPMENT REQUIRED

In the event of a major incident involving an oil spill from the Terminal, a tiered response would be initiated. The tiers described here would be used to guide the phased commitment of both equipment and manpower resources that would occur during a spill response.

FIGURE D.10-1 summarizes the resources that could be utilized in responding to the worst case discharge. The resources include those from the Company, as well as what is available from cooperatives and local contractors. **FIGURE D.10-2** describes how these resources could be incorporated into the tiered response approach as required by OSPR contingency plan regulations (Section 817.02(d)(3)(B)).

The Company maintains at least 10% of the reasonable worst case discharge volume on-site, and therefore, as per OSPR - Facility Response Regulations Section 817.02(d)(3)(B)(1)(ii), this equipment can be on-scene in three hours rather than two.

- **Tier 1 Response** - resources are those could be on scene within six hours of the discovery of an oil discharge. These resources include the Company's on-site response equipment and Facility Response Team, as supplemented with manpower and equipment from OSROs as needed (Refer to **SECTION 7.1.1**, **FIGURE 7.1-1**, and **APPENDIX B**).

- **Tier 2 Response** - resources that could be on scene within 24 hours of the discovery of an oil discharge.

- **Tier 3 Response** - resources that could be on scene within 36 hours of the discovery of an oil spill. Supplementary response resources from local contractors, such as those listed in **FIGURE D.8-1**, also could be activated, as necessary.

- **Tier 4 Response** - resources that could be on scene within 60 hours of the discovery of an oil spill. This would be also accomplished through activation of additional equipment. Supplementary response resources from local contractors, such as those listed in **FIGURE D.8-1**, also could be activated, as necessary. In addition, personnel and a limited amount of equipment from the National Response Resources listed in **SECTION 3** could be called upon to assist further in response operations.

FIGURE D.10-1 - RESPONSE RESOURCES SUMMARY

RESPONSE RESOURCE	CAPABILITY OF RESOURCE						
	OSRV DERATED (Y/N) BBL/DAY		CONTAINMENT (Y/N) BOOM FT		STORAGE CAPABILITY (Y/N) BBL		SHORELINE CLEANUP (Y/N)
NRC Environmental Service 90 San Pablo Ave. Selby CA 94572	Y	10011	Y	2500	Y	100	Y
NRC Environmental Service 7 N. Court Martinez CA 94553	Y	6306	Y	3700	Y	100	Y
NRC Environmental		0		0	Y	22000	

Service 255 Parr Blvd. Richmond CA 94801							
NRC Environmental Service 321 A Ave. San Francisco CA 94130		0		0	Y	5257	
NRC Environmental Service 2121 Piedmont Way Pittsburgh CA 94565		0		0	Y	10217	
So. Cal Ship Services 201 East 5th St. Benicia CA		0		0		0	

* Additional response resources, response personnel, and equipment lists and response times are included in **APPENDIX B** of this plan.

** Capability is available, but not locally.

FIGURE D.10-1 - RESPONSE RESOURCES SUMMARY

RESPONSE RESOURCE	CAPABILITY OF RESOURCE						
	OSRV DERATED (Y/N) BBL/DAY		CONTAINMENT (Y/N) BOOM FT		STORAGE CAPABILITY (Y/N) BBL		SHORELINE CLEANUP (Y/N)
NRC Environmental Service 2700 Rice Way Sacramento CA 95691		0	Y	1500		0	Y
NRC	Y	238		0	Y	100	Y

Environmental Service 1316 Canal Blvd. Richmond CA 94850							
NRC Environmental Service 1605 Ferry Point Alameda CA 94501	Y	12322	Y	11500		0	Y
NRC Environmental Service Port Rd. G Stockton CA 95298		0	Y	1500		0	Y
NRC Environmental Service 1090 West Waterfront Eureka CA 95501	Y	24000	Y	29000		0	Y
NRC Environmental Service 417 E. Hueneme Rd. # 131, Dock # 2 Pt. Hueneme CA 93041		0	Y	4000		0	Y

* Additional response resources, response personnel, and equipment lists and response times are included in **APPENDIX B** of this plan.

** Capability is available, but not locally.

FIGURE D.10-1 - RESPONSE RESOURCES SUMMARY

RESPONSE RESOURCE	CAPABILITY OF RESOURCE			
	OSRV DERATED	CONTAINMENT	STORAGE	SHORELINE

	(Y/N) BBL/DAY		(Y/N) BOOM FT		CAPABILITY (Y/N) BBL		CLEANUP (Y/N)
NRC Environmental Service 2250 E. Dominguez St Carson CA 90810		0	Y	7300		0	Y
NRC Environmental Service Pier D, Berth - D47 Long Beach CA 90802		0	Y	10500		0	Y

* Additional response resources, response personnel, and equipment lists and response times are included in **APPENDIX B** of this plan.

** Capability is available, but not locally.

FIGURE D.10-2 - RESPONSE RESOURCES FOR WORST CASE DISCHARGE OSPR HIGH VOLUME PORT REQUIREMENTS

RESPONSE RESOURCES FOR WORST CASE DISCHARGE OSPR HIGH VOLUME PORT REQUIREMENTS				
TIER	RESPONSE RESOURCE	CAPABILITY OF RESOURCE		
		DERATED RECOVERY CAPABILITY* BBL/DAY	CONTAINMENT/ PROTECTION BOOM	STORAGE BBL
1	Martinez Terminal 2801 Waterfront Road Martinez CA 94553		1,400	560,000
1	Worley Catastrophe Response 303 Timber Creek Hammond LA 70403			
1	NRC Environmental Service 90 San Pablo Ave.	10,011	2,500	100

	Selby CA 94572			
1	NRC Environmental Service 7 N. Court Martinez CA 94553	6,306	3,700	100
1	NRC Environmental Service 255 Parr Blvd. Richmond CA 94801			22,000
1	NRC Environmental Service 321 A Ave. San Francisco CA 94130			5,257

FIGURE D.10-2 - RESPONSE RESOURCES FOR WORST CASE DISCHARGE OSPR HIGH VOLUME PORT REQUIREMENTS

RESPONSE RESOURCES FOR WORST CASE DISCHARGE OSPR HIGH VOLUME PORT REQUIREMENTS				
		CAPABILITY OF RESOURCE		
TIER	RESPONSE RESOURCE	DERATED RECOVERY CAPABILITY* BBL/DAY	CONTAINMENT/ PROTECTION BOOM	STORAGE BBL
1	NRC Environmental Service 2121 Piedmont Way Pittsburgh CA 94565			10,217
1	So. Cal Ship Services 201 East 5th St. Benicia CA			
1	NRC Environmental Service 2700 Rice Way Sacramento		1,500	

	CA 95691			
1	NRC Environmental Service 1316 Canal Blvd. Richmond CA 94850	238		100
1	O'Briens Response Management 2929 E. Imperial Hwy, Suite 290 Brea CA 92821			
1	NRC Environmental Service 1605 Ferry Point Alameda CA 94501	12,322	11,500	

FIGURE D.10-2 - RESPONSE RESOURCES FOR WORST CASE DISCHARGE OSPR HIGH VOLUME PORT REQUIREMENTS

RESPONSE RESOURCES FOR WORST CASE DISCHARGE OSPR HIGH VOLUME PORT REQUIREMENTS				
TIER	RESPONSE RESOURCE	CAPABILITY OF RESOURCE		
		DERATED RECOVERY CAPABILITY* BBL/DAY	CONTAINMENT/ PROTECTION BOOM	STORAGE BBL
1	NRC Environmental Service Port Rd. G Stockton CA 95298		1,500	
1	NRC Environmental Service 1090 West Waterfront Eureka CA 95501			
1	NRC Environmental Service 417 E. Hueneme Rd. #			

	131, Dock # 2 Pt. Hueneme CA 93041			
1	NRC Environmental Service 2250 E. Dominguez St Carson CA 90810			
1	NRC Environmental Service Pier D, Berth - D47 Long Beach CA 90802			
1	C-K Associates, LLC 17170 Perkins Road Baton Rouge LA 70810			

FIGURE D.10-2 - RESPONSE RESOURCES FOR WORST CASE DISCHARGE OSPR HIGH VOLUME PORT REQUIREMENTS

RESPONSE RESOURCES FOR WORST CASE DISCHARGE OSPR HIGH VOLUME PORT REQUIREMENTS				
TIER	RESPONSE RESOURCE	CAPABILITY OF RESOURCE		
		DERATED RECOVERY CAPABILITY* BBL/DAY	CONTAINMENT/ PROTECTION BOOM	STORAGE BBL
1	Robert J. Myers and Associates 31430 Capella Circle Tomball TX 77375			
1	TOTAL	0	0	0

* Derated Recovery required by OSPR regulations:

(b) (7)(F)

[redacted]

*

FIGURE D.10-2 - RESPONSE RESOURCES FOR WORST CASE DISCHARGE OSPR HIGH VOLUME PORT REQUIREMENTS

RESPONSE RESOURCES FOR WORST CASE DISCHARGE OSPR HIGH VOLUME PORT REQUIREMENTS				
TIER	RESPONSE RESOURCE	CAPABILITY OF RESOURCE		
		DERATED RECOVERY CAPABILITY* BBL/DAY	CONTAINMENT/ PROTECTION BOOM	STORAGE BBL
2	Martinez Terminal 2801 Waterfront Road Martinez CA 94553			
2	Worley Catastrophe Response 303 Timber Creek Hammond LA 70403			
2	NRC Environmental Service 90 San Pablo Ave. Selby CA 94572			
2	NRC Environmental Service 7 N. Court Martinez CA 94553			
2	NRC Environmental Service 255 Parr Blvd. Richmond CA 94801			
2	NRC Environmental Service 321 A Ave. San Francisco CA 94130			

FIGURE D.10-2 - RESPONSE RESOURCES FOR WORST CASE DISCHARGE OSPR HIGH VOLUME PORT REQUIREMENTS

RESPONSE RESOURCES FOR WORST CASE DISCHARGE OSPR HIGH VOLUME PORT REQUIREMENTS				
TIER	RESPONSE RESOURCE	CAPABILITY OF RESOURCE		
		DERATED RECOVERY CAPABILITY* BBL/DAY	CONTAINMENT/ PROTECTION BOOM	STORAGE BBL
2	NRC Environmental Service 2121 Piedmont Way Pittsburgh CA 94565			
2	So. Cal Ship Services 201 East 5th St. Benicia CA			
2	NRC Environmental Service 2700 Rice Way Sacramento CA 95691			
2	NRC Environmental Service 1316 Canal Blvd. Richmond CA 94850			
2	O'Briens Response Management 2929 E. Imperial Hwy, Suite 290 Brea CA 92821			
2	NRC Environmental Service 1605 Ferry Point Alameda CA 94501			

FIGURE D.10-2 - RESPONSE RESOURCES FOR WORST CASE DISCHARGE

OSPR HIGH VOLUME PORT REQUIREMENTS

RESPONSE RESOURCES FOR WORST CASE DISCHARGE OSPR HIGH VOLUME PORT REQUIREMENTS				
TIER	RESPONSE RESOURCE	CAPABILITY OF RESOURCE		
		DERATED RECOVERY CAPABILITY* BBL/DAY	CONTAINMENT/ PROTECTION BOOM	STORAGE BBL
2	NRC Environmental Service Port Rd. G Stockton CA 95298			
2	NRC Environmental Service 1090 West Waterfront Eureka CA 95501	24,000	5,000	
2	NRC Environmental Service 417 E. Hueneme Rd. # 131, Dock # 2 Pt. Hueneme CA 93041		4,000	
2	NRC Environmental Service 2250 E. Dominguez St Carson CA 90810		7,300	
2	NRC Environmental Service Pier D, Berth - D47 Long Beach CA 90802		10,500	
2	C-K Associates, LLC 17170 Perkins Road Baton Rouge LA 70810			

FIGURE D.10-2 - RESPONSE RESOURCES FOR WORST CASE DISCHARGE OSPR HIGH VOLUME PORT REQUIREMENTS

RESPONSE RESOURCES FOR WORST CASE DISCHARGE OSPR HIGH VOLUME PORT REQUIREMENTS				
TIER	RESPONSE RESOURCE	CAPABILITY OF RESOURCE		
		DERATED RECOVERY CAPABILITY* BBL/DAY	CONTAINMENT/ PROTECTION BOOM	STORAGE BBL
2	Robert J. Myers and Associates 31430 Capella Circle Tomball TX 77375			
2	TOTAL	0	0	0

* Derated Recovery required by OSPR regulations:

(b) (7)(F)

[redacted]

FIGURE D.10-2 - RESPONSE RESOURCES FOR WORST CASE DISCHARGE OSPR HIGH VOLUME PORT REQUIREMENTS

RESPONSE RESOURCES FOR WORST CASE DISCHARGE OSPR HIGH VOLUME PORT REQUIREMENTS				
TIER	RESPONSE RESOURCE	CAPABILITY OF RESOURCE		
		DERATED RECOVERY CAPABILITY* BBL/DAY	CONTAINMENT/ PROTECTION BOOM	STORAGE BBL
3	Martinez Terminal 2801 Waterfront Road Martinez CA 94553			
3	Worley Catastrophe Response 303 Timber Creek Hammond LA 70403			
3	NRC Environmental Service			

	90 San Pablo Ave. Selby CA 94572			
3	NRC Environmental Service 7 N. Court Martinez CA 94553			
3	NRC Environmental Service 255 Parr Blvd. Richmond CA 94801			
3	NRC Environmental Service 321 A Ave. San Francisco CA 94130			

* Derated Recovery required by OSPR regulations:

(b) (7)(F)

[redacted]

FIGURE D.10-2 - RESPONSE RESOURCES FOR WORST CASE DISCHARGE OSPR HIGH VOLUME PORT REQUIREMENTS

RESPONSE RESOURCES FOR WORST CASE DISCHARGE OSPR HIGH VOLUME PORT REQUIREMENTS				
TIER	RESPONSE RESOURCE	CAPABILITY OF RESOURCE		
		DERATED RECOVERY CAPABILITY* BBL/DAY	CONTAINMENT/ PROTECTION BOOM	STORAGE BBL
3	NRC Environmental Service 2121 Piedmont Way Pittsburgh CA 94565			

3	So. Cal Ship Services 201 East 5th St. Benicia CA			
3	NRC Environmental Service 2700 Rice Way Sacramento CA 95691			
3	NRC Environmental Service 1316 Canal Blvd. Richmond CA 94850			
3	O'Briens Response Management 2929 E. Imperial Hwy, Suite 290 Brea CA 92821			
3	NRC Environmental Service 1605 Ferry Point Alameda CA 94501			

* Derated Recovery required by OSPR regulations:

(b) (7)(F)

[redacted]

FIGURE D.10-2 - RESPONSE RESOURCES FOR WORST CASE DISCHARGE OSPR HIGH VOLUME PORT REQUIREMENTS

RESPONSE RESOURCES FOR WORST CASE DISCHARGE OSPR HIGH VOLUME PORT REQUIREMENTS				
TIER	RESPONSE RESOURCE	CAPABILITY OF RESOURCE		
		DERATED RECOVERY CAPABILITY*	CONTAINMENT/ PROTECTION	STORAGE BBL

		BBL/DAY	BOOM	
3	NRC Environmental Service Port Rd. G Stockton CA 95298			
3	NRC Environmental Service 1090 West Waterfront Eureka CA 95501			
3	NRC Environmental Service 417 E. Hueneme Rd. # 131, Dock # 2 Pt. Hueneme CA 93041			
3	NRC Environmental Service 2250 E. Dominguez St Carson CA 90810			
3	NRC Environmental Service Pier D, Berth - D47 Long Beach CA 90802			
3	C-K Associates, LLC 17170 Perkins Road Baton Rouge LA 70810			

* Derated Recovery required by OSPR regulations:

(b) (7)(F)

[redacted]

FIGURE D.10-2 - RESPONSE RESOURCES FOR WORST CASE DISCHARGE

OSPR HIGH VOLUME PORT REQUIREMENTS

RESPONSE RESOURCES FOR WORST CASE DISCHARGE OSPR HIGH VOLUME PORT REQUIREMENTS				
TIER	RESPONSE RESOURCE	CAPABILITY OF RESOURCE		
		DERATED RECOVERY CAPABILITY* BBL/DAY	CONTAINMENT/ PROTECTION BOOM	STORAGE BBL
3	Robert J. Myers and Associates 31430 Capella Circle Tomball TX 77375			
3	TOTAL	0	0	0

* Derated Recovery required by OSPR regulations:

(b) (7)(F) [redacted]

D.10.1 Shoreline Response Planning Volume

The amount of equipment and services necessary, to address the shoreline response planning volume according to OSPR calculations, is calculated as follows:

WCD x persistence factor (0.5) x emulsification factor (2.0) = (b) (7)(F) [redacted]

The total amount equipment required to respond to the shoreline response planning volume above is equal to the onshore recovery planning volume calculated for the nearshore/inland environment pursuant to 33 CFR 154, Appendix C, Section 7. Calculations are provided in **APPENDIX D.9**. Equipment and services to respond to shoreline impact are provided in **SECTION 7.1** and **APPENDIX B**. Refer to **SECTION 6** for specific shoreline response techniques.

D.11 PRODUCT CHARACTERISTICS AND HAZARDS

This Facility may store various types of commodities including but not limited to:

- #2 Fuel Oil
- #5 Fuel Oil
- #6 Fuel Oil (Black Oil)
- Crude Oil

- Gasoline
- Naphtha
- Vacuum Gas Oil

The key chemical and physical characteristics of each of these oils and/or other small quantity products/
chemicals are identified in MSDS. MSDS can be obtained by the Facility via the Company intranet.

FIGURE D.11-1 describes primary oils handled.

FIGURE D.11-1 - SUMMARY OF COMMODITY CHARACTERISTICS

COMMON NAME	MSDS NAME	HEALTH HAZARD	FLASH POINT	SPECIAL HAZARD	REACTIVITY	HEALTH HAZARD WARNING STATEMENT
#2 Fuel Oil	Appropriate Product Name	2	3	C,COR,H2S	0	Long term, repeated exposure may cause cancer. May cause damage to the following organs: blood, kidneys, liver, peripheral and central nervous systems, respiratory tract, skin, eye, lens, or cornea.
#5 Fuel Oil	Appropriate Product Name	1	2	COR,H2S,C,T,OX	0	May be fatal if swallowed. Harmful if absorbed through skin. Skin irritant. May cause damage to blood, liver, kidneys, skin, central nervous system, eye, lens or cornea. Suspect cancer hazard.
						May be fatal if

#6 Fuel Oil (Black Oil)	Appropriate Product Name	1	2	A,C,H2S,COR,T	0	inhaled, harmful if swallowed, absorbed through skin. Causes skin irritation and damage to organs (blood, kidneys, liver, skin, central nervous system, eye, lens or cornea). Possible cancer hazard.
Crude Oil	Appropriate Product Name	2	3	C, H2S	0	May contain benzene, a carcinogen or hydrogen sulfide, which is harmful if inhaled; flash point varies widely.
Gasoline	Appropriate Product Name	1	3	C	0	Long term, repeated exposure may cause cancer, blood, kidney and nervous system damage, and contains benzene.
Naphtha	Appropriate product name	1	3	N/A	0	May cause nerve or kidney damage.

Health Hazard	**4 = Extremely Hazardous** **3 = Hazardous** **2 = Warning** **1 = Slightly Hazardous** **0 = No Unusual Hazard**	**Fire Hazard (Flash Point)**	**4 = Below 73Â°F, 22Â°C** **3 = Below 100Â°F, 37Â°C** **2 = Below 200Â°F, 93Â°C** **1 = Above 200Â°F, 93Â°C** **0 = Will not burn**
Special Hazard	**A = Asphyxiant** **C = Contains Carcinogen** **W = Reacts with Water** **Y = Radiation Hazard** **COR = Corrosive** **OX = Oxidizer** **H_2S = Hydrogen Sulfide**	**Reactivity Hazard**	**4 = May Detonate at Room Temperature** **3 = May Detonate with Heat or Shock** **2 = Violent Chemical Change with High Temperature and Pressure**

P = Contents under Pressure **T = Hot Material**	**1 = Not Stable if Heated** **0 = Stable**

FIGURE D.11-1 - SUMMARY OF COMMODITY CHARACTERISTICS

COMMON NAME	MSDS NAME	HEALTH HAZARD	FLASH POINT	SPECIAL HAZARD	REACTIVITY	HEALTH HAZARD WARNING STATEMENT
Vacuum Gas Oil	Appropriate Product Name	0	1	C	0	Prolonged or repeated inhalation exposure may cause cancer and chemical pneumonitis. May case skin cancer. May also cause drying, cracking, dermatitis, or folliculitis.

Health Hazard	**4 = Extremely Hazardous** **3 = Hazardous** **2 = Warning** **1 = Slightly Hazardous** **0 = No Unusual Hazard**	**Fire Hazard (Flash Point)**	**4 = Below 73Â°F, 22Â°C** **3 = Below 100Â°F, 37Â°C** **2 = Below 200Â°F, 93Â°C** **1 = Above 200Â°F, 93Â°C** **0 = Will not burn**
Special Hazard	**A = Asphyxiant** **C = Contains Carcinogen** **W = Reacts with Water** **Y = Radiation Hazard** **COR = Corrosive** **OX = Oxidizer** **H_2S = Hydrogen Sulfide** **P = Contents under Pressure** **T = Hot Material**	**Reactivity Hazard**	**4 = May Detonate at Room Temperature** **3 = May Detonate with Heat or Shock** **2 = Violent Chemical Change with High Temperature and Pressure** **1 = Not Stable if Heated** **0 = Stable**

APPENDIX E Last Revised: March 27, 2013

CROSS-REFERENCES

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Figure E-1 - EPA / FRP Cross-Reference

Figure E-2 - USCG / FRP Cross-Reference

Figure E-3 - DOT / PHMSA Cross-Reference

Figure E-4 - California OSPR Cross-Reference

Figure E-5 - OSHA Cross-Reference

Figure E-6 - EPA Response Plan Cover Sheet

FIGURE E-1 - EPA / FRP CROSS-REFERENCE

EPA FRP REQUIREMENTS	LOCATION
Facility Information	
General Information (1.0)	
• Facility Name	Figure 1-2
• FRP #	Figure 1-2
• Facility Address	Figure 1-2
• Facility Telephone	Figure 1-2
• Facility Owner	Figure 1-2
• Owner Address	Figure 1-2
• Owner Telephone	Figure 1-2
• Name of Protected Waterway/ Environmentally Sensitive Area	Section 6.6
• Distance from Facility	Figure D.6-1
Standard Facility Response Plan (sec. 1.0)	
Emergency Response Action Plan (ERAP) (sec. 1.1)	
Qualified Individual (QI) information (sec. 1.2) partial	ERAP - Figure 3-3
Emergency notification phone list (sec. 1.3.1) partial	ERAP - Figure 3-3, Figure 3-4
Spill response notification form (sec. 1.3.1) partial	ERAP - Figure 3-1, Figure 3-2
Response equipment list and location (sec. 1.3.2) complete	ERAP - Figure 4-2, Figure 4-3
Response equipment testing and deployment (sec. 1.3.4) complete	ERAP - Figure 4-4
Facility response team list (sec. 1.3.4) partial	ERAP - Figure 3-3
Facility evacuation plan (sec. 1.3.5) condensed	ERAP - Section 2.2
Immediate actions (sec. 1.7.1) complete	ERAP - Section 2.0
Facility diagrams (sec. 1.9) complete	ERAP - Section 5.0
Facility Information (sec. 1.2)	
Facility name and location (sec. 1.2.1)	Figure 1-2
Latitude and longitude (sec. 1.2.2)	Figure 1-2
Wellhead protection area (sec. 1.2.3)	Figure 1-2

Owner/ operator (both names included, if different (sec. 1.2.4)	Figure 1-2
QuaIified Individual (sec. 1.2.5) (name, position, home and work address, phone numbers) and specific response training experience	Figure 1-2
Date of oil storage start-up (sec. 1.2.6)	Figure 1-2
Current operation (sec. 1.2.7)	Figure 1-2
Date and type of substantial expansion (sec. 1.2.8)	Figure 1-2

FIGURE E-1 - EPA / FRP CROSS-REFERENCE, CONTINUED

EPA FRP REQUIREMENTS	LOCATION
Emergency Response Information (sec. 1.3)	
Notification (sec. 1.3.1)	
National Response Center phone number	Figure 3.1-5
Qualified Individual (day and evening) phone numbers	Figure 1-2, Figure 3.1-4
Company Response Team (day and evening) phone numbers	Figure 3.1-4
Federal On-Scene Coordinator (FOSC) and/ or Regional Response Center (day and evening) phone numbers	Figure 3.1-5
Local response team phone numbers (fire department/ cooperatives)	Figure 3.1-5
Fire marshal (day and evening) phone numbers	Figure 3.1-5
State Emergency Response Commission (SERC) phone number	Figure 3.1-5
State police phone number	Figure 3.1-5
Local Emergency Planning Committee (LEPC) phone number	Figure 3.1-5
Local water supply system (day and evening) phone numbers	Figure 3.1-5
Weather report phone number	Figure 3.1-5
Local TV/ radio phone number(s) for evacuation notification	Figure 3.1-5
Hospital phone number	Figure 3.1-5
Spill Response Notification Form	
• Reporter's name	Figure 3.1-3
• Company information	Figure 3.1-3
• Incident description	Figure 3.1-3
• Materials	Figure 3.1-3
• Response actions	Figure 3.1-3
• Impact	Figure 3.1-3

Response Equipment List (Identify if Facility, OSRO, CO-OP owned by letters O, F, or C) (sec. 1.3.2)	
Equipment list	Figure 7.1-1, Section 7.1.1
Equipment location	Figure 7.1-1, Section 7.1.1
Release handling capabilities and limitations	Figure 7.1-1, Section 7.1.1
Response Equipment Testing/ Deployment (sec. 1.3.3)	
Last inspection or equipment test date	Figure A.1-4
Inspection frequency	Figure A.1-4
Last deployment drill date	Figure A.1-4
Deployment frequency	Figure A.1-4
OSRO certification (if applicable)	Figure A.1-4

FIGURE E-1 - EPA / FRP CROSS-REFERENCE, CONTINUED

EPA FRP REQUIREMENTS	LOCATION
Response Personnel (sec. 1.3.4)	
Emergency response personnel list	Figure 3.1-4
Emergency response contractors	Figure 3.1-4, Figure 7.1-1, Appendix B
Evidence of response capability	Appendix B
Facility response team list (sec. 1.3.4)	Figure 3.1-4
Evacuation Plans (sec. 1.3.5)	
Facility-wide evacuation plan	Section 2.2
Reference to existing community evacuation plans (sec. 1.3.5.3)	Section 2.2
Evacuation routes shown on diagram	Evacuation Diagram "Figure C-3"
Qualified Individual's Duties (sec. 1.3.6)	
Description of duties	Section 4.5
Consistent with requirements	Section 4.5
Hazard Evaluation (sec. 1.4)	
Hazard Identification (sec. 1.4.1)	
Schematic Diagram	
Labeled schematic drawing	Drainage Diagram "Figure C-2"
Above-ground tanks identified separately	Drainage Diagram "Figure C-2"

Below-ground tanks identified separately	Drainage Diagram "Figure C-2"
Surface impoundments identified separately	N/A
Tank Form:	
Tank number	Figure C-1
Substance stored	Figure C-1
Quantity stored	Figure C-1
Tank type and year installed	Figure C-1
Maximum capacity	Figure C-1
Failure/ Cause	Figure C-1
Surface Impoundment Form:	
Surface impoundment number	Figure C-1
Substance stored	Figure C-1
Quantity stored	Figure C-1
Surface area/ year	Figure C-1
Maximum capacity	Figure C-1
Failure/ Cause	Figure C-1

FIGURE E-1 - EPA / FRP CROSS-REFERENCE, CONTINUED

EPA FRP REQUIREMENTS	LOCATION
Facility Operations Description:	
Loading and unloading procedures	Figure 1-2
Day to day operations	Figure 1-2
Secondary containment	Figure C-1
Daily throughput	Figure 1-2
Vulnerability Analysis (sec. 1.4.2)	
Vulnerability of:	
• Water intakes	Section 6.6, Section 6.10
• Schools	Section 6.6, Section 6.10
• Medical facilities	Section 6.6, Section 6.10
• Residential areas	Section 6.6, Section 6.10
• Business	Section 6.6, Section 6.10
• Wetlands or other environmentally sensitive areas	Section 6.6, Section 6.10

• Fish and wildlife	Section 6.6, Section 6.10
• Lakes and streams	Section 6.6, Section 6.10
• Endangered flora and fauna	Section 6.6, Section 6.10
• Recreational areas	Section 6.6, Section 6.10
• Transportation routes (air, land, and water)	Section 6.6, Section 6.10
• Utilities	Section 6.6, Section 6.10
• Other applicable areas (List below)	Section 6.6, Section 6.10
• Other areas:	Section 6.6, Section 6.10
Analysis of Potential for a Spill (sec. 1.4.3)	
Probability of spill occurring at the facility	Appendix D.4.1
Incorporates Factors:	
Tank age	Figure C-1
Spill history	Figure C-8
Horizontal range of a potential spill	Figure D.6-1
Vulnerability to natural disaster	Appendix D.4.1
Facility Reportable Oil Spill History Description (sec. 1.4.4)	
Date of discharge	Figure C-8
List of discharge causes	Figure C-8
Materials discharged	Figure C-8
Amount discharged in gallons	Figure C-8
Amount of discharge that reached navigable waters	Figure C-8
Effectiveness and capacity of secondary containment	Figure C-8
Clean-up actions taken	Figure C-8

FIGURE E-1 - EPA / FRP CROSS-REFERENCE, CONTINUED

EPA FRP REQUIREMENTS	LOCATION
Facility Reportable Oil Spill History Description (sec. 1.4.4), Continued	
Steps taken to reduce possibility of reoccurrence	Figure C-8
Total oil storage capacity of tank(s) or impoundment(s) from which material is discharged	Figure C-8

Effectiveness of monitoring equipment	Figure C-8
Description of how each spill was detected	Figure C-8
Discharge Scenarios (sec. 1.5)	
Small and Medium Volume Discharges (sec. 1.5.1)	
Small Volume Discharges	
Small volume discharge calculation for a facility	Appendix D.7
Facility-specific spill potential analysis	Appendix D.7
Average most probable discharge for "complexes"	Appendix D.7
1,000 feet of boom (1 hour deployment time)	Section 7.1.1, Figure 7.1-1, Appendix B
Correct amount of boom for "complexes"	Appendix D.7
Oil recovery devices equal to small discharge (2 hour recovery time)	Section 7.1.1, Figure 7.1-1, Appendix B
Oil storage capacity for recovered material	Section 7.1.1, Figure 7.1-1, Appendix B
Medium Volume Discharges	
Medium volume discharge calculation for a facility	Appendix D.7
Facility-specific spill potential analysis	Appendix D.7
Maximum most probable discharge for "complexes"	Appendix D.7
Oil recovery devices equal to medium discharge	Section 7.1.1, Figure 7.1-1, Appendix B
Availability of sufficient quantity of boom	Section 7.1.1, Figure 7.1-1, Appendix B
Oil storage capacity for recovered material	Section 7.1.1, Figure 7.1-1, Appendix B
Worst Case Discharge (WCD) (sec. 1.5.2)	
Correct WCD calculations	Appendix D.8, Appendix D.9
Correct WCD for "complexes"	Appendix D.7
Sufficient response resources for WCD	Appendix D.7, Figure 7.1-1, Appendix B
Sources and quantity of equipment for response to WCD	Appendix D.7, Figure 7.1-1, Appendix B
Oil storage capacity for recovered material	Appendix D.7, Figure 7.1-1, Section 7.4 , Figure 7.4-3, Appendix B

FIGURE E-1 - EPA / FRP CROSS-REFERENCE, CONTINUED

EPA FRP REQUIREMENTS	LOCATION
Discharge Detection Systems (sec. 1.6)	
Discharge Detection by Personnel (sec. 1.6.1)	
Detection procedures	Section 2.1.1, Appendix D.5
Discussion of facility inspections	Figure C-5, Appendix D.3
Initial response actions	Figure 2.1-1
Automated Discharge Detection (sec. 1.6.2)	
Equipment description	Appendix D.5
Alarm verification procedures	Appendix D.5
Initial response actions	Figure 2.1-1
Plan Implementation (sec. 1.7)	
Response Resources (sec. 1.7.1)	
Demonstration of accessibility of proper response personnel and equipment	Appendix B
Emergency plans for spill response	Section 2
Additional training	Appendix A.2
Additional contracted help	Appendix B
Access to additional equipment/ experts	Appendix B
Ability to implement plan, including training and practice drills	Appendix A
Immediate Actions Form for small, medium, and worst-case spills	Figure 2.1-1
Disposal Plans (sec. 1.7.2)	
How and where materials will be disposed	Section 5.6, Section 7.4, Appendix D.5
Disposal permits	Section 5.6, Section 7.4
Containment and Drainage Planning (sec. 1.7.3)	
Containment and drainage plan available	Figure C-9
Incorporates Factors:	
Available volume of containment	Figure C-9
Route(s) of drainage	Figure C-9
Construction materials used in drainage troughs	Figure C-9
Type and number of valves separators	Figure C-9
Sump pump capacities	Figure C-9
Containment capacity of weirs and booms	Figure C-9
Other clean up materials	Figure C-9

FIGURE E-1 - EPA / FRP CROSS-REFERENCE, CONTINUED

EPA FRP REQUIREMENTS	LOCATION
Self-Inspection, Drills/ Exercises, and Response Training (sec. 1.8)	
Facility Self-Inspection (sec. 1.8.1)	
Inspection checklist (with dates)	Figure C-5
Records maintained for five years	Figure C-5, Figure C-6
Tank Inspection (sec. 1.8.1.1)	
Tank leaks	Figure C-5
Tank foundations	Figure C-5
Tank piping	Figure C-5
Response Equipment Inspection (sec. 1.8.1.2)	
Inventory (item and quantity)	Figure D.5-1
Storage location (time to access and respond)	Figure D.5-1
Operation status/ condition	Figure D.5-1
Actual use/ testing (last test date and frequency of testing)	Maintain On-Site
Shelf life	Figure D.5-1
Secondary Containment Inspection (sec. 1.8.1.3)	
Dike or berm system	Figure C-5
Secondary containment	Figure C-5
Retention and drainage ponds	Figure C-5
Facility Drills/ Exercises (sec. 1.8.2)	
Facility drills/ exercise description	Appendix A.1
Equipment deployment exercise	Appendix A.1
Unannounced exercise	Appendix A.1
Area exercises	Appendix A.1
Qualified Individual Notification Drills	Appendix A.1
Qualified Individual Notification Drill Log (sec. 1.8.2.1) (date, company, qualified individual, other contacted, emergency scenario, evaluation)	Appendix A.1
Emergency Management Team Tabletop Exercises	Appendix A.1
Emergency Management Team Tabletop Drill Log (sec. 1.8.2.2) (date, company, qualified individual, participants, emergency scenario, evaluation, changes to be implemented, time table for implementation)	Appendix A.1
Response Training (sec. 1.8.3)	
Description of response training program (including topics)	Figure A.2-2
Personnel Response Training Logs (name, response training date/ and number of hours, prevention training date/ and number of hours)	Figure A.2-3

Discharge Prevention Meeting Log (date, attendees)	Figure C-4

FIGURE E-1 - EPA / FRP CROSS-REFERENCE, CONTINUED

EPA FRP REQUIREMENTS	LOCATION
Diagrams (sec. 1.9)	
Site Diagram includes:	
Entire facility to scale	Site Plan "Figure 1-5"
Above and below-ground bulk storage tanks	Site Plan "Figure 1-5"
Contents and capacities of bulk storage tanks	Site Plan "Figure 1-5"
Contents and capacities of drum storage areas	Site Plan "Figure 1-5"
Contents and capacities of surface impoundments	Site Plan "Figure 1-5"
Process buildings	Site Plan "Figure 1-5"
Transfer areas	Site Plan "Figure 1-5"
Secondary containment systems	Site Plan "Figure 1-5"
Structures where hazardous materials are used and capacity	Site Plan "Figure 1-5"
Location of communication and emergency response equipment	Site Plan "Figure 1-5"
Location of electrical equipment which contains oil	Site Plan "Figure 1-5"
If a "complex" facility, interface between EPA and other regulating agencies	N/A
Site Drainage Diagram	
Major sanitary and storm sewers, manholes, and drains	Drainage Diagram "Figure C-2"
Weirs and shut-off valves	Drainage Diagram "Figure C-2"
Surface water receiving streams	Drainage Diagram "Figure C-2"
Fire fighting water sources	Drainage Diagram "Figure C-2"
Other utilities	Drainage Diagram "Figure C-2"
Response personnel ingress and egress	Evacuation Diagram "Figure C-3"
Equipment transportation routes	Drainage Diagram "Figure C-2", Evacuation Diagram "Figure C-3"
Direction of spill flow from release points	Drainage Diagram "Figure C-2"
Site Evacuation Diagram includes:	

Site plan diagram with evacuation routes	Evacuation Diagram "Figure C-3"
Location of evacuation regrouping areas	Evacuation Diagram "Figure C-3"

FIGURE E-1 - EPA / FRP CROSS-REFERENCE, CONTINUED

EPA FRP REQUIREMENTS	LOCATION
Site Security (sec. 1.10)	
Emergency cut-off locations	Figure 7.3-2
Enclosure	Figure 7.3-2
Guards and their duties, day and night	Figure 7.3-2
Lighting	Figure 7.3-2
Valve and pump locks	Figure 7.3-2
Pipeline connection caps	Figure 7.3-2
Response Plan Cover Sheet (sec. 2.0)	
Owner/ operator of facility	Figure E-6
Facility name	Figure E-6
Facility address	Figure E-6
Facility phone number	Figure E-6
Latitude and longitude	Figure E-6
Dun and Bradstreet number	Figure E-6
Response Plan Cover Sheet (sec. 2.0), Continued	
North American Industrial Classification System (NAICS) Code	Figure E-6
Largest oil tank storage capacity	Figure E-6
Maximum oil storage capacity	Figure E-6
Number of oil storage tanks	Figure E-6
Worst case discharge amount	Figure E-6
Facility distance to navigable waters	Figure E-6
Applicability of substantial harm criteria	Figure E-6
Certification	Figure E-6

FIGURE E-2 - USCG / FRP CROSS-REFERENCE

USCG OPA 90 REQUIREMENTS (33 CFR 154.1035)	LOCATION IN THIS PLAN
a) Introduction and Plan Content	

1. Facility Name and Location (address, city, county, state, zip, phone number, fax number).	Figure 1-2
2. Facility Directions (including but not limited to maps, landmarks and river mile that could aid a responder and reviewer).	Figure 1-2, Figure 1-3
3. Name, address and procedures for contacting the facility's owner or operator on a 24 hour basis.	Figure 1-2
4. Table of contents.	Table of Contents
5. Period when submitted plan does not have to conform to the subpart, a cross index, if appropriate.	Figure E-2
6. Record of change(s) to record information on plan updates.	Table of Contents
b) Emergency Response Action Plan	
1. Notification procedures • Prioritized list of facility response personnel. • Federal, State or local agencies, as required • Spill response notification forms to Federal, State, local agencies. Form must state that initial notification must not be delayed by collection of data. • Notification of the National Response Center.	Section 3

2. Facility's spill mitigation procedures
• Describe volume and oil groups that would be involved in the following:
  • Average, maximum and worse discharge from the MTR facility.
• Where applicable, the worst case discharge from the non-transportation-related facility.
• Prioritized list of procedures and facility personnel (identified by job title). Procedures must address actions to be taken in the event of a discharge, potential discharge or emergency involving the following equipment and scenarios:
• Transfer equipment
  • Tank overfill or failure
  • Piping rupture, leak both under pressure and not under pressure
  • Explosion or fire
  • Equipment failure
• Listing of equipment and the responsibilities of facility personnel to mitigate an average most probable discharge
	Section 2.1.1, Figure 2.1-2, Appendix D

FIGURE E-2 - USCG / FRP CROSS-REFERENCE, CONTINUED

USCG OPA 90 REQUIREMENTS (33 CFR 154.1035)	LOCATION IN THIS PLAN
3. Facility's response activities	
i. Responsibilities of facility personnel to initiate a response and supervise response resources pending arrival of qualified individuals.	Figure 2.1-1
ii. Responsibilities and authority of the qualified individual and alternate as required in § 154.1026.	Section 4.5
iii. Apply the following organizational structure to manage response actions: • Command and control • Public information • Safety • Liaison with government agencies • Spill operations • Planning • Logistics support • Finance	Section 4.6
iv. Identify oil spill removal organizations and the spill management teams to be capable of providing the following response resources: • Equipment and supplies to meet § 154.1045, 154.1047, as appropriate • Trained personnel for response to be on hand for the first 7 days of the response • Job descriptions for each spill management team member within the organizational structure in a response action.	Section 4, Section 7.1, Appendix B
v. For mobile facilities in more than one COTP zone, oil spill removal organizations and the spill management teams must be identified from paragraph (3)(iv) and included in each COTP zone.	N/A
vi. For facilities that handle, store, or transport group II through group IV petroleum oils, and that operate in waters where dispersant use is pre-authorized, this subsection of the plan must also separately list the resource providers and specific resources, including appropriately trained dispersant-application personnel, necessary to provide the dispersant capabilities	Figure 3.1-5, Figure B.1-1

required in this subpart. All resource providers and resources must be available by contract or other approved means as described in Â§154.1028(a). The dispersant resources to be listed within this section must include the following:	

FIGURE E-2 - USCG / FRP CROSS-REFERENCE, CONTINUED

USCG OPA 90 REQUIREMENTS (33 CFR 154.1035)	LOCATION IN THIS PLAN
A. Identification of each primary dispersant staging site to be used by each dispersant-application platform to meet the requirements of this subpart.	Figure B.1-1
B. Identification of the platform type, resource-providing organization, location, and dispersant payload for each dispersant-application platform identified. Location data must identify the distance between the platform's home base and the identified primary dispersant staging site for this section.	Figure B.1-1
C. For each unit of dispersant stockpile required to support the effective daily application capacity (EDAC) of each dispersant-application platform necessary to sustain each intended response tier of operation, identify the dispersant product resource provider, location, and volume. Location data must include the stockpile's distance to the primary staging sites where the stockpile would be loaded onto the corresponding platforms.	Figure B.1-1
D. If an oil spill removal organization has been evaluated by the Coast Guard, and its capability is equal to or exceeds the response capability needed by the owner or operator, the section may identify only the oil spill removal organization, and not the information required in paragraphs (b)(3)(vi)(A) through (b)(3)(vi)(C) of this section.	Appendix B.1.1
vii. This subsection of the plan must also separately list the resource providers and specific resources necessary to provide aerial oil tracking capabilities required in this subpart. The oil tracking resources to be listed within this section must include the following:	Figure 3.1-5, Figure B.1-1

A. The identification of a resource provider; and	Figure 3.1-5, Figure B.1-1
B. Type and location of aerial surveillance aircraft that are ensured available, through contract or other approved means, to meet the oil tracking requirements of Â§154.1045(j).	Figure B.1-1
viii. For mobile facilities that operate in more than one COTP zone, the plan must identify the oil spill removal organization and the spill management team in the applicable geographic-specific appendix. The oil spill removal organization(s) and the spill management team discussed in paragraph (b)(3)(iv) of this section must be included for each COTP zone in which the facility will handle, store, or transport oil in bulk.	Figure 3.1-5, Section 7.1, Appendix B

FIGURE E-2 - USCG / FRP CROSS-REFERENCE, CONTINUED

USCG OPA 90 REQUIREMENTS (33 CFR 154.1035)	LOCATION IN THIS PLAN
ix. For mobile facilities that operate in more than one COTP zone, the plan must identify the oil spill removal organization and the spill management team in the applicable geographic-specific appendix. The oil spill removal organization(s) and the spill management team discussed in paragraph (b)(3)(iv)(A) of this section must be included for each COTP zone in which the facility will handle, store, or transport oil in bulk.	Figure 3.1-5, Section 7.1, Appendix B
4. Sensitive areas	
i. Identify areas of economic importance and environmental sensitivities as identified in the ACP, which are potentially impacted by a worst case discharge.	Section 6.6
ii. For a worst case discharge the plan must address the following:· • List all sensitive elements identified in ACP that are potentially impacted by a discharge· • Describe all response actions anticipated to protect sensitive elements· • Contain map or chart that depicts each response action anticipated.	Section 6, Appendix D

iii. Identify appropriate equipment and personnel as described in § 154.1028 to protect sensitive elements by one of the following calculations: • Persistent oils and non-petroleum oils discharged into non-tidal waters, the distance from the facility reached in 48 hours at maximum current. • Persistent and non-petroleum oils discharged into tidal waters, 15 miles from the facility down current during ebb tide and to the point of maximum tidal influence or 15 miles, whichever is less, during flood tide. • Non-persistent oils discharged into non-tidal waters, the distance from the facility reached in 24 hours at maximum current. • Non-persistent oils discharged into tidal waters, 5 miles from the facility down current during ebb tide and to the point of maximum tidal influence or 5 miles, whichever is less, during flood tide.	Section 7.1, Appendix B, Appendix D

FIGURE E-2 - USCG / FRP CROSS-REFERENCE, CONTINUED

USCG OPA 90 REQUIREMENTS (33 CFR 154.1035)	LOCATION IN THIS PLAN
• Spill trajectory or model maybe substituted if acceptable to COTP. • Procedures contained in the Environmental Protection's Agency's regulations on oil pollution prevention may be substituted for non-tidal and tidal waters. • COTP may require additional sensitive elements to be protected depending on trajectory.	Section 6.11, Section 7.1, Appendix B, Appendix D
5. Disposal plan Describe actions and procedures that adhere to Federal, state or local requirements.	Section 5.6, Section 7.4
c) Training and Exercises	
1. Training procedures of the facility owner or operator must meet requirements of § 154.1050.	Appendix A
2. Drill procedures of the facility owner or operator must meet requirements of § 154.1055.	Appendix A
d) Plan Review and Update Procedures	

Plan review and update procedures of the facility owner or operator must meet requirements of §154.1065 and any post-discharge review of the plan to evaluate and validate its effectiveness.	Section 1.2
e) Appendices	
1. Facility-specific information - principal characteristics	
i. Identify sizes, types and number of vessels the facility can transfer oil to or from simultaneously.	Figure 1-2
ii. Identify the first valve(s) on piping separating transportation-related and non-transportation-related areas. If piping serves tank vessels from a manifold it is considered the first valve.	Figure 1-5, Figure 1-6, Figure C-2
iii. The oil(s) and hazardous material handled, stored or transported in bulk must be documented and include the following: • Generic/chemical name • Description of appearance and odor • Hazards involved with handling or discharge • Firefighting procedures and extinguishing agents for oil/hazardous materials	Appendix D.11
2. List of contacts must include primary and alternate personnel, personnel from paragraph (b) (3) (iv), and Federal, state and local officials.	Figure 3.1-4, Figure 3.1-5

FIGURE E-2 - USCG / FRP CROSS-REFERENCE, CONTINUED

USCG OPA 90 REQUIREMENTS (33 CFR 154.1035)	LOCATION IN THIS PLAN
3. Equipment list and records must include the following: • List of equipment and facility personnel required to respond to an average most probable discharge, as defined by §154.1020 • List of equipment belonging to an oil spill removal organization as described in §154.1028; unless the organization has been classified by the Coast Guard to equal or exceed the response capability needed by the facility • When it is necessary for the appendix to contain a listing of response equipment, it shall include	Section 7.1, Appendix B

the following: skimmers; booms; dispersant application; in-situ burning; bioremediation equipment and supplies and other equipment used to apply other chemical agents on the NCP Product Schedule; communications, firefighting and beach cleaning equipment; boats and motors; and heavy equipment • This list must also include specifications for each piece of equipment as follows: 1. type, make, model and year of manufacture, 2. for oil recovery devices, the effective daily recovery rate, 3. for containment boom, the overall boom height and type of end connectors, 4. spill scenario in which the equipment will be used, 5. total daily capacity for storage and disposal of recovered daily oil 6. for communication equipment, the type and amount of equipment intended for use during response activities, 7. location of equipment, and 8. date of last inspection.	
4. Communications plan must describe the primary and alternate method of communication during discharges, including communications at the facility and at remote locations.	Section 7.1.6
5. Site specific safety and health plan must describe the safety and health plan to be implemente This appendix may reference another existing plan requiring under 29 CFR 1910.120	Section 5.4
6. List of acronyms and definitions must include all definitions that are critical to understanding the response plan.	Appendix F

FIGURE E-3 - DOT / PHMSA CROSS-REFERENCE

OPA 90 REQUIREMENTS (49 CFR 194)	LOCATION
Information Summary	
• For the core plan:	
• Name and address of operator	Figure 1-2

• For each Response Zone which contains one or more line sections that meet the criteria for determining significant and substantial harm (§194.103), listing and description of Response Zones, including county(s) and state(s)	Figure 1-2
• For each Response Zone appendix:	
• Information summary for core plan	Figure 1-2
• QI names and telephone numbers, available on 24-hr basis	Figure 1-2, Figure 3.1-4
• Description of Response Zone, including county(s) and state(s) in which a worst case discharge could cause substantial harm to the environment	Figure 1-2
• List of line sections contained in Response Zone, identified by milepost or survey station or other operator designation	Figure 1-2
• Basis for operator's determination of significant and substantial harm	Figure 1-2
• The type of oil and volume of the worst case discharge	Appendix D.8, Appendix D.9
• Certification that the operator has obtained, through contract or other approved means, the necessary private personnel and equipment to respond, to the maximum extent practicable, to a worst case discharge or threat of such discharge	Section 1.3, Appendix B
Notification Procedures	
• Notification requirements that apply in each area of operation of pipelines covered by the plan, including applicable state or local requirements	Section 3
• Checklist of notifications the operator or Qualified Individual is required to make under the response plan, listed in the order of priority	Figure 2.1-1, Figure 3.1-4, Figure 3.1-5
• Name of persons (individuals or organizations) to be notified of discharge, indicating whether notification is to be performed by operating personnel or other personnel	Figure 3.1-1, Figure 3.1-4, Figure 3.1-5
• Procedures for notifying Qualified Individuals	Figure 3.1-1, Section 4.2
• Primary and secondary communication methods by which notifications can be made	Section 7.1.6

FIGURE E-3 - DOT / **PHMSA** CROSS-REFERENCE, CONTINUED

OPA 90 REQUIREMENTS (49 CFR 194)	LOCATION
• Information to be provided in the initial and each follow-up notification, including the following: • Name of pipeline • Time of discharge • Location of discharge • Name of oil recovered • Reason for discharge (e.g. material failure, excavation damage, corrosion) • Estimated volume of oil discharged • Weather conditions on scene • Actions taken or planned by persons on scene	Figure 3.1-3
Spill Detection and On-Scene Spill Mitigation Procedures	
• Methods of initial discharge detection	Appendix D.5
• Procedures, listed in order of priority, that personnel are required to follow in responding to a pipeline emergency to mitigate or prevent any discharge from the pipeline	Section 2
• List of equipment that may be needed in response activities based on land and navigable waters including: • Transfer hoses and pumps • Portable pumps and ancillary equipment • Facilities available to transport and receive oil from a leaking pipeline	Section 7.1.1, Figure 7.4-4, Appendix B
• Identification of the availability, location, and contact phone numbers to obtain equipment for response activities on a 24-hour basis	Figure 3.1-5, Appendix B
• Identification of personnel and their location, telephone numbers, and responsibilities for use of equipment in response activities on a 24-hour basis	Figure 3.1-4, Section 7.1, Appendix B
Response Activities	
• Responsibilities of, and actions to be taken by, operating personnel to initiate and supervise response actions pending the arrival of the Qualified Individual or other response resources identified in the response plan	Section 2, Section 4.6, Appendix B
• Qualified Individual's responsibilities and authority, including	Section 4.6

notification of the response resources identified in the response plan	
• Procedures for coordinating the actions of the operator or Qualified Individual with the action of the OSC responsible for monitoring or directing those actions	Section 4.5, Section 4.6
• Oil spill response organizations (OSRO) available through contract or other approved means, to respond to a worst case discharge to the maximum extent practicable	Appendix B

FIGURE E-3 - DOT / **PHMSA** CROSS-REFERENCE, CONTINUED

OPA 90 REQUIREMENTS (49 CFR 194)	LOCATION
Response Activities, Continued	

• For each organization identified under paragraph (d), a listing of:
  • Equipment and supplies available
  • Trained personnel necessary to continue operation of the equipment and staff the oil spill removal organization for the first seven days of the response
	Appendix B

List of Contacts	
• List of persons the Plan requires the operator to contact	Figure 3.1-1, Figure 3.1-4, Figure 3.1-5
• Qualified individuals for the operator's areas of operation	Figure 1-2, Figure 3.1-4
• Applicable insurance representatives or surveyors for the operator's areas of operation	Figure 3.1-5
• Persons or organizations to notify for activation of response resources	Figure 3.1-1, Figure 3.1-4, Figure 3.1-5
Training Procedures	
• Description of training procedures and programs of the operations	Appendix A.2
Drill Procedures	
• Announced and unannounced drills	Appendix A.1
• Types of drills and their frequencies; for example: • Manned pipeline emergency procedures and qualified individual notification drills conducted quarterly	Appendix A.1

• Drills involving emergency actions by assigned operating or maintenance personnel and notification of qualified individual on pipeline facilities which are normally unmanned, conducted quarterly • Shore-based spill management team (SMT) tabletop drills conducted yearly • Oil spill removal organization field equipment deployment drills conducted yearly • A drill that exercises entire response plan for each Response Zone, would be conducted at least once every three years	
Response Plan review and update procedures	
• Procedures to meet §194.121	Section 1.2
• Procedures to review plan after a worst case discharge and to evaluate and record the plan's effectiveness	Section 1.2, Section 8.3, Appendix C
Response zone appendices	
Each response zone appendix would provide the following information:	
• Name and telephone number of the qualified individual	Figure 1-2, Figure 3.1-4
• Notification procedures	Section 3
• Spill detection and mitigation procedures	Section 2.1.1, Figure 2.1-2, Appendix D

FIGURE E-3 - DOT / **PHMSA** CROSS-REFERENCE, CONTINUED

OPA 90 REQUIREMENTS (49 CFR 194)	LOCATION
• Name, address, and telephone number of oil spill response organization	Figure 3.1-5, Appendix B
• Response activities and response resources including: • Equipment and supplies necessary to meet §194.115 • Trained personnel necessary to sustain operation of the equipment and to staff the oil spill response organization and spill management team for the first seven days of the response	Section 4, Appendix A, Appendix B
• Names and telephone numbers of federal, state, and local agencies which the operator expects to assume pollution response responsibilities	Figure 3.1-5

Worst case discharge volume	Appendix D.8, Appendix D.9
• Method used to determine the worst case discharge volume, with calculations	Appendix D.8, Appendix D.9

• A map that clearly shows:
  • Location of worst case discharge
  • Distance between each line section in the Response Zone:
  • Each potentially affected public drinking water intake, lake, river, and stream within a radius of five miles of the line section
  • Each potentially affected environmentally sensitive area within a radius of one mile of the line section
	Figure 1-3, Figure 1-5, Section 6.7, Section 6.10, Section 6.11

• Piping diagram and plan-profile drawing of each line section; may be kept separate from the response plan if the location is identified	Figure 1-2, Figure 1-5, Figure 1-6, Figure C-2

• For every oil transported by each pipeline in the response zone, emergency response data that:
  • Include name, description, physical and chemical characteristics, health and safety hazards, and initial spill-handling and firefighting methods
  • Meet 29 CFR 1910.1200 or 49 CFR 172.602
	Figure 2.1-2, Figure D.11-1

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE

REQUIREMENTS	LOCATION
817.02 Marine Facility Plan Content (Except for those Small Marine Fueling Facilities Addressed in Section 817.03)	
Note: To the degree information required by Subsections 817.02(b) through (k) exists elsewhere, copies of the pre-existing information may be submitted. If the information provided is not sufficient to meet the requirements of this subchapter, additional information may be requested by the Administrator.	
(a) Introductory Material	
(1) Each plan shall provide the following information:	
(A) Name and address of the marine facility, and mailing address if different. The name and address of the facility shall be referenced in the plan title or on a title page at the front of the plan;	Figure E-6; Figure 1-2

(B) name, address, phone number, fax number and e-mail address, if available, of the owner and/or operator of the marine facility;	Figure 1-2
(C) Name, address and phone number of the person to whom correspondence should be sent;	Figure 1-2
(D) a certification statement signed under penalty of perjury by an executive within management who is authorized to fully implement the oil spill contingency plan, who shall review the plan for accuracy, feasibility, and executability. If this executive does not have training, knowledge and experience in the area of oil spill prevention and response, the certification statement must also be signed by another individual within the plan holder's management structure who has the requisite training, knowledge, and experience. The certification shall be submitted according to the following format: "I certify, to the best of my knowledge and belief, under penalty of perjury under the laws of the State of California, that the information contained in this contingency plan is true and correct and that the plan is both feasible and executable." (signature), (title), (date);	Section 1.3
(E) The California Certificate of Financial Responsibility (COFR) number for the facility shall be included in the front of the plan. If the COFR is not available when the plan is submitted because the facility is not yet operational, the COFR number must be provided as soon as it becomes available. The COFR number must be provided before the plan can be approved.	TOC after the ROC
(2) Each plan shall identify a qualified individual, as defined in Chapter 1, Section 790, and any alternates that may be necessary for the purpose of implementing the plan. If the plan holder contracts for this service, documentation that the Qualified Individual or company, and any identified alternates, acknowledge this capacity shall be included in the plan. If an alternate or alternates are identified in the plan, then the plan shall also describe the process by which responsibility will be transferred from the Qualified Individual to an alternate. During spill response activities, notification of such a transfer must be made to the State Incident Commander at the time it occurs.	Figure 1-2

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
(3) Each plan shall provide the name, address, telephone number and facsimile number of an agent for service of process designated to receive legal documents on behalf of the plan holder. If the plan holder contracts for this service, documentation that the agent for service of process acknowledges this capacity shall be included in the plan. Such agent shall be located in California.	Figure 1-2
(4) Each plan shall identify a Spill Management Team (as defined in Section 815.05(p)). If the plan holder contracts for this service, documentation that the Spill Management Team acknowledges this capacity shall be included in the plan.	Figure 3.1-4
(5) Each plan shall contain a copy of the contract or other approved means (as defined in Section 815.05(b)) verifying that any oil spill resource organization(s) that are named in the plan will provide the requisite equipment and personnel in the event of an oil spill. This requirement can be met by, a copy of the basic written agreement with an abstract of the recovery and/or cleanup capacities covered by the contract. Plan holders shall only contract with an OSRO(s) that has received a Rating by OSPR (as specified in Section 819) for the booming, on-water recovery and storage, and shoreline protection services required.	Figure B.1-1
(b) Facility Description	
(1) Each plan shall describe the facility's design and operations with specific attention to those areas from which an oil spill could occur. This description shall include, at a minimum, the following information:	Appendix C
(A) a piping and instrumentation diagram, and a tank diagram including the location of pumps, valves, vents and lines; the number, and oil storage capacity of each structure covered under the plan and its age, design, construction and general condition; the range of oil products normally stored in each structure; the present or absence of containment structures and equipment; and the location of mooring areas, oil transfer locations, control stations, safety equipment, drip pans and the drainage for drip pans;	Figure 1-5; Figure 1-6; Figure C-1; Figure C-2
(B) a description of the types, physical properties, health and safety hazards, maximum storage or handling capacity and current normal daily throughput of oil handled. A material safety data sheet (MSDS) or equivalent will meet this requirement and can be maintained separately at the facility providing the plan identified its locations;	Figure 1-2; Figure C-1; Appendix D.11

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
(C) a description of the normal procedures for transferring oil from or to a pipeline, tanker, barge or other vessel, or storage	Figure 1-2

tank, and the amount, frequency and duration of oil transfers;	
(D) the marine facility's normal hours of operation; and	Figure 1-2
(E) for an exploration or production facility, a complete description of those sections of the oil or gas lease field, gathering lines, storage tanks and processing facilities, under the control of the owner/operator, a spill from which could reasonable be expected to impact the marine waters of California.	N/A
(2) Each plan shall describe the marine facility site and surrounding area, including where appropriate, the following information (note: where maps/diagrams are required they may be submitted (in addition to the original hard copy) on electronic media, in portable document format (PDF)):	
(A) a map and description of site topography, including the drainage and diversion plans for the facility, such as sewers, storm drains, catchment, containment or diversion systems or basins, oil/water separators, and all watercourses into which surface runoff from the facility drains;	Section 6.1.2; Figure C-2; Figure C-9
(B) vicinity maps showing any vehicular or rail access to the facility, pipelines to and from the facility, nearby residential, commercial or other populous areas, and access to private land necessary to respond to a spill;	Figure 1-3; Figure 1-4; Figure 1-5; Figure 1-6; Section 6.10; Figure C-2
(C) seasonal hydrographic and climatic conditions including wind speed and direction, air and water temperature, local tides, prevailing currents, any local visibility problems.	Section 6.1.1
(D) Physical geographic features, including ocean depths and local bathymetry; beach types and other geological conditions; including type of soil and terrain; operational conditions such as physical or navigation hazards, traffic patterns, permanent buoys, moorings and underwater structures or other site-specific factors; and any other physical feature or peculiarity of local waters that call for special precautionary measures that may affect spill response;	Section 6.1.2
(E) logistical resources within the geographic area covered by the plan, including facilities for fire services, medical services, and accommodations for spill response personnel; and	Figure 3.1-5
(F) shoreline access area, including piers, docks, boat launches, and equipment and personnel staging areas.	Figure 1-5; Section 7.1.5

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
(c) Prevention Measures	
Each plan shall address prevention measures in order to reduce the possibility of an oil spill occurring as a result of the operation of the marine facility. The prevention measures must eliminate or mitigate all the hazards identified in the Risk and Hazard Analysis.	
(1) Risk and Hazard Analysis	Appendix D
(A) Each facility shall conduct a Risk and Hazard Analysis to identify the hazards associated with the operation of the facility, including operator error, the use of the facility by various types of vessels, equipment failure, and external event likely to cause an oil spill.	Appendix D.2
The owner/operator may use one or more of the hazard evaluation method identified by the American Institute of Chemical Engineers, or an equivalent method, including, but not limited to:	Appendix D.2
1. What-if analysis;	Appendix D.2
2. Checklist analysis;	
3. Preliminary hazard analysis;	
4. Hazard and operability study;	
5. Failure mode and effect analysis; or	
6. Fault tree analysis.	
(B) The chosen hazard evaluation method must be conducted in accordance with the guidelines established by the American Institute of Chemical Engineers as published in the “Guidelines for Hazard Evaluation Procedures”, second edition, copyright 1992, prepared for The Center For Chemical Process Safety.	Appendix D.2.2
1. The plan must include information regarding the expertise of the working group that develops the analysis.	Appendix D.2.4
2. The plan must include information that demonstrates to the Administrator that the analysis is appropriate to the marine facility and adequate according to the published procedures referenced in (B) above.	Appendix D.1; Appendix D.2
3. An owner/operator may be found in violation of this section if the Risk and Hazard Analysis does not adequately address the risks posed by the marine facility.	Appendix D.2

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
4. The Administrator may require that an analysis be updated if there are significant changes made to the marine facility. A significant change, as used in the paragraph, is one that would have an impact on the outcome of the Risk and Hazard Analysis.	Only if requested
5. Additional information regarding the analysis method used or the working group that conducted the analysis shall be made available to the Administrator upon request.	Only if requested
(C) Each plan shall include a summary of the results of the Risk and Hazard Analysis. The summary shall include the following:	
1. The hazard analysis method used, and a statement that the analysis is specific to the marine facility. If the analysis relies on a risk assessment at a similar facility, the summary shall specify how the two facilities are comparable;	Appendix D.1; Appendix D.2.2
2. an inventory of the hazards identified, including the hazards that resulted in the historical spills:	Appendix D.2.6
3. an analysis of the potential oil discharges, including the size, frequency, cause, duration and location of all significant spills from the facility as a result of each major type of hazard identified;	Appendix D.2.6
4. the control measures that will be used to mitigate or eliminate the hazards identified. The plan shall include time frames for implementing any control measures that cannot be functional immediately; and	Appendix D.2.6
5. a prediction of the potential oil spills that might still be expected to occur, after any mitigating controls have been implemented.	Appendix D.2.6
(D) All supporting documentation used to develop the Risk and Hazard Analysis summary shall be made available to the Administrator upon request.	Appendix D.2.7
(2) Off-Site Consequence Analysis	
For the significant hazards identified in the Risk and Hazard Analysis required under this section, the facility shall conduct a trajectory analysis to determine the Off-Site Consequences of an oil spill. This analysis shall assume pessimistic water and air dispersion and other adverse environmental conditions such that the worst possible	Appendix D.2.8

dispersion of the oil into the air or onto the water will be considered. This analysis is intended to be used as the basis for determining the areas and shoreline types for which Response Strategies must be developed. Some of the information required in this subsection may be drawn from the appropriate Area Contingency Plans, completed by the U.S. Coast Guard, State Agencies, and local governments pursuant to the Oil Pollution Act of 1990. (Note: Where maps/diagrams are required they may be submitted on electronic media, in portable document format (PDF)). The analysis, which shall be summarized in the plan, shall include at least the following:	

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
(A) a trajectory, or series of trajectories (for pipelines, etc.), to determine the potential directions, rate of flow and time of travel of the reasonable worst case oil spill from the facility to marine waters and to the shorelines that may be impacted. For purposes of this requirement, a trajectory or trajectories (projected for a minimum of 72 hours) that determine the outer perimeter of a spill, based on regional extremes of climate, tides, currents and wind with consideration to seasonal differences, shall be sufficient;	Appendix D.2.8
(B) for each probable shoreline that may be impacted, a discussion of the general toxicity effects and persistence or the discharge based on type of product; the effect of seasonal conditions on sensitivity of these areas; and an identification of which areas will be given priority attention if a spill occurs.	Appendix D.2.8
(3) Resources at Risk from Oil Spills	Section 6
Based on the trajectory of the spilled oil as determined in the Off-Site Consequence Analysis, each plan shall identify the environmentally, economically and culturally sensitive areas that may be impacted. Each plan shall identify and provide a map of the locations of these areas. Some of the information as required in this subsection may be drawn from the appropriate Area Contingency Plans, completed by the U.S. Coast Guard, State Agencies, and Local Governments pursuant to the Oil Pollution Act of 1990. (Note: where maps/diagrams are required they may be submitted on electronic media, in Portable Document Format (PDF)).	Section 6
(A) The map of environmentally sensitive areas shall include:	Section 6
1. shoreline types and associated marine resources;	Section 6
2. the presence of migratory and resident marine bird and mammal migration routes, and breeding, nursery, stopover, haul-out, and population concentration areas by	Section 6

season;	
3. the presence of aquatic resources including marine fish, invertebrates, and plants including important spawning, migratory, nursery and foraging areas;	Section 6
4. the presence of natural terrestrial animal and plant resources in marine-associated environments;	Section 6
5. the presence of state or federally-listed rare, threatened or endangered species;	Section 6
6. the presence of commercial and recreational fisheries including aquaculture sites, kelp leases and other harvest areas.	Section 6
(B) The map of the locations of economically and culturally sensitive areas shall include:	Section 6.10
1. public beaches, parks, marinas, boat ramps and diving areas;	Section 6.10
2. industrial and drinking water intakes, power plants, salt pond intakes, and other similarly situated underwater structures;	Section 6.10
3. off-shore oil and gas leases and associated drilling/production platforms;	Section 6.10

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
4. known historical and archaeological sites. If a plan holder has access to any confidential archaeological information, it must be submitted as a separate item and will be handled as confidential information as outlined in Subsection 816.01(d);	Section 6.10
5. areas of cultural or economic significance to Native Americans; and	Section 6.10
6. the major waterways and vessel traffic patterns that are likely to be impacted.	Section 6.10
(4) Required Prevention Measures	
Each facility shall take all prevention measures to reduce or mitigate the potential hazards identified in the Risk and Hazard Analysis, and	Section 2; Appendix D

the potential impact those hazards pose to the resources at risk. Each plan shall include the following:	
(A) schedules, methods and procedures for testing, maintaining and inspecting pipeline and other structures within or appurtenant to the facility that contain or handle oil which may impact marine waters if a failure occurs. Any information developed in compliance with Title 30 CFR, Part 250.153; Title 33 CFR, Part 154; Title 49 CFR, Part 195; and/or Title 5, Division, Part 1, Chapter 5.5 of the Government Code may be substituted for all or part of any comparable prevent measures required by this subsection.	Figure C-5; Figure C-6
(B) Methods to reduce spills during transfer and storage operations, including overfill prevention measures and immediate spill containment provisions. Any information developed in compliance with Title 2, CCR, Division 3, Chapter 1, Article 5; Title 30 CFR, Part 250.154; and/or Title 33 CFR, Parts 154 and 156 may be substituted for all or part of any comparable prevention measures required by this subsection.	Section 2.1; Appendix C
(C) procedures to assure clear communication among all the parties involved during transfer operations. Any information developed in compliance with Title 2, CCR, Division 3, Chapter 1, Article 5; Title 14, CCR, Division 1, Subdivision 4, Chapter 3, Subchapter 6; and/or Title 33 CFR, Parts 154 and 156 may be substituted for all or part of any comparable prevention measures required by this subsection;	Section 7.1.6; Appendix D.5;
(D) protection measures for areas within the marine facility that are subject to flooding	Section 2.4; Appendix C
(E) the plan holder shall provide additional relevant information to the Administrator upon request.	Only if requested

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
(d) Containment Booming and On-Water Recovery	
Each plan holder must have a contract or other approved means for containment booming and on-water recovery response resources up to their Response Planning volume for all potential oil spills from the marine facility. To determine the response resources for containment booming and on-water recovery, each plan holder must calculate a Response Planning Volume as outlined below:	Section 7.1.1; Appendix B
(1) Reasonable Worse Case Spill (RWO)	
To calculate the Response Planning Volume, it is first necessary to determine the reasonable worst case spill for each marine facility, as follows:	

(A) For marine facilities (except on-shore pipelines not subject to Chapter 6.67 (commencing with Section 25270) or Chapter 6.7 (commencing with Section 25280) of Division 20, Health and Safety Code) which are addressed in Subsection (B), offshore platforms which are addressed in Subsection (E):	Appendix D.9
1. The loss of the entire capacity of all in-line, break-out and portable storage tank(s), not subject to Chapter 6.67 (commencing with Section 25270) or Chapter 6.7 (commencing with Section 25280) of Division 20,Health and Safety Code, needed for continuous operation of the pipelines used for the purposed of handling or transporting oil, taking into account the existence of volume limiting factors including, but not limited to, line pressure, gravity, and the availability and location of the emergency shut-off controls; plus	Appendix D.9

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
2. the amount of additional spillage that could reasonably be expected to enter California marine waters during emergency shut-off, transfer or pumping operations if a hose(s) or pipeline(s) ruptures or becomes disconnected, or if some other incident occurs which could cause or increase the size of an oil spill. The spillage shall be calculated as follows: the maximum time to discover the release from the pipe or hose in hours, plus the maximum time to shut down the flow from the pipe or hose in hours (based on historic discharge data or the best estimate in absence of historic discharge data for the marine facility) multiplied by the maximum flow rate expressed in barrels per hour (based on the maximum relief valve setting or maximum system pressure when relief valves are not provided) plus the total linefill drainage volume expressed in barrels.	Appendix D.9
3. The Administrator has the discretion to accept that a marine facility can operate only a limited number of the total pipelines at a time. In those circumstances, the reasonable worst case spill volume shall include the drainage volume from the piping normally not in use, in addition to the volume determined in (1) and (2), above.	Appendix D.9
(B) For on-shore pipelines not subject to Chapter 6.67 (commencing with Section 25270) or Chapter 6.7 (commencing with Section 25280) of Division 20, Health and Safety Code, the largest volume in barrels, of the following:	

1. The pipeline's maximum release time in hours (i.e., the time between pipeline rupture and discovery), plus the maximum shut-down response time in hours (based on historic discharge data or in the absence of such historic data, the operator's best estimate), multiplied by the maximum flow rate expressed in barrels per hour (based on the maximum daily capacity of the pipeline), plus the largest line drainage volume after shutdown of the line section(s) in the response zone expressed in barrels. (As used in this subsection: line section means a continuous run of pipe that is contained between adjacent pressure pump stations, between a pressure pump station and a terminal or break-out tank, between a pressures pump station and a block valve, or between adjacent block valves; response zone means a geographic area either along a length of pipeline or including multiple pipelines, containing one or more adjacent line sections, for which the operator must plan for the deployment of, and provide spill response capabilities. The size of the zone is determined by the operator after considering available capabilities, resources, and geographic characteristics); or	Appendix D.9
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 preventive action taken; or	Appendix D.9

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
3. if the response zone contains one or more break-out 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.	Appendix D.9
(C) For offshore platforms (except those drilling a new well which are addressed in Subsection (D)):	N/A
1. total tank storage and flow line capacity; plus	N/A
2. that portion of the total linefill capacity which could be lost during a spill, taking into account the availability and location of the emergency shut-off controls and the effect of hydrostatic pressure; plus	N/A
3. the amount of additional spillage that could reasonably be expected to enter marine waters during emergency shut-off, transfer or pumping operations if a hose or	N/A

pipeline ruptures or becomes disconnected, or some other incident occurs which could cause or increase the size of an oil spill. The calculation may take into consideration other safety devices, emergency reaction times and maximum transfer rates; plus	
4. the daily production volume for seven days from an uncontrolled blowout of the highest capacity well associated with the marine facility. In determining the daily discharge rate, the reservoir characteristics, casing/production tubing sizes, and historical production and reservoir pressure data shall be taken into consideration.	N/A
(D) For offshore platforms with active well drilling:	N/A
The owner/operator of a platform at which a new well is being drilled must submit a proposed reasonable worst-case oil spill calculation for platform operations to the Administrator. The proposed worst case discharge is the daily volume possible for seven days from an uncontrolled blowout taking into consideration any known reservoir characteristics. The proposed calculation will be reviewed by the Administrator during the plan review and approval process to determine if it adequately addresses the oil spill potential of the new well system.	N/A
(E) For offshore pipelines, the largest volume in barrels of the following calculation;	N/A
1. The pipeline system leak detection time, plus the shutdown response time, multiplied by the highest measured oil flow rate over the preceding 12-month period. For new pipelines, use the predicted oil flow rate. Add to this calculation the total volume of oil that would leak from the pipeline after it is shut in. This volume should be calculated by taking into account the effects of hydrostatic pressure, gravity, frictional wall forces, length of pipeline segment, tie-ins with other pipelines, and other factors.	N/A

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
(F) The calculations, and such parameters as flow rates, linefill capacities and emergency shutoff times, that are used to determine a marine facility's reasonable worst case spill shall be submitted as part of the plan. The Administrator may review and test these parameters as part of the drill conducted in accordance with Subsection 816.03(b).	Appendix D.9

(2) Persistence and Emulsification Factors	
(A) The reasonable worst-case spill volume is then multiplied by a persistence factor relative to the most persistent type of oil that may be spilled by the marine facility. The persistence factors relative to the type of oil spilled, are specified below:	Appendix D.9
Oil Group (Group 1) (Group 2) (Group 3) (Group 4) Persistence Multiplier: (.20) (.50) (.50) (.50)	
(B) Emulsification Factors	
The volume determined from the calculation in Subparagraph (A) is then multiplied by one of the following emulsification factors, again, based on the type of oil.	Appendix D.9
Oil Group: (Group 1) (Group 2) (Group 3) (Group 4) Emulsification Multiplier (1.0) (1.8) (2.0) (1.4)	
(C) Response Planning Volume	
The total determined by the above calculation is a Response Planning Volume.	Appendix D.8
1. The Response Planning Volume to be used to determine the amount of Response Equipment and Services that must be under contract or other approved means shall be the greater of the amount determined in Subsection 817.02(d)(1) and (2), or the Planning volume for On-water Recovery calculated for the nearshore/inland environment in the marine facility's federal response plan pursuant to 33 CFR Part 154, Appendix C, Section 7. The Planning Volume for On-water Recovery is the adjusted volume from the federal calculation determined prior to establishing the response tiers utilizing the mobilization factors.	Appendix D.9
2. All calculations used to determine the Response Planning Volume shall be included in the plan.	Appendix D.9
(3) Response Capability Standards	
The equipment and personnel necessary to address the Response Planning Volume is brought to the scene of the spill over a period of time. The time frames are dependent upon the risk zone in which the marine facility is located and are specified in the tables in this section.	Figure 3.1-4; Section 7.1.1; Appendix B; Appendix D.7; Appendix D.9; Appendix D.10

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
The standards set forth in this section are only planning standards and may not reflect the exigencies of actual spill response. However, these are the standards that must be used to determine the amount of equipment personnel that must be under contract or other approved means. Response resources in addition to that under contract must be identified, and a call-out procedure in place to access this equipment, if the marine facility has a spill that exceeds the Response Planning Volumes. The owner/operator is ultimately responsible for addressing the entire volume of an actual spill regardless of the planning volume.	Section 3; Section 7; Appendix B; Appendix D.9; Appendix D.10
(A) On-Water Daily Recovery Rates and Containment Boom Amounts	
1. The total amount of on-water recovery equipment and services required shall be the lesser of the amount necessary to address the Response Planning volume determined in Section 817.02(d)(2)(C) or the Daily Recovery Rate established by this Section at 817.02(d)(3)(B) below.	Appendix D.9; Appendix D.10
2. The amount of equipment and the timeframes for delivery are specified in Subsection 817.02(d)(2)(C) below. The barrels per day capability figure is the total amount of on-water recovery equipment that must be at the scene of the spill at the hour specified which is measured from the time of notification, as described in this subchapter. All on-water recovery response resources shall be capable of being deployed and operable within one hour of arrival at the scene of the spill or drill but no later than the designated timeframe for each risk zone.	Appendix B; Appendix D.9; Appendix D.10
3. The timeframes for equipment delivery and deployment as specified in this subsection do not take into account the time required to conduct a health and safety assessment of the site as set forth in Subsection 817.02(f)(9), and as required by the California Occupational and Safety Administration. In addition, these timeframes do not account for delays that may occur due to weather or seastate. The actual time necessary to deliver and deploy equipment will be assessed at the time of an incident or a drill and will take into account the prevailing conditions of weather and seastate, as well as the site assessment requirements.	Appendix D.9; Appendix D.10
(B) Daily Recovery Rate	
1. Facilities located in High-Volume Ports	
Delivery Time (Hrs) 6 24 36 60	

Bbls/Day Capability: (23,437) (31,250) (46,875) (78,125)	
(i) in addition, the facility transfer points within the high volume ports must have 3,125 barrels/day, or 10% of the reasonable worst case spill volume, whichever is less, of on-water recovery capability that can be mobilized and on-scene within two hours of notification;	Figure D.10-2

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
(ii) if a facility/transfer point within a High Volume Port maintains and can immediately deploy containment equipment for a 3,125 barrel spill, or 10% of the reasonable worst case spill volume, whichever is less, the initial on-water recovery capability can be on-scene within three hours rather than two hours.	Figure D.10-2
2. Facility Transfer Areas and the Santa Barbara Channel Area	N/A
Delivery Time (Hrs) 12 36 60 Bbls/Day:Capability: (19,531) (35,156) (66,406)	N/A
(i) in addition, facility transfer points within a Facility/Transfer Area and the Santa Barbara Channel Area must have 3,125 barrels/day or 10% of the reasonable worst case spill volume, whichever is less, of on-water recovery capability that can be mobilized and on-scene within two hours of notification;	N/A
(ii) if a facility/transfer point within a Facility/Transfer area or the Santa Barbara Channel Area maintains and can immediately deploy containment equipment for a 3,125 barrel spill, or 10% of the reasonable worst case spill volume, whichever is less, the initial on-water recovery capability can be on-scene within three hours rather than two hours.	N/A
(iii) for those points where transfers occur infrequently, and where there is not permanent	N/A

equipment present, the 3,125 barrel/day, or 10% of the reasonable worst case spill volume, whichever is less, on-water recovery capability shall be brought to the site at the time of transfer;	
(iv) for infrequent transfers of non-persistent oil, the initial response requirement may be waived by application to the Administrator. The application for waiver must include a justification based on such factors as the location of the marine facility, proximity to response equipment, additional equipment in the immediate area, and the relative environmental sensitivity of the potential spill sites.	N/A
(C) Sufficient containment equipment shall be brought to the scene of the spill to address the daily recovery rates as designed in Section 817.02(d)(3)(B).	Figure D.10-1
(D) The standards set forth in Subsection 817.02(d)(3)(B), were increased by a factor of 25% on July 1, 1997 and again on July 1, 2001. It was determined that this increase was feasible and necessary to meet the best achievable protection of the coast.	N/A

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
(E) The standards set forth in Subsection 817.02(d)(3)(D) will be reviewed by the Administrator to determine if increases to these amounts are feasible and necessary in order to meet the best achievable protection of the coast. The Administrator shall conduct a review and hold a public hearing prior to confirming the new standards to solicit input regarding the necessity of the proposed increase and any credit that may be allowed.	N/A
(4) Movement of Response Resources	
There may be times when it is necessary to move response equipment from one risk zone to another in order to respond to a catastrophic oil spill. However, the Administrator needs to ensure that sufficient response resources are available to address a reasonable risk within each zone. Therefore, when equipment is needed from one risk zone which may impact the plan holder's on-water containment and recovery at the 6 hour level, the plan holder or OSRO shall make a request to the Administrator to temporarily reduce the Response Capability Standards set forth in (d)(3) above, before the equipment can be moved. The Administrator shall only grant such a request after determining that sufficient response resources are available to address a reasonable risk within the zone from where the response equipment is being considered for removal.	Section 7.1.3

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
(5) On-Water Response Equipment and Services	
(A) Each plan shall demonstrate that the marine facility owner/operator has under contract, or by other approved means, (defined in Section 815.05(b) of this subchapter), access to all the necessary equipment and services to comply with the Response Capability Standards established in Subsection 817.02(d)(3). The amount of response equipment required shall take into account the effective daily recovery capacity (as defined in Chapter 1, Section 790 of this subdivision) of the equipment.	Section 7.1; Appendix B
(B) The equipment identified for a specific area must be appropriate for use in that area given the limitations of the geography, bathmetry, water depths, tides, currents and other local environmental conditions. For those areas that require shallow-water response capability (refer to the Area Contingency Plan), the plan shall provide for an adequate number of shallow-draft vessels (as defined in Section 815.05 of this subchapter) and for adequate booming and other shoreline protective resources to be owned or under contract or other approved means and available to provide shoreline protection of all sensitive sites identified in the trajectory analysis conducted as part of the Off-site Consequence Analysis. Additionally, the equipment identified shall also be appropriate for use on the type of oil identified. To the extent that the following information is provided by a Rated OSRO, evidence of a contract or other approved means with a Rated OSRO will suffice:	Section 7.1; Appendix B
1. the location, inventory and ownership of the equipment to be used to fulfill the response requirements of this subchapter;	Section 7.1; Appendix B
2. A complete inventory of any non-mechanical response equipment and supplies, including the type of toxicity of each chemical agent, with procedures for storage and maintenance;	Section 7.1; Appendix B
3. The type and capacity of storage and transfer equipment matched to the skimming capacity of the recovery systems;	Section 7.1; Appendix B
4. The manufacturer's rated capacities and the operational characteristics for each major item of oil recovery equipment;	Section 7.1; Appendix B

5. the effective daily recovery capacity (as defined in Chapter 1, Section 790 of this subdivision) for each major piece of on-water recovery equipment listed, as well as the effective daily recovery capacity for the skimming systems as a whole.	Section 7.1; Appendix B
(i) A request may be submitted to the Administrator to review the effective daily recovery capacity for a piece of equipment if it can be shown that the equipment has a different capacity than the derating factor allows.	If requested
(ii) The Administrator's decision regarding a change in the effective daily recovery capacity for a piece of equipment will be issued as soon as administratively feasible.	If requested

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
6. Vessels designated for oil recovery operations, including skimmer vessels and vessels designed to tow and deploy boom, and availability of shallow-draft vessels;	Section 7.1; Appendix B
7. Vessels of opportunity reasonably available for oil spill recovery operations, including availability of shallow-draft vessels, procedures to equip the vessels, inventory all equipment, and train personnel;	Section 7.1; Appendix B
8. Procedures for storage, maintenance, inspection and testing of spill response equipment under the immediate control of the operator;	Section 7.1; Appendix B
9. Sufficient equipment to track the movement of discharged oil, including aerial surveillance sufficient to direct skimming operations;.	Section 7.1; Appendix B
10. Each plan shall describe the personnel available to respond to an oil spill, including:	
i. A list of job category including a job description for each type of spill response position needed as indicated in the spill response organization scheme;	Section 4
ii. A match between personnel by job category, and the equipment proposed for use	Section 4

(including equipment appropriate for shallow-water environments), including the plan for mobilization of such personnel;	
iii. Sufficient personnel to maintain a response effort of at least 14 days.	Figure 3.1-4, Section 7
11. Each plan shall describe procedures for the transport of required equipment, personnel and other resources to the spill site. The description shall include plans for alternative procedures during adverse environmental conditions. Adverse environmental conditions to be considered shall include:	Section 2; Section 7
i. Adverse weather;	
ii. Sea states, tides, winds, and currents;	
ii. Presence of debris or other obstacles; and	
iv. Any other known environmental condition that could restrict response efforts.	
(C) A list of the facility's spill management personnel (and company name if applicable) and their spill response qualifications including a discussion of spill response training and experience, regulatory awareness and compliance, and supervision.	Figure 1-2; Figure 3.1-4; Section 4; Appendix A
(D) Any equipment and personnel identified in the plan must be available for response. Any necessary maintenance for the equipment, vacation periods for response personnel or other eventuality must be taken into account in relying upon these resources.	Section 7.1.3

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
1. The equipment owner must notify the Administrator when major equipment is removed from service for a period of 24 hours or more for maintenance or repair. Major equipment is that which, if removed, would affect timely implementation of the plan. Notification must be made prior to removing equipment for regularly scheduled maintenance, and within 24 hours of removing equipment for unscheduled repairs.	Section 7.1.3

2. The equipment owner must demonstrate that backup equipment is available during the time that the primary response equipment is out of service. Backup equipment may be provided from the owner's own inventory, or may be made available from another responder.	Section 7.1.3
3. A plan shall remain valid during the time that equipment has been removed from service for maintenance or repair.	Section 7.1.3
(E) Group 5 Oils	
Marine facilities that handle Group 5 oils must contract with one or more Rated OSRO(s) to address the marine facility's Response Planning Volume. Such equipment shall include, but is not limited to the following:	N/A
1. Sonar, sampling equipment, or other methods for locating the oil on the bottom or suspended in the water column;	N/A
2. Containment boom, sorbent boom, silt curtains, or other methods to reduce spreading on the bottom.	N/A
3. Dredges, pumps or other equipment necessary to respond to a discharge involving Group 5 oil.	N/A

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
(F) The plan holder may propose the use of non-mechanical methods for response operations which may include dispersants, in-situ burning, coagulants, boremediants, or other chemical agents. The use of any non-mechanical method for response must be done in accordance with provisions of the State Marine Oil Spill Contingency Plan, the National Contingency Plan, the applicable federal Area Contingency Plan and all applicable State laws and regulations.	Section 6
If a non-mechanical method of response is proposed, the plan shall include:	Section 6
1. Methods of deployment or application;	Section 6
2. for use of a chemical agent, description of the specific mechanisms in place to assess the environmental consequences of the chemical agent. This shall include the mechanism for continuous monitoring of	Section 6

environmental effects for the first three days after initial application, and periodic monitoring thereafter until the agent is inert or no longer operative;	
3. Identification of all permits, approvals or authorizations needed to allow the use of chemical agents or non-mechanical methods, and the timeline for obtaining them;	Section 6
4. a plan for protecting resources at risk, areas of public concern and the public from any adverse effects of the non-mechanical method used;	Section 6
5. the projected efficacy of each type of non-mechanical method proposed for use taking into account the type of spilled material and the projected environmental conditions of the potential spill site; and	Section 6
6. upon request, the plan holder shall provide any test results known to the plan holder which assess the environmental impacts of applying these methods in the marine environment.	Only if requested
(G) The plan shall describe methods for tracking the movement of the discharged oil; and	Section 2.1.4
(H) The plan shall list the location of the weather stations to be used for observations of winds, currents and other data at the time of a spill that may assist in making real-time projections of spill movement.	Figure 3.1-5
(e) Shoreline Protection	Figure 6.3-2
Each plan must provide for shoreline protection of all potential spills from the marine facility.	Appendix B; Appendix D.10
(1) Shoreline Response Planning Volume	Appendix D.10.1
Each plan shall demonstrate that the marine facility has access to all necessary equipment and services to address the response strategies appropriate to each shoreline that could potentially be impacted by a spill from the facility.	Appendix D.10.1
To determine the amount of equipment and services necessary a Response Planning Volume must be calculated as outlined below:	
(A) Multiply the reasonable worst case spill for the marine facility, as calculated in Subsection 817.02(d)(1), by the appropriate persistence factor from the chart below for the most persistent type of oil that may be spilled:	Appendix D.10.1

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
Oil Group: (Group 1) (Group 2) (Group 3) (Group 4) Persistence Multiplier: (.10) (.30) (.50) (.70)	
(B) Emulsification Factors	
The volume determined from the calculation above is then multiplied by one to following emulsification factors, again, based on the type oil.	Appendix D.10.1
Oil Group: (Group 1) (Group 2) (Group 3) (Group 4) Emulsification Multiplier: (1.0) (1.8) (2.0) (1.4)	
(C) Total Shoreline Equipment Required	
The total determined by this calculation is a Response Planning Volume.	Appendix D.10.1
1. The Response Planning Volume to be used to determine the amount of Response Equipment and Services that must be under contract shall be the greater of the amount determined in Subsection 817.02(e)(1), or the adjusted Planning Volume for onshore recovery calculated for the nearshore/inland environment in the facility's federal response plan pursuant to 33 CFR Part 154, Appendix C, Section 7.	Appendix D.9; Appendix D.10.1
2. All calculations used to determine the Response Planning Volume shall be included in the plan.	Appendix D.9; Appendix D.10.1
(2) Shoreline Response Equipment and Services	
Each plan must identify, and ensure availability through a contract or other approved means (as defined in Section 815.05(b) of this subchapter), the capability of effecting shoreline protection strategies. Such protection strategies must be commensurate with the Response Planning Volume calculated for potential shoreline impact, and must be capable of addressing all appropriate protection, and response strategies. The specific areas where equipment and services must be available for use shall be identified in the Off-Site Consequence Analysis.	Appendix D.10.1
(A) The equipment identified for a specific area must be appropriate for use in that area given the limitations of the bathymetry, geomorphology, shoreline types and other local environmental conditions. Additionally, the equipment identified shall be appropriate for use on the type of oil identified. To the extent that the following information is provided by a Rated OSRO, evidence of a contract or other approved means with a Rated OSRO will suffice:	Appendix B; Appendix D.10

1. The amounts of all protective booming, shallow-draft vessels, and shoreline cleanup equipment necessary to address the specific types of shorelines that may be impacted.	Section 6; Section 7.1; Appendix B
2. The location, inventory and ownership of the equipment to be used to fulfill the response requirements;	Section 7.1; Appendix B
3. The procedures for storage, maintenance, inspection and testing of spill response equipment under the immediate control of the operator.	Section 7.1; Appendix A; Appendix B

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
(B) Each plan shall have under contract or other approved means sufficient trained personnel to respond to all oil spills up to the calculated Response Planning Volume, which are to remain on scene until demobilized by the State Incident Command or the Unified Command. For planning purposes, this shall include procedures to obtain sufficient personnel to maintain a response effort of at least 14 days.	Figure 3.1-4; Section 4; Section 7; Appendix B
(C) Any equipment and personnel identified to meet the planning standard requirements must be available for response. Any necessary maintenance for the equipment, vacation periods for response personnel, or other eventuality must be taken into account in relying upon these resources.	Figure 3.1-4; Section 7.1.3; Appendix B
1. The equipment owner must notify the Administrator when major equipment is removed from service for a period of 24 hours or more for maintenance or repair. Major equipment is that which, if moved, would affect timely implementation of the plan. Notification must be made prior to removing equipment for regularly scheduled maintenance, and within 24 hours of removing equipment for unscheduled repairs.	Section 7.1.3; Appendix B
2. The equipment owner must demonstrate that backup equipment is available during the time that the primary response equipment is out of service. Backup equipment may be provided from the owner's own inventory or may be made available from another responder.	Section 7.1.3; Appendix B
3. A plan shall remain valid during the time that equipment has been removed from service for maintenance or repair if the Administrator has not disapproved such removal within 24 hours of notification.	Section 7.1.3; Appendix B

4. The equipment owner shall notify the Administrator when the major equipment is back in service.	Section 7.1.3; Appendix B
(3) (Reserved)	
(4) Shoreline Clean Up	Figure 6.3-2
(A) Utilizing the equipment that must be under contract, each plan shall describe the methods that will be used to contain spilled oil and remove it from the environment. The equipment identified for a specific area must be appropriate for use in that area given the limitations of the bathymetry, geomorphology, shoreline types and other local environmental conditions. Additionally, the equipment identified shall be appropriate for use on the type of oil identified. The description shall include:	
1. All shoreline protection procedures and oil diversion and pooling procedures for the close-to-shore environment. These procedures shall include, where appropriate, methods for carrying out response operations and clean-up strategies in shallow-water environments, as identified in the trajectory analysis conducted as part of the Off-site Consequence Analysis;	Section 6.2; Figure 6.3-2
2. methods for shoreside clean-up, including containment and removal of surface oil and oiled debris and vegetation from all applicable shorelines, adjacent land and beach types.	Figure 6.3-2

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
3. measures to be taken to minimize damage to the environment from land operations during a spill response, such as impacts to sensitive shoreline habitat caused by heavy machinery or foot traffic.	Section 6.2; Figure 6.3-2
(B) Protection, response and clean-up strategies will be specific to the type of oil spilled, the expected spill sites as identified in the Off-Site Consequence Analysis, and the resources at risk at those spill sites.	Section 6.2; Figure 6.3-2; Appendix D.2.8
(C) Each plan must utilize all the strategies appropriate to the potential impact sites.	Section 6.2; Figure 6.3-2
(D) Each plan shall have under contract or other approved means sufficient trained personnel to respond to all oil spills up to the Response Planning Volume, which are to remain on scene until demobilized by the State Incident Command or the	Figure 3.1-4; Section 8.1; Appendix B

Unified Command.	
(f) Response Procedures	
(1) Each plan shall describe the organization of the marine facility's spill response system and management team. An organizational diagram depicting the chain of command shall also be included. Additionally, the plan shall describe the method to be used to interface the plan holder's organization into the State Incident Command System and/or the Unified Command Structure as required by Title 8, California Code of Regulations, Section 5192(q)(3)(A).	Section 4
(A) The plan holder may utilize the procedures outlined in the appropriate Area Contingency Plan as a reference when describing how the marine facility's chain of command will interface with the State Incident Command System which utilizes the Unified Command.	Section 4; Section 5
(B) Each plan shall describe the organization of the plan holder's public information office, as it relates to an oil spill incident, and the method by which the Information Officer will be integrated into the State Incident Command System.	Section 4; Section 7.2
(C) Each plan shall describe the plan holder's safety program as it relates to an oil spill incident and the method by which their Safety Officer will be integrated into the State Incident Command System.	Section 4; Section 5.4
(2) Each plan shall identify potential sites needed for spill response operations, including location(s) for:	
(A) A central command post sufficient to accommodate the State Incident Command or Unified Command as well as the plan holder's response organization;	Section 7.1.4
(B) A central communications post if located away from the command post;	N/A
(C) Equipment and personnel staging areas.	Section 7.1.5
(3) Each plan shall include a checklist, flowchart or decision tree depicting the procession of each major stage of spill response operations from spill discovery to completion of cleanup. The checklist, flowchart or decision tree shall describe the general order and priority in which key spill response activities are performed.	Figure 2.1-1
(4) Each plan shall describe how the plan holder will provide emergency services before the arrival of local, state or federal authorities on the scene, including:	Section 2; Section 3; Section 4
(A) Procedures to control fires and explosions, and to rescue people or property threatened by fire or explosion;	Section 2.7

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
(B) Procedures for emergency medical treatment and first aid;	Section 2.5
(C) Procedures to control ground, marine and air traffic which may interfere with spill response operations;	Section 2; Section 7.3.1
(D) Procedures to manage access to the spill response site and the designation of exclusion, decontamination and safe zones; and	Section 5.4; Section 5.5; Section 7.3
(E) Procedures to provide the required personnel protective gear for responders.	Section 5.4
(5) Each plan shall describe equipment and procedures to be used by marine facility personnel to minimize the magnitude of a spill and minimize structural damage, which may increase the quantity of oil spilled.	
(A) Spill mitigation procedures shall include immediate containment strategies, methods to stop the spill at the source, methods to slow or stop leaks, and methods to achieve immediate emergency shutdown.	Figure 2.1-2
(B) For spill mitigation procedures the plan shall include prioritized procedures for marine facility personnel including specific procedures to shut down affected operations. Responsibilities of facility personnel should be identified by job title. A copy of these procedures should be maintained at the facility operations center. These procedures should address the following equipment and scenarios:	Figure 2.1-2
1. Failure of manifold and mechanical loading arm, other transfer equipment, or hoses, as appropriate;	Figure 2.1-2
2. Tank overfill;	Figure 2.1-2
3. Tank failure;	Figure 2.1-2
4. Pipe rupture;	Figure 2.1-2
5. Pipe leak, both under pressure and not under pressure, if applicable;	Figure 2.1-2
6. Explosion and/or fire; and	Figure 2.1-2
7. Other equipment failure (e.g. pumping system failure, relief valve failure, etc.).	Figure 2.1-2
(6) Each plan shall detail the lines of communications between the responsible party, the Qualified Individual and the on-scene commanders, response teams, and local, state, and federal emergency and disaster responders, including:	Section 7.1.6
(A) Communication procedures;	Section 7.1.6

(B) The communication function (e.g., ground-to-air) assigned to each channel or frequency used;	Figure 7.1-4
(C) The maximum broadcast range for each channel or frequency used; and	Figure 7.1-4
(D) Redundant and back-up systems.	Figure 7.1-4
(7) Each plan shall provide for post-spill review, including methods to review both the effectiveness of the plan and the need for plan amendments.	Section 8.3
(A) The result of the review shall be forwarded to the Administrator within 90 days following the completion of response and clean-up procedures;	Section 8.3
(B) The review shall be used by the Administrator only for the purposes of proposing future amendments to the contingency plan.	Section 8.3

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
(8) Each plan shall describe the procedures to manage access to the spill response site, the designation of exclusion, decontamination and safe zones, and the decontamination of equipment and personnel during and after oil spill response operations, as required by the California Occupational Safety and Health Administration.	Section 5.5; Section 7.3
(9) Prior to beginning spill response operations and/or clean up activities, a Site Safety Plan must be completed. Each site safety plan shall include information as required pursuant to Title 8, Section 5192(b)(4)(B) of the California Code of Regulations including, but not limited to, a written respiratory protection program, written personal protective equipment program, written health and safety training program, written confined space program and permit forms, direct reading instrument calibration logs, and written exposure monitoring program.	Section 5.4
(g) Notification Procedures	
(1) Each plan shall include a list of contacts to call in the event of a drill, threatened discharge of oil, or discharge of oil. The plan shall:	Section 3
(A) Detail the procedures for reporting oil spills to all appropriate local, state, and federal agencies;	Section 3
(B) identify a central reporting office or individual, who is responsible for initiating the notification process and is available on a 24-hour basis. The individual making this notification must be fluent in English. The following information must be provided:	Section 3

1. The individual or office to be contacted;	Section 3
2. Telephone number or other means of contact for any time of the day; and	Section 3
3. An alternate contact in the event the individual is unavailable.	Section 3
(C) Establish a clear order of priority for notification.	Section 3
(2) Immediate Notification	Section 3
Nothing in this section shall be construed as requiring notification before response.	Section 3
(A) Each plan shall include a procedure for contacting the OSRO, or other initial response resources if an OSRO is not being used, immediately, but no longer than 30 minutes, after discovery of a discharge of oil or threatened discharge of oil.	Figure 2.1-1
(B) Each plan shall include a procedure that ensures that the owner/operator of his/her designee will initiate contact with the Qualified Individual, the California Governor's Emergency Management Agency and the National Response Center immediately, but no longer than 30 minutes, after discovery of a discharge of oil or threatened discharge of oil.	Section 3
(C) All phone numbers necessary to complete the immediate notification procedures must be included in the response manual.	Section 3
(3) Each plan shall identify a call-out procedure to acquire the resources necessary to address spills that cannot be addressed by the equipment that the owner/operator is required to have under contract. Procedures must allow for initiation of the call-out within 24 hours of the incident and must begin as soon as a determination has been made that additional resources are necessary.	Section 3

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
(4) Each plan shall provide a checklist of the information to be reported in the notification procedures, including but not limited to:	Figure 3.1-2
(A) marine facility name and location;	Figure 3.1-2
(B) Date and time of the incident;	Figure 3.1-2
(C) The cause and location of the spill;	Figure 3.1-2

(D) An estimate of the volume of oil spilled and the volume at immediate risk of spillage;	Figure 3.1-2
(E) The type of oil spilled, and any inhalation hazards or explosive vapor hazards, if known;	Figure 3.1-2
(F) The size and appearance of the slick;	Figure 2.1-3
(G) Prevailing weather and sea conditions;	Figure 3.1-2
(H) Actions taken or planned by personnel on scene;	Figure 3.1-2
(I) current condition of the marine facility;	Figure 3.1-2
(J) Injuries and fatalities; and	Figure 3.1-2
(K) Any other information as appropriate.	Figure 3.1-2
(5) Reporting of a spill as required by Subsection 817.02(g)(2) shall not be delayed solely to gather all the information required by Subsection 817.02(g)(4).	Figure 3.1-2
(6) An updated estimate of the volume of oil spilled and the volume at immediate risk of spillage shall be reported to the California Governor's Emergency Management Agency whenever a significant change in the amount reported occurs, but not less than every 12 hours within the first 48 hours of response. The State Incident Commander and/or the Federal On-scene Coordinator through the Unified Command shall have the option of increasing or decreasing this timeframe, as needed. Updated spill volume information included in the Incident Action Plan developed through the Unified Command will meet the requirements of this subsection.	Section 5
(h) Temporary Storage and Waste Management	
(1) Each plan shall identify sufficient temporary storage for all recovered oil or all oily waste for recycling or other means of waste management. Sufficient storage shall be no less than two times the calculated Response Planning Volume up to the Daily Recovery Rate as determined in Section 817.02(d)(3)(B).	Section 7.4

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
(A) To meet the temporary storage requirement described in Subsection (1) above, the following amounts of storage shall be dedicated response resources (as defined in Section 815.05(c) of this subchapter) or OSRO-owned and controlled response resources (as defined in Section 815.05(k) of this subchapter), as applicable to the appropriate risk zone:	

Sufficient storage to support the skimming systems shall be brought to the scene of the spill during the first four hours of response;	Appendix D.10
520 barrels of storage, or 20% of the response planning volume, whichever is less, shall be brought to the scene of the spill within four hours of notification of a spill;	Appendix D.10
12,000 barrels, or two times the response planning volume, whichever is less, shall be available at the scene of the spill within 6 hours of notification of a spill.	Appendix D.10;
The balance of the temporary storage requirement described in Subsection (1) above may be provided by non-dedicated storage resources. All skimming systems operating at the scene of a spill shall have adequate storage.	Appendix D.10
(2) Each plan shall identify the party that shall maintain responsibility for recovered oil and oily waste for the purposes of temporary storage.	Section 7.4
(3) Each plan shall describe site criteria and methods used for temporary storage of recovered oil and oily wastes generated during response and cleanup operations, including sites available within the marine facility or near the spill area.	Section 7.4
(4) Each plan shall identify all applicable permits, and all federal, state, and local agencies responsible for issuing those permits for transit, temporary storage and ultimate waste management of all wastes likely to result from an oil spill.	Figure 7.4.4
(5) Each plan shall include information, which could expedite the state approval process for the use of temporary waste storage sites, including a list of appropriate contacts and a description of procedures to be followed for each approval process.	Section 5.6; Section 7.4

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
(I) Oiled Wildlife Care Requirements	
Each plan shall describe how oiled wildlife care will be provided by one of the following approved means:	
(1) Utilize the California Oiled Wildlife Care Network (OWCN) to meet oiled wildlife care requirements; or	Figure 3.1-5; Section 6.4
(2) Describe procedures that clearly outline how oiled wildlife care will be provided. The equipment, facilities, and personnel necessary to implement these procedures must be identified and assured by contract for each Geographic Area covered by the plan. Standards for wildlife care must comply with all applicable State and federal laws.	Section 6.4

(j) Training	
(1) Each plan shall provide that all appropriate personnel employed by the marine facility shall receive training in the use and operation of oil spill response and cleanup equipment. The plan shall describe:	Appendix A
(A) The type and frequency of training that each individual in a spill response position receives to achieve the level of qualification demanded by their job description;	Appendix A
(B) The procedures, if any, to train and use volunteers or other additional personnel in spill response operations as necessary for the size of the spill.	Figure A.2-1
(2) Each plan shall describe the type and frequency of personnel training on methods to reduce operational risks. The description of the training shall include, if applicable, the following:	Appendix A
(A) Any established training objectives that address potential spill sources and causes that were identified in the Risk and Hazard Analysis.	Appendix A
(B) The means of achieving any established training objectives, such as:	Appendix A
1. Training programs for the positions involved with the various aspects of the facility's operation that could result in a spill (e.g. position responsible for facility inspections or transfers);	Appendix A
2. A training schedule, including adequate frequency, (e.g., initial training upon hire and annual refresher training) and type of training (workshops, classroom, videotape, on-the-job training, etc.) for each position trained, by job classification;	Appendix A
(C) Any licenses, certifications or other prerequisites required to hold particular jobs.	Appendix A
(D) A plan holder whose facility is subject to and in compliance with State Lands Commission training regulations, Title 2, Division 3, Chater 1, Article 5.3, CCR Section 2540 through 2548, shall be considered in compliance with the training provisions of this subsection.	Appendix A
(3) Each plan shall provide for safety training as required by state and federal health and safety laws for all personnel likely to be engaged in oil spill response, including a program for training non-permanent responders such as volunteer or temporary help.	Figure A.2-1

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
(4) The marine facility owner/operator shall ensure that training records are maintained for 3 years. All such documentation must be made available to the Administrator upon request.	Figure A.2-1
(k) Drills and Exercises	Appendix A
(1) A marine facility owner/operator shall conduct drills and exercises as necessary to ensure that the elements of the plan will function in an emergency. Each plan shall describe the facility's drill and exercise program, including how the program assures shoreline protection strategies (for all environmentally sensitive sites identified as potentially impacted in the facility's Off-site Consequence Analysis) will be exercised, as outlined in Section 820.01(f) of this subdivision. The following are the necessary drill and exercise frequencies for all facilities, as consistent with the National Preparedness for Response Exercise Program (PREP):	Appendix A
(A) A quarterly drill of the notification procedures for marine facility personnel, the Qualified Individual, the OSROs, and the spill management team;	Appendix A
(B) A semiannual exercise to test the deployment of marine facility-owned equipment;	Appendix A
(C) A yearly tabletop exercise of the marine facility's spill management team.	Appendix A
(2) Training sessions may constitute creditable drills and exercises if all requirements in Subsection 820.01 (a) are met.	Appendix A
(3) A marine facility owner/operator shall ensure that all of the response resources identified in the plan participate in equipment deployment exercises at least once every six months.	Section 7.1.2; Section 7.1.3
Note: Authority cited: Sections 8670.7, 8670.28, 8670.29 and 8670.30, Government Code.	
Reference: Sections 8670.7, 8670.10, 8670.25.5, 8670.28, 8670.29, 8670.30, 8670.31, and 8670.37.51, Government Code.	

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
820.01 Drills and Exercises	
(a) Exercises shall be designed to exercise either individual components of the contingency plans or the entire response plan. Components include, but are not limited to:	Appendix A.1
on-water containment and recovery;	Appendix A.1
shoreline protection;	Appendix A.1

response procedures (which includes how the plan interfaces with the State's Incident Command Structure and/or Unified Command as required by Title 8, California Code of Regulations, Subsection 5192(p)(D)(2));	Appendix A.1
notification procedures;	Appendix A.1
temporary storage and waste management procedures;	Appendix A.1;
oiled wildlife care requirements;	Appendix A.1
and training related to response procedures.	Appendix A.1
Such exercises, individually or in combination, shall ensure that the entire plan is exercised at least once every three years, emphasizing spill response operations from spill discovery to completion of clean up and documentation. Any number of components may be tested during the exercises required below.	Appendix A.1
(1) For marine facilities and small marine fueling facilities:	
(A) A tabletop exercise, announced or unannounced, of the spill management team(s) shall be conducted annually.	Figure A.1-2

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
(B) Notification procedures shall be exercised quarterly for the Qualified Individual, marine facility personnel, the OSRO and the spill management team.	Figure A.1-2
(C) A semi-annual exercise to test the deployment of facility-owned equipment, which shall include immediate containment strategies, methods to stop the spill at the source, methods to slow or stop leaks, and methods to achieve immediate emergency shutdown.	Figure A.1-2
(D) Shoreline protection strategies shall be exercised as described in Subsection 820.01(b) below.	Figure A.1-2
(E) Oil spill response organization field equipment deployment exercises for on-water recovery and for	Figure A.1-2

shoreline protection shall each be conducted at least once every three years. Shoreline protection strategies shall be exercised as described in Subsection 820.01(b) below.	
(F) The owner/operator shall maintain adequate records of drills and exercises, for a period of at least three years, to include records of any drills and exercises of the oil spill response organization and resources identified in the contingency plan. These records shall be maintained at the marine facility and shall be available for inspection by the Administrator.	Figure A.1-2
(2) For Tank vessels, nontank vessels and vessels carrying oil as secondary cargo, as applicable:	N/A
(A) A shore-based spill management team tabletop exercise shall be conducted annually. This exercise shall be conducted in California at least once every three years.	N/A
(B) Onboard emergency procedures and Qualified Individual notification drills shall be conducted quarterly, or 72 hours prior to entering marine waters, whichever is less often;	N/A
(C) Oil spill response organization field equipment deployment exercises for onwater recovery and for shoreline protection shall each be conducted at least once every three years. Shoreline protection strategies shall be exercised as described in Subsection 820.01(b) below.	N/A
(D) The vessel owner/operator shall maintain adequate records of drills and exercises, for a period of at least three years, to include records of any offvessel drills and exercises (i.e., drills and exercises not held aboard the vessel) of the oil spill response organization and resources identified in the contingency plan. These records shall be maintained at the United States location of either the Qualified Individual or the vessel owner/operator. Contingency plans should indicate the location of these records. All exercises conducted aboard the vessel shall be documented in the vessel's log.	N/A
(3) Drills shall be designed to exercise either individual components of the contingency plans or the entire response plan. Such drills, individually or in combination, shall ensure that the entire plan is exercised at least once every three years.	Appendix A.1

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
(4) The owner/operator shall ensure that records sufficient to document a drill or exercise are maintained for three years following the completion of the drill or exercise. All such documentation must be made available to the Administrator upon request.	Figure A.1-2
(b) Shoreline Protection Strategies for Sensitive Sites	
(1) Marine facility owners/operators are required to exercise shoreline protection response strategies for all ACP-listed sensitive sites within the area identified as impacted. Marine facility owner/operators may use their own trajectories to identify impacted areas.	Figure A.1-2
(2) Vessel owner/operators are required to exercise the shoreline protection response strategies that are identified in the applicable Shoreline Protection Tables (SP Tables, see Section 790, incorporated by reference herein and posted on OSPR's website). All owner/operators may participate in the OSPR Sensitive Site Strategy Evaluation Program (as defined in Section 790) or shall submit a yearly schedule to OSPR which lists four sensitive sites to be exercised. Owner/operators are required to demonstrate to the Administrator that these areas have been exercised, either with owner/operator-owned equipment or through a Rated OSRO under contract with the owner/operator.	N/A
(A) Each schedule shall be approved or denied within 180 days after receipt by the Administrator.	N/A
(B) The Administrator shall determine whether each schedule adequately assures that the shoreline protection strategies for all sensitive sites identified as potentially impacted will be exercised. If it is determined that a schedule is inadequate, it will be returned to the submitter with a written explanation of deficiencies and, if practicable, suggested modifications or alternatives.	N/A
(c) The Administrator may call a drill or conduct an inspection, to validate all or part of a contingency plan. This drill or inspection may be announced or unannounced.	Figure A.1-2
(d) To receive credit from OSPR for an exercise, the following notification requirements must be met:	Figure A.1-2
(1) The owner/operator shall invite the Administrator to participate in both the equipment deployment exercises and the management team tabletop exercises and shall submit written notification including, but not limited to,	Figure A.1-2

the following information: company name, address, marine facility or tank vessel name, OSPR contingency plan number, point of contact, phone/FAX number, e-mail address, type of exercise, date, time and location of exercise, sensitive sites being tested, exercise scenario description, plan components to be tested, and other participants in the drill. The owner/operator may use the OSPR Exercise Notification Form (FG OSPR 1964, 3/10/97) or a document that includes the same information as the Notification Form, for this purpose. Notification may be made via letter, E-mail, or fax and sent to:	

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
Drills and Exercises Coordinator Executive Branch Department of Fish & Game/ OSPR Post Office Box 944209 Sacramento, California 94244-2090 Fax: Drills and Exercises Coordinator, DFG/OSPR, (916) 324-9786	Figure A.1-2
(2) The Administrator shall be given advance notice of a minimum of 45 days for all exercises. Full Scale Combination Exercises and Area Exercises, however, require advance notice of a minimum of 60 days.	Figure A.1-2
(e) The Administrator shall determine if the elements of the plan were adequately tested by the exercise scenario and the response of the participants.	Figure A.1-2
The Administrator shall give credit for all exercise objectives successfully tested during the exercise. Objectives not successfully tested during the exercise will not receive credit and shall be exercised again within the three year cycle. Exercise objectives shall include, but not be limited to, the following (as set forth in Appendix B of the PREP guidelines, as applicable):	Figure A.1-2
(1) Notifications: Test the notification procedures identified in the contingency plan;	Figure A.1-1
(2) Staff mobilization: Demonstrate the ability to assemble the spill response organization identified in the contingency plan;	Figure A.1-1
(3) Reserved	
(3.1) Unified Command: Demonstrate the ability of the spill response organization to form or interface with a Unified	Figure A.1-1

Command;	
(3.1.1) Federal Representation: Demonstrate the ability to consolidate the concerns and interests of the other members of the unified command into a unified strategic plan with tactical operations;	Figure A.1-1
(3.1.2) State Representation: Demonstrate the ability to function within the unified command structure;	Figure A.1-1
(3.1.3) Local Representation: Demonstrate the ability to function within the unified command structure;	Figure A.1-1
(3.1.4) Responsible Party Representation: Demonstrate the ability to function within the unified command structure;	Figure A.1-1
(3.2) Response Management System: Demonstrate the ability of the response organization to operate within the framework of the response management system identified in their respective plans;	Figure A.1-1
(3.2.1) Operations: Demonstrate the ability to coordinate or direct operations related to the implementation of action plans contained in the respective response and contingency plans developed by the unified command;	Figure A.1-1

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
(3.2.2) Planning: Demonstrate the ability to consolidate the various concerns of the members of the unified command into joint planning recommendations and specific long range strategic plans. Demonstrate the ability to develop short range tactical plans for the operations division;	Figure A.1-1
*(CA1) Situation Unit: Demonstrate the ability to collect, organize, and disseminate information about the current status of the spill;	Figure A.1-1
*(CA2) Resource Unit: Demonstrate the ability to maintain the status of all incident resources;	Figure A.1-1
*(CA3) Environmental Unit: Demonstrate the ability to prepare environmental data including assessments, modeling, surveillance, resources at risk, and impacts on environmentally sensitive sites.	Figure A.1-1
*(CA4) Resources at Risk Technical Specialist: Demonstrate the	Figure A.1-1

ability to identify natural resources thought to be at risk from exposure to spilled oil through the gathering and analysis of known and anticipated oil movement and the location of natural, cultural and economic resources, and to prioritize a list of resources for protection based on the relative important of the resources and relative risk of exposure.	
(3.2.3) Logistics: Demonstrate the ability to provide the necessary support of both the short term and long term action plans;	Figure A.1-1
(3.2.4) Finance: Demonstrate the ability to document the daily expenditures of the organization and provide cost estimates for continuing operations;	Figure A.1-1
(3.2.5) Public Affairs: Demonstrate the ability to form a joint information center and provide the necessary interface between the unified command and the media;	Figure A.1-1
(3.2.6) Safety Affairs: Demonstrate the ability to monitor all field operations and ensure compliance with safety standards;	Figure A.1-1
(3.2.7) Legal Affairs: Demonstrate the ability to provide the unified command with suitable legal advice and assistance;	Figure A.1-1
*(CA5) Liaison Officer: Demonstrate the ability to establish and coordinate interagency communication and cooperation;	Figure A.1-1
(4) Source Control: Demonstrate the ability of the spill response organization to control and stop the discharge at the source;	Figure A.1-1
(4.1) Vessel Emergency Services (formerly called Salvage): Demonstrate the ability to assemble and deploy the vessel emergency services resources identified in the response plan;	Figure A.1-1
(4.2) Firefighting: Demonstrate the ability to assemble and deploy the firefighting resources identified in the response plan;	Figure A.1-1

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
(4.3) Lightering: Demonstrate the ability to assemble and deploy the lightering resources identified in the response plan;	Figure A.1-1
(4.4) Other Vessel Emergency Services (formerly called Salvage) Equipment and Devices: Demonstrate the ability to assemble and deploy other vessel emergency services equipment and devices identified in the response plan;	Figure A.1-1

(5) Assessment: Demonstrate the ability of the spill response organization to provide an initial assessment of the discharge and provide continuing assessments of the effectiveness of the tactical operations;	Figure A.1-1
(6) Containment: Demonstrate the ability of the spill response organization to contain the discharge at the source or in various locations for recovery operations;	Figure A.1-1
(7) Recovery: Demonstrate the ability of the spill response organization to recover, mitigate, and remove the discharged product. Includes mitigation and removal activities, e.g., dispersant use, in-situ burning use, and bioremediation use.	Figure A.1-1
(7.1) On-water Recovery: Demonstrate the ability to assemble and deploy the on-water response resources identified in the response plans;	Figure A.1-1
(7.2) Shore-based Recovery: Demonstrate the ability to assemble and deploy the shoreside response resources identified in the response plans;	Figure A.1-1
*(CA6) Dispersants: Demonstrate the ability to evaluate the use of chemical dispersants utilizing the state and federal dispersant use policies and procedures adopted in the Region IX Regional Contingenc Plan and the federal area plans, including: identify and mobilize the necessary equipment and personnel; utilize the appropriate FOSC checklists and evaluation forms (pre-approval or case-by-case dispersant use approval); activate the Regional Response Team (RRT) for case-by-case dispersant approval and provide sufficient information for a recommendation to be made by the RRT; develop all necessary documentation of actions taken; and, if appropriate, develop a dispersant use plan for inclusion in the Incident Action Plan (IAP).	Figure A.1-1
*(CA7) In-situ Burning: Demonstrate the ability to evaluate the use of in-situ burning utilizing state and federal policies and procedures as adopted in the federal area contingency plans, including: identify and mobilize the necessary equipment and personnel; establish and coordinate communications with the local air quality management districts; complete the in-situ burning checklists and evaluation forms; activate the Regional Response Team (RRT) and provide sufficient information for a recommendation to be made by the RRT; document actions taken; and, if appropriate, develop an in-situ burning plan for inclusion in the IAP.	Figure A.1-1

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
*(CA8) Bioremediation: Demonstrate the ability to evaluate the use of bioremediation utilizing state and federal policies and procedures as adopted in the federal area contingency plans, including: identify and mobilize the necessary equipment and personnel; develop all necessary documentation of actions taken; and, if appropriate, develop a bioremediation plan for inclusion in the IAP.	Figure A.1-1
(8) Protection: Demonstrate the ability of the spill response organization to protect the environmentally and economically sensitive areas identified in the approved Area Contingency Plans;	Figure A.1-1
(8.1) Protective Booming: Demonstrate the ability to assemble and deploy sufficient resources to implement the protection strategies contained in the Area Contingency Plan and the respective industry response plan;	Figure A.1-1
(8.2) Water Intake Protection: Demonstrate the ability to quickly identify water intakes and implement the proper protection procedures from the Area Contingency Plan or develop a plan for use;	Figure A.1-1
(8.3) Wildlife Recovery and Rehabilitation: Demonstrate the ability to quickly identify these resources at risk and implement the proper protection procedures from the Area Contingency Plan or develop a plan for use;	Figure A.1-1
(8.4) Population Protection: Demonstrate the ability to quickly identify health hazards associated with the discharged product and the population at risk from these hazards, and implement the proper protection procedures from the Area Contingency Plan or develop a plan for use;	Figure A.1-1
(9) Disposal: Demonstrate the ability of the spill response organization to dispose of the recovered material and contaminated debris.	Figure A.1-1
*(CA9) Waste Management: Demonstrate the ability of the spill response organization to properly manage the recovered product and to develop a waste management plan for approval by the Unified Command. The plan will include appropriate procedures for obtaining permits and/or waivers, waste characterization, waste minimization, volumetric determination, and overall waste management and final disposition, as appropriate;	Figure A.1-1
(10) Communications: Demonstrate the ability to establish an effective communications system for the response organization;	Figure A.1-1

(10.1) Internal Communications: Demonstrate the ability to establish an intra-organization communications system. This encompasses communications both within the administrative elements and the field units;	Figure A.1-1
(10.2) External Communications: Demonstrate the ability to establish communications both within the administrative elements and the field units;	Figure A.1-1

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
(11) Transportation: Demonstrate the ability to provide effective multi-mode transportation both for execution of the discharge and support functions;	Figure A.1-1
(11.1) Land Transportation: Demonstrate the ability to provide effective land transportation for all elements of the response;	Figure A.1-1
(11.2) Waterborne Transportation: Demonstrate the ability to provide effective waterborne transportation for all elements of the response;	Figure A.1-1
(11.3) Airborne Transportation: Demonstrate the ability to provide the necessary support of all personnel associated with the response;	Figure A.1-1
(12) Personnel Support: Demonstrate the ability to provide the necessary support of all personnel associated with the response;	Figure A.1-1
(12.1) Management: Demonstrate the ability to provide administrative management of all personnel involved in the response. This requirement includes the ability to move personnel into or out of the response organization with established procedures;	Figure A.1-1
(12.2) Berthing: Demonstrate the ability to provide overnight accommodations on a continuing basis for a sustained response;	Figure A.1-1
(12.3) Messing: Demonstrate the ability to provide suitable feeding arrangements for personnel involved with the management of the response;	Figure A.1-1
(12.4) Operational/Administrative Spaces: Demonstrate the ability to provide suitable operational and administrative spaces for personnel involved with the management of the response;	Figure A.1-1

(12.5) Emergency Procedures: Demonstrate the ability to provide emergency services for personnel involved in the response;	Figure A.1-1
(13) Equipment Maintenance and Support: Demonstrate the ability to maintain and support all equipment associated with the response;	Figure A.1-1
(13.1) Response Equipment: Demonstrate the ability to provide effective maintenance and support for all response equipment;	Figure A.1-1
(13.2) Response Equipment (Support): Demonstrate the ability to provide effective maintenance and support for all equipment that supports the response. This requirement includes communications equipment, transportation equipment, administrative equipment, etc;	Figure A.1-1
(14) Procurement: Demonstrate the ability to establish an effective procurement system;	Figure A.1-1
(14.1) Personnel: Demonstrate the ability to procure sufficient personnel to mount and sustain an organized response. This requirement includes ensuring that all personnel have qualifications and training required for their position within the response organization;	Section 7; Figure A.1-1; Appendix B
(14.2) Response Equipment: Demonstrate the ability to procure sufficient response equipment to mount and sustain an organized response;	Section 7; Figure A.1-1; Appendix B

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
(14.3) Support Equipment: Demonstrate the ability to procure sufficient support equipment to support and sustain an organized response;	Section 7; Figure A.1-1; Appendix B
(15) Documentation: Demonstrate the ability of the spill response organization to document all operational and support aspects of the response and provide detailed records of decisions and actions taken. These documents shall be provided to the Administrator upon request.	Section 4; Section 5; Figure A.1-1
*California-specific requirements	
(f) The owner/operator shall provide the following documentation in order to receive credit from OSPR for any exercise conducted	
(1) the contingency plan number including point of	Figure A.1-2; Figure

contact, phone number and e-mail address;	A.1-3
(2) a list of all other participants and their roles, including contingency plan numbers if applicable;	Figure A.1-2; Figure A.1-3
(3) a list of all components of the contingency plan tested;	Figure A.1-2; Figure A.1-3
(4) a list of all ACP-listed sensitive site protection response strategies tested and documentation of actual deployment;	Figure A.1-2; Figure A.1-3
(5) A list of any written plans created during the drill or response (such as the site safety plan, incident action plan, disposal plan communications plan, completed or not);	Figure A.1-2; Figure A.1-3
(6) a list of other regulatory agencies attending the drill or exercise, if any; and,	Figure A.1-2
(7) an exercise evaluation.	Section 8.3; Figure A.1-2
(8) for all exercises:	
(A) information that demonstrates whether the required drills as listed in subsection in (a) above, have been conducted. The Evaluator Work Sheet (FG OSPR 1963, 2/9/98) or a form that includes the same information, may be used to gather this information. This information shall be kept by the Plan Holder for 3 years and made available to the Administrator upon request;	Figure A.1-2
(B) information of either concern or benefit to the local Area Planning Committee or the applicable California Harbor Safety Committee including, but not limited to, the following: plan components tested, observations and description of successful positive action or statement of problem, and any recommendations for suggested action or improvement to Area Contingency Plans, marine facilities and vessel plans, OSROs, federal agencies, state agencies, local agencies, training or exercise programs. The USCG/OSPR Lessons Learned Reporting Form (ACP LL Rev. 2/98), or a form that includes the same information, may be used to gather this information. This information shall be kept by the Plan Holder for 3 years and made available to the Administrator upon request.	Figure A.1-2

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
(9) for all tabletop exercises:	
(A) information including, but not limited to, the following: point of contact, and phone number and e-mail address, date of exercise; location; time started/time completed; the response plan scenario used; size of spill; evaluation of the spill management team's knowledge of the oil spill response plan; determination of proper notifications; evaluation of the communications system; ability to access contracted OSROs; ability to coordinate spill response with On-Scene Coordinator, state and applicable agencies; and ability to access sensitive site and resource information in the Area Contingency Plan if referenced. The Spill Management Team/Tabletop Exercise Report (FG OSPR 1966, 5/7/97), or a form that includes the same information, may be used to gather this information. This information shall be kept by the Plan Holder for 3 years and made available to the Administrator upon request.	Figure A.1-2; Figure A.1-3
(10) for all equipment deployment exercises:	
(A) information including, but not limited to, the following: date; identity of marine facility or vessel; location(s); time started/completed; equipment ownership; a list of type and amount of all equipment deployed and number of support personnel employed; description of the exercise goals and a list of any Area Contingency Plan strategies tested, with a sketch of equipment deployments and booming strategies; if marine facility-owned equipment, was at least the amount of equipment deployed necessary to respond to the average most probable spill; was equipment deployed in its intended operating environment; was a representative sample of OSRO-owned equipment deployed; was the OSRO-owned equipment deployed in its intended operating environment; description of the marine facility's comprehensive training and equipment maintenance programs; did personnel responsible for equipment deployment actually deploy the equipment; and was deployed equipment operational. The Equipment Deployment Evaluation Form (FG OSPR 1965, 2/20/97), or a form that includes the same information, may be used to gather this information. This information shall be kept by the	Figure A.1-2; Figure A.1-3

Plan Holder for 3 years and made available to the Administrator upon request.	
(11) a list or check sheet showing what documentation has been submitted as part of the credit request.	Figure A.1-2; Figure A.1-3

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
(g) The Administrator shall issue exercise credit via e-mail, for objectives met during the exercise, within 90 days to the owner/operator for any exercise attended by OSPR personnel, which evaluates the adequacy of the exercise scenario to test elements of the plan and its implementation, and the response of the participants. Any inadequacies noted in the Administrator's report must be addressed in writing by the owner/operator within 60 days of the receipt of the Administrator's report. The owner/operator's response shall propose remedies to the noted inadequacies including, but not limited to, any necessary changes to the plan, any changes in contracted or owned response resources, changes in or additions to training, and/or the need for additional drills or exercises. The owner/operator's response shall include a schedule for implementing the remedies. The Administrator may audit all drill documentation to verify that the drill was done in accordance with the credit request.	Figure A.1-2
(h) Substitution	
(1) In-State Exercises	
In substitution for the exercises required by Subsections (a) above, the Administrator may accept an exercise conducted by the marine facility or vessel, and called by an agency other than the OSPR, if all of the following conditions are met:	Figure A.1-2
(A) the exercise tests one or more of the following: the marine facility or vessel’s spill management team and spill response organization; deployment of the facility or vessel’s response equipment; or deployment of other response resources identified in the contingency plan; and	Figure A.1-2
(B) the exercise is conducted with the U. S. Coast Guard, or another local, state or federal agency and the OSPR has been invited with the minimum notification required in Section 820.01(d)(2); and,	Figure A.1-2
(C) the owner/operator has received prior approval for the exercise substitution from the Administrator,	Figure A.1-2

and,	
(D) the Administrator finds the plan components tested and evaluation criteria equal to or exceeding those of the OSPR.	Figure A.1-2
(2) Out-of-State Exercises	Figure A.1-2
The only exercise that can be substituted under this Subsection (2) is an exercise of the spill management team and a response management organization that is separate from the tank vessel operation itself. However, at least once every three years, the annual spill management team tabletop exercise must be conducted in California.	Figure A.1-2
In substitution for the spill management team tabletop exercises, the Administrator may accept an exercise conducted by the vessel owner/operator outside of the State of California if the following conditions are met:	Figure A.1-2

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
(A) OSPR has been invited with the minimum notification required in Subsection 820.01(d)(2); and,	Figure A.1-2
(B) the owner/operator has received prior approval for the exercise substitution from the Administrator; and,	Figure A.1-2
(C) the Administrator finds the exercise objectives and evaluation criteria equal to or exceeding those of the OSPR.	Figure A.1-2
(i) OSRO Exercises	Figure A.1-2
An exercise of an OSRO's services may fulfill the equipment deployment exercise requirement of Subsection (a)(1) above for any marine facility, or Subsection (a)(2) above for any vessel, that utilizes the OSRO's plan to fulfill the response requirements of the facility's or vessel's own plan. These exercises will not fulfill the semi-annual equipment deployment exercise requirement of marine facility-owned equipment pursuant to Subsection (a)(1)(C). OSRO's who participate in the OSPR Sensitive Site Strategy Evaluation program (as defined in S. 790) may meet the shoreline protection exercise requirement of Subsection (b)(1) above for marine facilities, or Subsection (a)(2) above for vessels.	Figure A.1-2
(j) Unannounced Exercises	Figure A.1-2

An unannounced exercise may be used to satisfy the exercise requirements of this subsection under the following conditions:	Figure A.1-2
(1) The owner/operator shall submit a written request to the administrator within 90 days after the unannounced exercise is conducted asking that the exercise be considered in substitution for one or more of the required exercises, and;	Figure A.1-2
(2) the exercise tests one or more of the following: 1) the marine facility's or vessel's spill management team and spill response organization, 2) deployment of the facility's or vessel's response equipment, or 3) deployment of other response resources identified in the facility's or vessel's plan.	Figure A.1-2
(K) Actual Spill	Figure A.1-2
(1) Actions taken in response to an actual spill may be considered for exercise credit upon request of the owner/operator if all of the following conditions are met:	Figure A.1-2

FIGURE E-4 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
(A) the OSPR receives the documentation, as appropriate, outlined in Section 820.01(f); and,	Figure A.1-2
(B) the OSPR receives documentation of State OES oil spill notification, and the owner/operator provides all the information required on the OSPR Notification Form (FG OSPR Form 1964); and,	Figure A.1-2
(C) activation of the spill management team is successfully accomplished; and,	Figure A.1-2
(D) OSPR or another regulatory agency responds to the spill. A written response/evaluation by the owner/operator may be accepted by OSPR in lieu of an agency report if an agency report is not prepared; and,	Figure A.1-2
(E) the response was carried out in accordance with an approved contingency plan, the appropriate Area Contingency Plan, and/or in accordance with the directions of the Administrator or Federal On-Scene Coordinator; and	Figure A.1-2
(F) the OSPR receives a report from the	Figure A.1-2

Responsible Party as to cause of the spill, and procedures or other measures adopted to prevent a similar reoccurrence.	
(G) Plan holders must submit updated oil spill contingency plans showing the procedures developed for Subsection (F) above.	Figure A.1-2
Note: Authority cited: Sections 8670.10 and 8670.28, Government Code. Reference: Sections 8670.7, 8670.10, 8670.28, 8670.29 and 8670.30, Government Code.	Figure A.1-2

FIGURE E-5 - OSHA CROSS-REFERENCE

EAP REQUIREMENTS (29 CFR 1910.38 [a] [2])	LOCATION
• Emergency escape procedures and emergency escape route assignments	Figure C-3
• Procedures to be followed by employees who remain to operate critical plant operations before they evacuate	N/A
• Procedures to account for all employees after emergency evacuation has been completed	Section 2
• Rescue and medical duties for those employees who are to perform them	Section 2
• The preferred means of reporting fires and other emergencies	Section 2, Figure 3.1-5
• Names of regular job titles of persons or departments who can be contacted for further information or explanation of duties under the plan	Figure 3.1-4

ERP REQUIREMENTS (29 CFR 1910.120 [l] [2])	LOCATION
• Pre-emergency planning	Appendix C, Appendix D
• Personnel roles, lines of authority, and communication	Section 4, Section 7.1.6
• Emergency recognition and prevention	Section 2, Appendix C, Appendix D
• Safe distances and places of refuge	Section 2
• Site security and control	Section 5.7, Section 7.3

Decontamination procedures which are not covered by the site safety and health plan	Section 5.5, Section 5.6
• Emergency medical treatment and first aid	Section 2
• Emergency alerting and response procedures	Section 2, Section 3
• Critique of response and follow-up	Section 8.3
• PPE and emergency equipment	Section 7.1.1

FIGURE E-6 - EPA RESPONSE PLAN COVER SHEET

Owner/ operator of facility:	Plains Products Terminals LLC
Facility name:	Martinez Terminal
Facility address (street address or route):	2801 Waterfront Road
City, state, and U.S. zip code	Martinez, 94553
Facility mailing address:	As above
Facility phone number:	(925) 228-3227
Latitude:	(b) (7)(F) [redacted]
Longitude:	(b) (7)(F) [redacted]
Dun & Bradstreet number:	80-167-8061
Largest above ground oil storage tank capacity (gallons):	(b) (7)(F) [redacted] 0
Number of above ground oil storage tanks:	36 (including additive tanks)
North American Industrial Classification System (NAICS):	42271
Maximum oil storage capacity (gallons):	(b) (7)(F) [redacted]
Worst case oil discharge amount (bbls.):	(b) (7) [redacted]
Facility distance to navigable water; mark the appropriate line.	
0-1/4 ☐ 1/4-1/2 mile ☐ 1/2 - 1 mile ☑ > 1 mile ☐	
APPLICABILITY OF SUBSTANTIAL HARM CRITERIA	
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 ☐	
Does the facility have a total oil storage capacity greater than or equal to one million gallons and, within any storage area, 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?	
YES ☐ NO ☑	
Does the facility have a total oil storage capacity greater than or equal to one million gallons and is the facility located at a distance (as calculated using the appropriate formula in or a	

comparable formula) such that a discharge from the facility could cause injury to fish and wildlife and sensitive environments?
YES ☑ NO ☐
Does the facility have a total oil storage capacity greater than or equal to one million gallons and is the facility located at a distance (using the appropriate formula in or a comparable formula) such that a discharge from the facility would shut down a drinking water intake?
YES ☐ NO ☑
Does the facility have a total oil storage capacity greater than or equal to one 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 five years?
YES ☐ NO ☑

CERTIFICATION	
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and that based on my inquiry of those individuals responsible for obtaining information, I believe that the submitted information is true, accurate, and complete.	
Signature: Steven M. Caddell	Date: 11/2/2007
Name: Steven Caddell	Title: Western Division Manager

APPENDIX F Last Revised: May 2008

ACRONYMS AND DEFINITIONS

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F.1 Acronyms

F.2 Definitions

F.1 ACRONYMS

ACP	Area Contingency Plan
AFFF	Aqueous Film Forming Foam
ASTM	American Society of Testing Materials
BBL	Barrel(s)
BLM	Bureau of Land Management (USDOI)
BPD	Barrels Per Day
BPH	Barrels Per Hour
CERCLA	Comprehensive Environmental Response, Compensation & Liability Act of 1980, as amended
CFR	Code of Federal Regulations
CO_2	Carbon Dioxide
COTP	Captain of the Port (USCG)
CRZ	Contamination Reduction Zone
CWA	Clean Water Act of 1977 (Federal)
EAP	Emergency Action Plan
EMS	Emergency Medical Services
EOC	Emergency Operations Center
EPA	U.S. Environmental Protection Agency
EPCRA	Emergency Planning and Community Right-to-Know Act
ERAP	Emergency Response Action Plan
ERP	Emergency Response Plan
ERT	Emergency Response Team
FAA	Federal Aviation Administration
FEMA	Federal Emergency Management Agency
FOSC	Federal On-Scene Coordinator
FRP	Facility Response Plan
FRT	Facility Response Team
FWPCA	Federal Water Pollution Control Act of 1972
GIS	Geographic Information System
GPM	Gallons Per Minute
HAZMAT	Hazardous Materials
HMIS	Hazardous Material Information System
IAP	Incident Action Plan
IC	Incident Commander
ICS	Incident Command System

JIC	Joint Information Center

F.1 ACRONYMS, CONTINUED

LEL	Lower Explosive Limit
LEPC	Local Emergency Planning Committee
LEPD	Local Emergency Planning District
LNG	Liquid Natural Gas
LPG	Liquefied Petroleum Gas
MSDS	Material Safety Data Sheets
MTR	Marine Transportation Related
N/A	Not Applicable
NCP	National Oil and Hazardous Substances Pollution Contingency Plan
NIIMS	National Interagency Incident Management System
NM	Nautical Miles
NOAA	National Oceanic and Atmospheric Administration
NRC	National Response Center
NRDA	National Resource Damage Assessment
NRT	National Response Team
OBA	Oxygen Breathing Apparatus
OPA 90	Oil Pollution Act of 1990
OSC	On-Scene Coordinator/Commander
OSHA	Occupational Safety and Health Administration (USDL)
PHMSA	Pipeline and Hazardous Materials Safety Administration (DOT)
PPE	Personal Protective Equipment
PREP	(National) Preparedness for Response Exercise Program
QI	Qualified Individual
RCRA	Resource Conservation and Recovery Act of 1976
RQ	Reportable Quantity
SARA	Superfund Amendments and Reauthorization Act
SCADA	Supervisory Control and Data Acquisition (System)
SCBA	Self Contained Breathing Apparatus
SDWA	Safe Drinking Water Act of 1986
SERC	State Emergency Response Commission
SETS	Safety Environment and Training Services
SI	Surface Impoundment
SIC	Standard Industrial Classification (Code)

EMT	Emergency Management Team
SOSC	State On-Scene Coordinator

F.1 ACRONYMS, CONTINUED

SPCC	Spill Prevention, Control, and Countermeasures (Plan)
SSC	Scientific Support Coordinator (NOAA)
UCS	Unified Command System
UEL	Upper Explosive Limit
USACOE	U.S. Army Corps of Engineers
USCG	U.S. Coast Guard
USDOD	U.S. Department of Defense
USDL	U.S. Department of Labor
USDOE	U.S. Department of Energy
USDOI	U.S. Department of the Interior
USDOJ	U.S. Department of Justice
USDOT	U.S. Department of Transportation
USFWS	U.S. Fish and Wildlife Service (USDOI)
USGS	U.S. Geological Survey (USDOI)

F.2 DEFINITIONS

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 with the Captain of the Port (COTP) zone in which the systems or equipment are intended to function.

Aqueous Film Forming Foam
A fluoro-carbon surfactant that acts as an effective vapor securing agent due to its effect on the surface tension of the water. Its physical properties enable it to float and spread across surfaces of a hydrocarbon fuel with more density than protein foam.

Average Most Probable Discharge **(USCG)**
A discharge of the lesser of 50 barrels (2100 gallons) or one percent of the volume of the worst case discharge.

Barrel
Measure of space occupied by 42 U. S. gallons at 60 degrees Fahrenheit.

Bleve
A boiling liquid-expanding vapor explosion; failure of a liquefied flammable gas container caused by fire exposure. Pronounced

"blevey."

Boilover
Occurs when the heat from a fire in a tank travels down to the bottom of the tank causing water that is already there to boil and push part of the tank's contents over the side.

Carbon Dioxide
A heavy, colorless, odorless, asphyxiating gas, that does not normally support combustion. It is one and one-half times heavier than air and when directed at the base of a fire its action is to dilute the fuel vapors to a lean mixture to extinguish the fire.

Class A Fire
A fire involving common combustible materials which can be extinguished by the use of water or water solutions. Materials in this category include wood and wood-based materials, cloth, paper, rubber and certain plastics.

Class B Fire
A fire involving flammable or combustible liquids, flammable gases, greases and similar products. Extinguishment is accomplished by cutting off the supply of oxygen to the fire or by preventing flammable vapors from being given off.

Class C Fire
A fire involving energized electrical equipment, conductors or appliances. Nonconducting extinguishing agents must be used for the protection of firefighters.

Class D Fire
A fire involving combustible metals, for example, sodium, potassium, magnesium, titanium and aluminum. Extinguishment is accomplished through the use of heat-absorbing extinguishing agents such as certain dry powders that do not react with the burning metals.

F.2 DEFINITIONS, CONTINUED

Cold (Support) Zone
An area free of contaminants so that Personal Protection Equipment (PPE) is not required for personnel working in this area. Command functions and supporting operations are carried out here.

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.

Communication Equipment
Equipment that will be utilized during response operations to maintain communication between employees, contractors, federal/state/local agencies.

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.

Contamination Reduction Zone
Same as the warm zone, a buffer between the hot and cold zones. Decontamination activities take place there. Equipment needed to support the primary response operation may be staged in the warm zone.

Contingency Plan
A document used by: (1) federal, state, and local agencies to guide planning and response procedures regarding spill 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
Includes:

- A written contractual agreement with a response contractor. The agreement should identify and ensure the availability of the specified personnel and equipment described under U.S.C.G. Regulations within stipulated response times in the specified geographic areas

- Certification by the facility owner or operator that the specified personnel and equipment described under USCG Regulations are owned, operated, or under the direct control of the facility owner or operator, and are available within stipulated times in the specified geographic areas

- Active membership in a local or regional oil spill removal organization that has identified specified personnel and equipment described under USCG Regulations that are available to respond to a discharge within stipulated times in the specified geographic areas

- A document which:

    - Identifies the personnel, equipment, services, capable of being provided by the response contractor within stipulated response times in specified geographic areas
    - Sets out the parties' acknowledgment that the response contractor intends to commit the resources in the event of a response
    - Permits the Coast Guard to verify the availability of the response resources identified through tests, inspections, drills
    - Is incorporated by reference in the Response Plan

- For a facility that could reasonably be expected to cause substantial harm to the environment, with the consent of the response contractor or oil spill removal organization, the identification of a response contractor or oil spill removal organization with specified equipment and personnel which are available within stipulated response times in specific geographic areas.

F.2 DEFINITIONS, CONTINUED

Demand Breathing Apparatus
A type of self-contained breathing apparatus that provides air or oxygen from a supply carried by the user.

Dispersants
Those chemical agents that emulsify, disperse, or solublize oil into the water column or promote the surface spreading of oil slicks to facilitate dispersal of the oil into the water column.

Diversion 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.

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.

Exclusion Zone
Same as hot zone, the area where a hazard exists. This is the hazardous location on site, therefore entry requires personal protective equipment (PPE). It must be big enough for both mitigation activities and protection of personnel in the warm zone should an explosion, fire, change of wind direction, or an unexpected release occur during response activities.

Explosive Range
Flammable range; the range of the mixture of air and flammable gas or flammable vapor of liquids that must be present in the proper proportions for the mixture to be ignited. The range has upper and lower limits; any mixture above the upper explosive limit or below the lower explosive limit will not burn.

Facility
Any pipeline, structure, equipment, or device used for handling oil including, but not limited to, underground and aboveground storage tanks, impoundments, mobile or portable drilling or workover rigs, barge mounted drilling or workover rigs, and portable fueling facilities located offshore or on or adjacent to coastal waters or any place where a discharge of oil from the facility could enter coastal waters or threaten to enter the coastal waters.

Federal Fund
The oil spill liability trust fund established under OPA.

First Responders, First Response Agency
A public health or safety agency (i.e., 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.

Flashover
The ignition of combustibles in an area heated by convection, radiation, or a combination of the two. The action may be a sudden ignition in a particular location followed by rapid spread or a "flash" of the entire area.

F.2 DEFINITIONS, CONTINUED

Flash Point
The temperature at which a liquid fuel gives off sufficient vapor to form an ignitable mixture near its surface.

Foam
A blanket of bubbles that extinguishes fire mainly by smothering. The blanket prevents flammable vapors from leaving the surface of the fire and prevents oxygen from reaching the fuel. The water in the foam also has a cooling effect.

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 EPA pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act; regulated pursuant to Section 311 of the Federal Water Pollution Control Act.

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 Resources 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.

Higher Volume Port Area
Ports of:

- Boston, MA
- New York, NY
- Delaware Bay and River to Philadelphia, PA
- St. Croix, VI
- Pascagoula, MS
- Mississippi River from Southwest Pass, LA to Baton Rouge, LA
- Louisiana Offshore Oil Port (LOOP), LA
- Lake Charles, LA
- Sabine-Nachez River, TX
- Galveston Bay and Houston Ship Channel, TX
- Corpus Christi, TX
- Los Angeles/Long Beach Harbor, CA
- San Francisco Bay, San Pablo Bay, Carquinez Strait, Suisun Bay to Antioch, CA
- Straits of Juan de Fuca and Puget Sound, WA
- Prince William Sound, AK

Hot (Exclusion) Zone
The area where a hazard exists. This is the hazardous location on site, therefore entry requires personal protective equipment (PPE). It must be big enough for both mitigation activities and protection of personnel in the warm zone should an explosion, fire, change of wind direction, or an unexpected release occur during response activities.

F.2 DEFINITIONS, CONTINUED

Hyperthermia
A dangerously high fever that can damage nerve centers. This condition can result from exposure to excessive heat over an extended period of time.

Ignition Temperature
The lowest temperature at which a fuel will burn without continued application of an ignition source.

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.

Incident Command System
A method by which the response to an extraordinary event, including a spill, is categorized into functional components and responsibility for each component assigned to the appropriate individual or agency.

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 the spill response.

Lead Federal Agency
The agency which coordinates the federal response to incidents on navigable waters. The lead Federal agencies are:

- **U. S. Coast Guard (USCG):** Oil and chemically hazardous materials incidents on navigable waters
- **Environmental Protection Agency (EPA):** Oil and chemically hazardous materials incidents on most inland waters and in the inland zone

Lead State Agency
The agency which coordinates state support to Federal and/or Local governments or assumes the lead in the absence of a Federal spill response.

Lower Flammable Limit
Minimum flammable concentration of a particular gas in the air.

Marine Transportation-Related Facility (MTR Facility)
An onshore facility, including piping and any structure used to transfer oil to or from a vessel, subject to regulation under 33 CFR Part 154 and any deepwater port subject to regulation under 33 CFR Part 150.

Maximum Extent Practicable
The planning values derived from the planning criteria used to evaluate the response resources described in the response plan to provide the on-water recovery capability and the shoreline protection and cleanup capability to conduct response activities for a worst case discharge from a facility in adverse weather.

Maximum Most Probable Discharge (USCG)
A discharge of the lesser of 2,500 barrels or ten percent of the volume of a worst case discharge.

F.2 DEFINITIONS, CONTINUED

Medium Discharge **(EPA)**

Same as maximum most probable discharge.

National Contingency Plan
The plan prepared under the Federal Water Pollution Control Act (33 United States 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.

Nearshore Area
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 (COLREG) lines) 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:

- At least 50% of which by volume, distill at a temperature of 340EC (645EF)
- At least 95% of which volume, distill at a temperature of 370EC (700EF)

Non-Petroleum Oil
Oil of any kind that is not petroleum-based. It includes, but is not limited to, animal and vegetable oils.

Offshore Area
The area beyond 12 nautical miles measured from the boundary lines defined in 46 CFR Part 7 extending seaward to 50 nautical miles, except in the Gulf of Mexico. In the Gulf of Mexico it is the area beyond 12 nautical miles of the line of demarcation (COLREG lines) defined in '80-740 - 80.850 of Title 33 of the CFR extending seaward to 50 nautical miles.

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 Removal Organization (OSRO)
An entity that provides oil spill response resources, and includes any for profit or not-for-profit contractor, cooperative, or in-house response resources that have been established in a geographic area to provide required response resources.

Operating Area
The rivers and canals, inland, nearshore, Great Lakes, or offshore geographic location(s) in which a facility is handling, storing, or transporting oil.

Operating Environment
Rivers and canals, inland, Great Lakes, or ocean. These terms are used to define the conditions in which response equipment is designed to function.

Overhaul
A procedure following a fire whereby the area is examined for hidden fire and fire extension and the fire area is cleaned up.

F.2 DEFINITIONS, CONTINUED

Owner or Operator
Any person, individual, partnership, corporation, association, governmental unit, or public or private organization of any character.

PPE - Level A
Offers the highest level of respiratory, skin, eye and mucous membrane protection. Intended for IDLH or near IDLH conditions. Level A consists of the following:

- Positive pressure self contained breathing apparatus (SCBA)
- Fully encapsulated chemical resistant unit
- Inner and outer chemical resistant gloves
- Chemical resistant boots with steel toe and shank
- Hard hat
- Other accessories as required

PPE - Level B
Offers the highest degree of respiratory protection, but a lesser level of skin and eye protection. Level B is the minimum level recommended on initial site entries until the hazards have been further identified and defined by monitoring sampling, and other methods. Level B protection may be used where confined space entry conditions exist and existing gases or vapors are not harmful to the skin. Level B consists of the following:

- Positive pressure self contained breathing apparatus (SCBA)
- Chemical resistant clothing appropriate for hazard
- Inner and outer chemical resistant gloves
- Chemical resistant boots with steel toe and shank
- Hard hat
- Other accessories as required

PPE - Level C
May be used when the type of airborne substance is known, its concentration has been measured, and criteria for using air-purifying respirators have been met. Also, skin and eye exposure is unlikely. Level C consists of the following:

- Full-face, air purifying respirator appropriate for contaminant
- Chemical, fire and/or heat resistant clothing appropriate for hazard
- Inner and outer chemical resistant gloves
- Chemical resistant boots with steel toe and shank
- Hard hat
- Other accessories as required

PPE - Level D
Standard minimum level of protection required during routine operations or incidents with no known hazards. Level D consists of the following:

- Flame retardant clothing
- Safety glasses
- Leather boots or shoes
- Hard hat

Fire fighting protective clothing

F.2 DEFINITIONS, CONTINUED

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:

- Group II - specific gravity less than .85
- Group III - specific gravity between .85 and less than .95
- Group IV - specific gravity .95 to and including 1.0
- Group V - specific gravity greater than 1.0

Primary Response Contractor(s)
An individual, company, or cooperative that has contracted directly with the plan holder to provide equipment and/or personnel for the containment or cleanup of spilled oil.

Qualified Individual(s)
An English-speaking representative(s) of the facility identified in the plan, located in the United States, available on a 24-hour basis, familiar with implementation of the facility response plan, and trained in his or her responsibilities under the plan. This person must have full written authority to implement the facility's response plan. This includes:

- Activating and engaging in contracting with identified oil spill removal organization(s)
- Acting as a liaison with the predesignated of Federal On-Scene Coordinator (FOCS)
- Obligating, either directly or through prearranged contracts, funds required to carry out all necessary or directed response activities

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.

Reid Vapor Pressure Method
Method used by the American Society of Testing Materials to test vapor pressure. It is a measure of the volatility, or tendency to vaporize, of a liquid.

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.

Rivers and Canals
A body of water confined within the inland area that has a projected depth of 12 feet or less, including the Intracoastal Waterway and other waterways artificially created for navigation.

F.2 DEFINITIONS, CONTINUED

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.

Slopover
An event that occurs when water is introduced into a tank of very hot liquid, causing the liquid to froth and spatter.

Small Discharge (EPA)
Same as average most probable discharge.

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.

Emergency Management Team
The personnel identified to staff the organizational structure identified in a response plan to manage response plan implementation.

Spontaneous Ignition
A fire that occurs without a flame, spark, hot surface, or other outside source of ignition.

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.

Static Electricity
Charges of electricity accumulated on opposing and usually moving surfaces having negative and positive charges, respectively. A hazard exists where the static potential is sufficient to discharge a spark in the presence of flammable vapors or combustible dusts.

Support Zone
Same as cold zone, an area free of contaminants so that personal protection equipment (PPE) is not required for personnel working in this area. Command functions and supporting operations are carried out here.

Tornado Warning
A tornado has been sighted.

Tornado Watch
Conditions are favorable for tornados to form.

F.2 DEFINITIONS, CONTINUED

Unified Command
The method by which local, state, and federal agencies 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

Warm (Contamination Reduction) Zone
A buffer between the hot and cold zones. Decontamination activities take place there. Equipment needed to support the primary response operation may be staged in the warm zone.

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.

Wildlife Rescue
Efforts made in conjunction with federal and state agencies to retrieve, clean, and rehabilitate birds and wildlife affected by an oil spill.

APPENDIX G Last Revised: May 2008

ADDITIONAL INFORMATION (All items are links)

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- Certification of Qualified Individual and Alternate QI

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Martinez Terminal
Emergency Response Action Plan
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Emergency Response Action Plan

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PLAINS ALL AMERICAN PIPELINE, L.P.

Martinez Terminal
Emergency Response Action Plan

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EMERGENCY RESPONSE ACTION PLAN

Last Revised: December 5, 2011

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1.0 INTRODUCTION

1.1 Purpose / Scope of Plan

This Martinez Terminal Emergency Response Action Plan (ERAP) provides guidelines to assist in managing an emergency. The primary goal of this Plan is to provide tools to enable an efficient, coordinated, and effective response to emergencies.

The ERAP is not meant to replace common sense or actions not specifically described herein. Responders should continually evaluate the effectiveness of actions called for in this Plan and make the appropriate adjustments based on past experience and training.

This ERAP contains tactical response plans that identify site-specific potential response strategies. Response strategies, equipment and manpower requirements, and site conditions are based on conditions that were present during site assessments. Actual conditions at the time of a response may vary significantly and may necessitate the need for a different strategy and/or equipment requirements. The strategies and equipment lists contained in this plan should be used as guidelines only.

This document is intended to satisfy the requirements of 29 CFR 1910.38(a)(2) and 1910.120(l)(2) (OSHA Emergency Response Plan and Emergency Action Plan) and 40 CFR Part 112.20 (EPA Emergency Response Action Plan). Cross-references for these regulations are

located in **APPENDIX E** of the Emergency Response Plan.

1.2 Plan Review and Updating Procedures

The ERAP will be reviewed and modified as appropriate to address new information.

Plan revisions will be numbered sequentially and entered on the Record of Changes Form. The change numbers, date, and description of change will also be entered on the form. These changes are then to be distributed to all plan holders on the Distribution List.

1.3 Facility Description

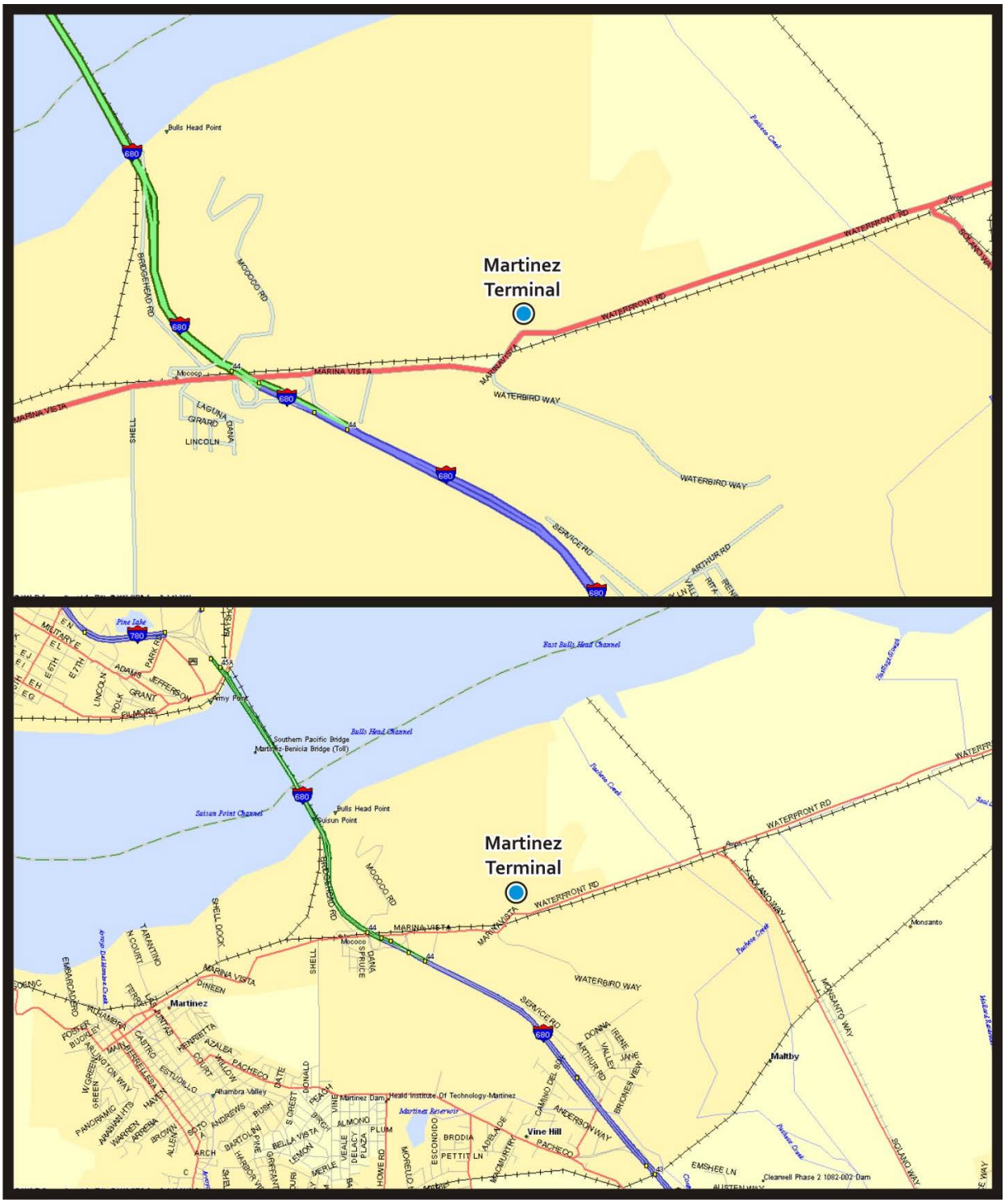
The Martinez Terminal is located approximately 1-1/2 nm east of the Benicia-Martinez Highway I-680 Bridge and Railroad Bridge along the south shore of Suisun Bay.

The Martinez Terminal consists of 37 aboveground storage tanks (ASTs) with storage capacities ranging from (b) (7)(F) [redacted]. The facility includes a wharf connected to the tank farm by pipelines approximately 1-1/3 miles in length.

The facility is surrounded by a chain link fence and is manned 24 hours per day. Electronic gates and other monitoring equipment are also used.

Ships transporting petroleum products to the Martinez Terminal enter the San Francisco Bay from the shipping lane located roughly 50 miles off the California coast. The ships proceed up the Carquinez Strait and enter Bulls Head Channel along the south side of Suisun Bay approximately 1-1/2 miles east of the Benicia I-680 Bridge.

FIGURE 1-1 - FACILITY AREA MAP



2.0 RESPONSE STEPS

2.1 SPILL / RELEASE RESPONSE

RESPONSE ACTION	
First Person to Discover Spill	
Immediately notify Supervisor, Terminal Manager and/or Operations Office. Take appropriate action to protect life and ensure safety of personnel. Contact the	☐

appropriate local emergency responders or request the Control Center personnel to do so.	
Immediately shut down terminal operations (if applicable). Remotely controlled motor operated valves should be closed as soon as a leak is detected. Manual operated valves should be closed if safe to do so.	☐
If safe to do so, direct facility responders to shut down potential ignition sources in the vicinity of the spill, including motors, electrical pumps, electrical power, flares, etc. If applicable, keep drivers away from truck rack if spill occurs there. The Facility Manager will notify Person-In-Charge of any moored vessel alerting them to the condition at the terminal.	☐
Evacuate nonessential personnel, notify emergency response agencies to provide security, and evacuate surrounding area (if necessary). Notify Person-In-Charge. **At our Dock Terminals, Security efforts will be coordinated by our Facility Security Officer, and followed according to our Facility Security Plan.**	☐
If safe to do so, direct facility responders to shut down and control the source of the spill. Be aware of potential hazards associated with product and ensure that lower explosive limits (LELs) and air quality for breathing are within safe levels before sending personnel into the spill area.	☐
Assign initial role of Incident Commander (IC) and Safety Officier (SO). If only one person on scene, IC and SO will be one in the same person.	☐
If safe to do so, direct facility responders to stabilize and contain the situation. This may include construction of minor earthen berms and/or deployment of sorbent boom and pads.	☐
Contact the E& R/C Department for Agency Spill Notifications.	☐
Secure the scene. Isolate the area and assure the safety of people and the environment. Keep people Follow procedures in the Facility Security Plan to secure the scene. Isolate the area and assure the safety of people and the environment. Keep people away from the scene and outside the safety perimeter.	☐
Terminal Management	
Assume role of Incident Commander until relieved by upper Management (if applicable).	☐
Conduct preliminary assessment of health and safety hazards.	☐
Call out Emergency Management Team and primary spill response contractors, as needed (**FIGURE 3-4**).	☐
Notify the Division Operations Manager and provide an incident briefing. Evaluate the need for activating the Divisional Response Team (DRT).	☐
Notify the Division E&R/C Director.	☐
For low flash product (<100ºF), consider applying foam over the product, using water spray to reduce vapors, grounding all equipment handling the product, and using non-sparking tools.	☐
If there is a potential to impact shorelines, consider lining shoreline with sorbent or diversion boom to reduce impact.	☐
Notify Local Emergency Responders. Obtain the information necessary to complete the Leak Accident Report Form (**FIGURE 3-2**).	☐
Make local notifications: • LEPC	

• Police • Fire • Sheriff	☐

2.1 SPILL/RELEASE RESPONSE, CONTINUED

RESPONSE ACTION	
E&R/C Division Director or Designee	
Make appropriate notifications: • National Response Center (800) 424-8802 • External regulatory notifications (**FIGURE 3-4**)	☐
Emergency Management Team	
Activate all or a portion of Emergency Management Team (EMT) (as necessary). E&R/C Department will maintain contact with notified regulatory agencies.	☐
Mobilize spill response contractors (if necessary). It is much better to demobilize equipment and personnel if not needed than to delay contacting them if they are needed.	☐
Document all response actions taken, including notifications, agency/media meetings, equipment and personnel mobilization and deployment, and area impacted. (Refer to **SECTION 5** in the Emergency Response Plan for documentation.)	☐
Water-based Spills: Initiate spill tracking and surveillance operations. Determine extent of pollution via surveillance aircraft or vehicle. Estimate volume of spill utilizing information in **SECTION 2.1.3** in the Emergency Response Plan. Send photographer / videographer, if safe. Use of dispersants requires Federal or State approval.	☐
Land-based Spills: Initiate spill tracking and surveillance, if applicable.	☐
SECONDARY RESPONSE ACTIONS (Refer to EMT job descriptions in **SECTION 4.6** in the Emergency Response Plan)	
FACILITY-SPECIFIC RESPONSE CONSIDERATIONS (Refer to **SECTIONS 6.0** through **SECTION 11.0** for maps, tactical plans, and sensitivity information).	

SITE-SPECIFIC ACTIONS	
DOCUMENT ALL ACTIONS TAKEN	
First Priority	
Account for all personnel and visitors.	☐
Identify and assess fire/safety hazards.	☐
Second Priority	
Secure spill source, if possible.	☐
Assure all required notifications are conducted.	☐

Secure all drainage leading from facility.	☐
Third Priority	
Facility drainage and secondary containment will be adequate to contain a spill of small or medium size, preventing it from going off-site. Once the spill has been contained, resources are present at the facility to recover spilled product, safety conditions permitting.	☐
If unable to contain spill to facility property, refer to SECTION 6.8 of the FRP or SECTION 9.0 of the ERAP for the location of the tactical strategy.	☐
Once deployment of response equipment has been completed, initiate recovery of product.	☐
Upon arrival of EMT, assure all information is accurate and complete prior to being released.	☐
Assure proper documentation has been completed from initial discovery of spill to finish; reference **SECTION 5** in the Emergency Response Plan.	☐

2.2 EVACUATION

EVACUATION CHECKLIST	
TASK	
Request assistance from off-site response organizations; convey Command Post's location. Notify appropriate agencies (if appropriate).	☐
Assemble personnel at predetermined safe location: upwind/up gradient of release (assembly area).	☐
Account for Company and contractor personnel.	☐
Assess casualties (number/type/location).	☐
Determine probable location of missing personnel.	☐
Secure site, establish re-entry point and check-in/check-out procedures.	☐
Develop list of known hazards (confined spaces, electrical hazards, physical hazards, vapors, oxygen deficiency, fire/explosion, etc.).	☐
Monitor situation (weather, vapors, product migration) for significant changes.	☐
Assist in developing a Rescue Plan, if necessary.	☐
Site-Specific Actions:	
	☐

2.2 EVACUATION, CONTINUED

EVACUATION FACTORS	
FACTOR	**DESCRIPTION**
Stored material location	• Located in oil storage area • Identified in facility Plot Plan (**FIGURE 5-1**)

Spilled material hazards	• Hazard is fire/explosion
Water currents, tides or wave conditions	• The flood current commences approximately 1.5 hours before the Golden Gate reference area. The ebb begins approximately 1.0 hour earlier. Maximum current velocities do generally exceed 1.5 knots. The tide cycle is semi-diurnal and maximum predicted range is 7.5 feet.
Evacuation routes	• Routes are summarized on Evacuation Plan Diagram (**FIGURE 5-2**) • Criteria for determining safest evacuation routes from facility may include: wind direction, potential exposure to toxins and carcinogens, intense heat, potential for explosion/fire, and blockage of planned route by fire, debris, or released liquid
Alternate evacuation routes	• Alternate routes may exist; refer to Evacuation Plan Diagram (**FIGURE 5-2**)
Injured personnel transportation	• Emergency services can be mobilized to the facility (**FIGURE 5-2**)
Alarm/Notification system location	• Sound evacuation alarm. Communicate by radio/cellphone as necessary
Community evacuation plans	• Company may request local police, county sheriff and/or state police assistance (**FIGURE 3-5**). Community evacuations are the responsibility of these agencies.
Spill flow direction	• Surface runoff generally flows to the north. • Identified in facility drainage diagram (**FIGURE 5-1**)
Prevailing wind direction and speed	• The wind direction is primarily from the northwest. However, on the water, the wind is generally channeled through Carquinez Strait. • Because wind direction varies with weather conditions, consideration for evacuation routing will depend in part on wind direction
Emergency personnel/response equipment arrival route	• Waterfront Road • Directions to nearest medical facility provided below

2.2 EVACUATION, CONTINUED

EVACUATION FACTORS	
FACTOR	**DESCRIPTION**
Centralized check-in area	• Outside the Contractor Gate • Supervisor is responsible for head count
Mitigation Command Center location	• Initial Command Center located at Terminal office or the Emergency Response trailer located next to the office building. If more space is required then the command center could be located at the Hilton Hotel in Concord, California. • Mobile Command Posts may be established as necessary
Facility Shelter Location	• One personnel shelter is located in the southwest corner of the main wharf platform. • Not a safe harbor from fires, explosions, vapor clouds, or other significant emergencies; however, may be used for temporary shelter from inclement weather
Directions to nearest medical facility	Directions to John Muir Medical Center - 2540 East Street, Concord, CA : • Take Waterfront Road west to I-680 South towards San Jose. Merge onto CA-4 East via Exit 53 toward Antioch/Pittsburg. Merge onto CA-242 South via Exit 15A toward Oakland/Concord. Take the Solano Way exit toward Grant Street. Take the ramp toward Grant Street. Turn left onto Solano Way. Solano Way become Grant Street. Turn onto East Street.

2.3 TORNADO

TORNADO CHECKLIST	
TASK	
Monitor news media reports (**FIGURE 3-4**). • Tornado watch means conditions are favorable for tornadoes. • Tornado warning means a tornado has been sighted.	☐
When a tornado warning is issued, sound the local alarm. Notify off site personnel of the situation (Control Center or Regional Management).	☐
Take shelter: • Go to an interior room on the lowest floor.	☐

Get under a sturdy piece of furniture or solid structure. • Use your arms to protect head and neck.	
Have location personnel report to the designated area.	☐
Account for all personnel on duty.	☐
Look for funnel formations on the ground or in the clouds; listen for a roar that sounds like a jet aircraft or rail traffic.	☐
If the facility is damaged by the tornado, notify Management.	☐
Go to the scene of the incident to evaluate the situation. • Be aware of broken glass and downed power lines. • Assess the area for damaged equipment or product releases. • Check for injuries. • Use caution entering a damaged building.	☐
Update Supervisory Personnel/Management.	☐
Perform Initial Response Actions functions as stated in **SECTION 2.1**.	☐
Conduct post-emergency evaluation and report.	☐
Site-Specific Actions:	
	☐

2.4 EARTHQUAKE

Earthquakes generally strike without warning, thus making preparation very difficult. While the initial quake may be unpredictable, there is a certain amount of post quake activity accompanying most quakes. These procedures should be followed in the aftermath of a major earthquake within the vicinity of the pipeline system.

Fires, explosions, spills, or releases resulting from earthquakes should be treated as described in this section.

EARTHQUAKE CHECKLIST	
TASK	
Call 9-1-1, if necessary. Listen to media coverage to determine the location of the quake.	☐
Shut down the potentially affected pipeline section. Continuously monitor the static pipeline pressures to ascertain the mechanical condition of the pipeline.	☐
If damage is found, an assessment of the situation will be reported to the Operations Control Center. In conjunction with the Engineering Department, repair efforts shall be undertaken and completed prior to start up of the pipeline.	☐
If no damage is found, continue to maintain the shutdown condition and continue to monitor the static pipeline pressures. The Division Manager will assess the	☐

conditions and confer on the start up and return to service of the pipeline system.	
Inside a building:	
Move away from windows, tall fire cabinets, and other things that could fall on or crush you.	☐
Shelter yourself by getting under a table or desk.	☐
Protect yourself by putting your head as close to your lap as possible, or kneel down and protect your head.	☐
Remain calm and clearheaded. Remember that even major earthquakes generally last less than 60 seconds.	☐
Do not try to stand in the doorway. The doors are heavy and can cause damage when they swing during an earthquake.	☐
Do not attempt to leave the building. You are much safer inside the building until the shaking stops.	☐
Wait for further instructions after the shaking stops.	☐
Outside a building:	
Seek protection away from buildings. Falling glass, power lines, and debris can be very hazardous.	☐
Once it is safe to do so, contact Supervisory personnel and the Operations Control Center to advise them of your location and report the earthquake. They will advise the employee of the next steps to take.	☐

2.5 FLOOD

FLOOD CHECKLIST	
TASK	
Perform continuous monitoring of the situation by listening to radio and/or television reports (**FIGURE 3-4**). • Flash flood watch means flooding is possible. • Flash flood warning means flooding is occurring or is imminent.	☐
Update Supervisory Personnel when flooding is imminent.	☐
Establish an evacuation plan (**SECTION 2.2**).	☐
Take preliminary actions to secure the facility before flooding and mandatory evacuation.	☐
Consider having sandbags brought to sites that could be affected by the flooding.	☐
Consider obtaining portable pumps and hoses from local suppliers or from other petroleum service locations in the area.	☐
Remove product from underground storage tanks (i.e., sumps and separators, if applicable) and replace with water to prevent them from floating out of the ground.	☐
If additional new product is available fill each tank to the minimum level necessary to prevent buoyancy in the event of flooding (Rule of thumb is 30% of	

the safe fill height). If additional product is not available, transfer appropriate product among tanks to prevent buoyance. If minimum levels cannot be reached through product transfer, add water bottoms.	☐
Plug all rack drains and facility drains connected to the sump.	☐
Empty all dikes of water.	☐
Ensure that tank roof drains are working properly.	☐
Anchor all bulk additive tanks, fuel barrels, empty drums, and propane tanks (if applicable).	☐
Notify Supervisory Personnel/Management that the facility will be closed. Customer should be notified.	☐
Back up computer files.	☐
Remove assets such as files, computers, spare parts, and vehicles.	☐
Shut off high voltage power and natural gas lines.	☐
Close all valves on product and additive storage tanks.	☐
Before evacuation, know where all the employees will be residing and obtain phone numbers so they can be contacted if additional emergencies occur.	☐

2.5 FLOOD, CONTINUED

FLOOD CHECKLIST	
TASK	
Conduct a post-emergency evacuation and report.	☐
Maintain hazards awareness: • Structural damage; • Equipment damage and product release; • Downed power lines; • Leaking natural gas, water, and sewer lines; • Poisonous snakes and other wildlife sheltering in structures, vehicles, and furniture; and • Avoid direct contact with flood water, mud, and animal carcasses.	☐

2.6 MEDICAL

MEDICAL CHECKLIST	
TASK	
Summon Emergency Medical Services (EMS) to the scene (**FIGURE 3-4**).	☐

Do not move the patient unless a situation (such as a fire) threatens patient's life.	☐
If trained, provide appropriate first aid for both injury and shock until the EMS arrives at the scene.	☐
As the situation warrants, try to stop the bleeding and keep the patient breathing until the EMS arrives at the scene.	☐
The rescuer's role includes: • Removing the patient from any situation threatening patient's life or the lives of rescuers. • Correcting life-threatening problems and immobilizing injured parts before transporting the patient. • Transporting the patient in a way that minimizes further damage to injured parts. • Administering essential life support while the patient is being transported. • Observing and protecting the patient until medical staff can take over. • Administering care as indicated or instructed.	☐
Notify Supervisory Personnel and/or Regional Management.	☐
Notify victim's immediate family.	☐
Complete follow-up and written reporting, as the situation demands.	☐

2.7 BOMB/TERRORIST THREAT

(b) (7)(F)

[redacted]

(b) (7)(F)

[redacted]

(b) (7)(F)

[redacted]

(b) (7)(F)

[redacted]

2.8 SABOTAGE

(b) (7)(F)

[redacted]

(b) (7)(F)

[redacted]

(b) (7)(F)

[redacted]

2.9 VANDALISM

The difference between vandalism and sabotage is the intent of the person committing the act. While a saboteur seeks to destroy or disrupt for a specific reason, vandals are likely to strike without reason or provocation. For this reason acts of vandalism are more likely to be confined to one location and be somewhat more obvious in nature. Therefore, while the end result may be the same, the response to an act of vandalism will be different.

(b) (7)(F)

[redacted]

2.10 FIRE AND/OR EXPLOSION

Your first consideration is always the safety of people in the immediate area, including your own.

The first responder's initial objective is site management.

FIRE AND/OR EXPLOSION CHECKLIST	
TASK	
At a manned facility	
It is Plains' Pipeline policy that fighting fires, which accelerate beyond the incipient stage, will not be conducted by Plains personnel. If it becomes apparent that a fire may grow beyond the point of being controlled by fire extinguishers, the local fire department will manage the fire fighting and Plains will only provide assistance as necessary and if safe to do so; for example shutting off the supply of fuel to the fire. Tank fires and fires fueled by pipeline releases will	☐

generally be allowed to burn out.	
Evaluate the situation; approach cautiously from upwind; do not rush in.	☐
Notify the local police and fire departments (Dial 911).	☐
Sound the facility alarm and push the red emergency shutdown switch (if equipped).	
Notify Qualified Individual and Operations Control (if applicable).	☐
Appropriately trained personnel may attempt to extinguish the fire if it is in the incipient (early) stage and **if it can be done safely**.	☐
In the event the fire is too large for an individual to fight alone, the individual sounding the alarm or making the phone call should stand by at a safe distance to direct the fire department to the scene of the fire and keep personnel and vehicles from entering the danger area.	☐
Alert all Facility areas of the exact location and extent of the fire.	☐
Instruct all drivers to discontinue loading, disconnect loading arms, and tell all drivers present to stand by the trucks (if safe to do so) and wait for instruction to remove same to safe area.	☐
Shut off all pumps.	☐
If the fire/explosion is a result of a pipe rupture, isolate product release by closing valves.	☐
If product is being received from pipelines, notify the appropriate pipeline personnel of the fire and request that the pipeline be shut down. The tank which is receiving product from the pipeline must not be closed until assurance is received that the pipeline is shut down, unless that tank is on fire.	☐
After confirmation has been received that pipelines have been shut down, close the pipeline header valves.	☐
Undertake basic site control: • Make an assessment of hazards. • Isolate the area. • Keep people away from the scene and outside the safety perimeter. • Establish safety zones and escape routes.	☐

2.10 FIRE AND/OR EXPLOSION, CONTINUED

Your first consideration is always the safety of people in the immediate area, including your own.

The first responder's initial objective is site management.

FIRE AND/OR EXPLOSION CHECKLIST, CONTINUED
TASK
At a manned facility, Continued

Respond to the fire: • Establish a Command Post and lines of communication. • Maintain site control. • Establish Incident Command/Unified Command as necessary (**SECTION 4.4**) in the Emergency Response Plan.	☐
Call in additional resources if on-scene personnel and equipment are inadequate to handle the emergency.	☐
Conduct a post-emergency evaluation and report.	☐

2.10 FIRE AND/OR EXPLOSION, CONTINUED

Your first consideration is always the safety of people in the immediate area, including your own.

The first responder's initial objective is site management.

FIRE AND/OR EXPLOSION CHECKLIST, CONTINUED	
TASK	
At an unmanned facility	
It is Plains' Pipeline policy that fighting fires, which accelerate beyond the incipient stage, will not be conducted by Plains personnel. If it becomes apparent that a fire may grow beyond the point of being controlled by fire extinguishers, the local fire department will manage the fire fighting and Plains will only provide assistance as necessary and if safe to do so; for example shutting off the supply of fuel to the fire. Tank fires and fires fueled by pipeline releases will generally be allowed to burn out.	☐
Handle the call.	☐
Notify the local police and fire departments.	☐
Notify Qualified Individual and Operations Control.	☐
Go to the incident scene to evaluate the situation; approach cautiously from upwind; do not rush in.	☐
Undertake basic site control: • Make an assessment of hazards. • Isolate the area. • Keep people away from the scene and outside the safety perimeter. • Establish safety zones and escape routes.	☐
If roads or railroads are in the affected area, assist the sheriff or local emergency officials with halting traffic.	☐

Update the next level manager.	☐
If the fire/explosion is a result of a pipe rupture, isolate the product release by closing valves.	☐
Respond to the fire: • Establish a Command Post and lines of communication. • Maintain site control. • Establish Incident Command/Unified Command as necessary, refer to **SECTION 4.4** in the Emergency Response Plan.	☐
Call in additional resources if on-scene personnel and equipment are inadequate to handle the emergency.	☐
Conduct a post-emergency evaluation and report.	☐
Site-Specific Actions:	
	☐

2.11 WILDFIRES (RIGHT OF WAY)

The possibility of a wild/brush fire exists due to the amount and type of vegetation along certain sections of the pipeline Right-of-Way. It is highly unlikely that a wild/brush fire would affect the buried pipeline. The Right-of-Way will most likely serve as a "fire fuel break" and could serve as access to the area for emergency firefighting equipment (e.g. bulldozer and scrapers). It is necessary to recognize the potential for mechanical damage to the pipeline from such equipment, and that a leak or rupture could fuel the fire and impede fire fighting capabilities. Care should be taken to reduce the potential for any mechanical damage caused by equipment to the pipeline.

WILDFIRE CHECKLIST	
TASK	
In the Vicinity of the Pipeline Right-of-Way	
Notify the PCC. Observe and be prepared to report wind direction, wind velocity, and direction of fire travel.	☐
The PCC will immediately notify the Division Manager and appropriate jurisdictional authority.	☐
Unless specifically trained to fight a wild/brush fire, make no attempts at fire suppression. Relocate to a safe zone where the status of the fire can be monitored and reported.	☐
On PAALP Pipeline or Facility	
Notify the PCC.	☐
The PCC will notify the Division Manager.	☐
Look for injured or trapped people to the degree you feel is reasonable without putting your well being in danger. (Rescues, when possible, should be left to trained professionals; however, any rescue attempt is left to the discretion of the person who is faced with the situation).	☐

Cut off the flow of fuel to the fire if the fire officials on the scene are in agreement. Do not open or close valves or actuate other devices unless you have been trained and are aware of the consequences of that action.	☐
Assess the danger to surrounding areas if the fire continues.	☐
Evacuate or isolate those areas to the extent necessary.	☐
Contain the spilled liquid, if possible, to prevent further spread of the fire.	☐
Work with fire officials or other agencies by providing them with your knowledge of the facility and oil. Allow them to fight the fire as they are trained to do.	☐
Once the flow of fuel is cut off, the fire should burn itself out. This is normally the way petroleum fires are handled. If it is necessary to extinguish the fire before the fuel is expended, it is CRITICAL that all hot spots or other potential sources of ignition are eliminated.	☐
Occasionally it may be wise to continue to operate or flow through a portion of a system that is on fire or very near to a fire. The reason for this is to cool the piping with the hope of preventing damage to it which may add to the existing fire. If this is done, pressure should be lowered to minimal levels while retaining a flowing liquid and preventing vaporization in the line. The nearest manually operated block valves should be manned, if necessary, for quick closure.	☐

2.12 VAPOR CLOUD

VAPOR CLOUD CHECKLIST	
TASK	
The person who discovers the vapor cloud will sound the alarm and notify the supervisor on duty and vacate the area.	☐
Remember: the only proper action in the presence of a vapor cloud is to get away from it. Do not shut off electrical equipment.	☐
All personnel will report to the evacuation muster point for roll call and further instructions.	☐
After all personnel have been accounted for, the Facility Management, the Facility Supervisor or a Facility Operator will initiate the following actions as deemed necessary: • Shut down pipeline. • Evacuation of adjacent property. • Only the fire department will be permitted to enter the Facility.	☐
Contact the appropriate agencies and potentially affected neighbors (refer to **FIGURE 3-4**).	☐

3.0 NOTIFICATIONS

FIGURE 3-1 - SITUATION REPORT (SPILL EVENT) INFORMATION COLLECTION WORKSHEET

Today's Date & Time:		
Name of Person Calling/ Reporting:	Caller / Reporter:	
	Information Taken by:	
Date of Spill or Event:		
Time of Spill or Event:		
Name of Pipeline System or Operator Involved:		
Weather Conditions at scene: (include forecast and wind directions if possible)		
Landowner: (identity/contact)?		
Legal Description:		
Location:		
Latitude:		
Longitude:		
County:		
Driving Instructions:		
Cause of Spill / Release:		
Type of Crude / Product Released:		
Amount of Spill / Release:	Barrels:	Gallons:
Current Response Status:		
Has Spill been Contained?		
Amount Recovered:	Barrels:	Gallons
Has Product Impacted Navigable Waters (Waters of the State)?	Name of Lake, Stream, River, or Waterway:	
Local, State, or Federal Agencies Contacted?		
Name / Position / Agency:		
Name / Position / Agency:		
Name / Position / Agency:		
Name / Position / Agency:		
Name / Position / Agency:		
Name / Position / Agency:		

FIGURE 3-2 - EPA SPILL REPORT FORM

INVOLVED PARTIES			
Reporting Party		Suspected Responsible Party	
Name:		Name:	

Phone:	(Day)	Phone:	(Day)
	(Evening)		(Evening)
Position:		Company:	
Company:		Organizational Type: ☐ Private Citizen ☐ Private Enterprise ☐ Public Utility ☐ Local Government ☐ State Government ☐ Federal Government	
Address:			
Person Discovering Incident			
Name:			
Company/Organization:			
City: State: Zip:			
Were materials released? ☐ Yes ☐ No		Calling for Responsible Party ☐ Yes ☐ No	

INCIDENT DESCRIPTION

Date:	Time: ☐ AM ☐ PM	Weather:	
Incident Address/Location:		Latitude:	_____ degrees _____ min _____ sec N
		Longitude:	_____ degrees _____ min _____ sec W
Mile Post/River Marker:			
City/County:		Distance from City:	
State:		Direction from City:	
Source and Cause of Incident:			
Storage Tank Type: ☐ Above Ground ☐ Below Ground ☐ Unknown			
Tank Capacity:		Facility Capacity:	

MATERIAL INFORMATION

CHRIS Code	Product Released	Released Quantity (Include units of measure)	Quantity in Water (Include units of measure)

*** INITIAL NOTIFICATION SHOULD NOT BE DELAYED PENDING COLLECTION OF ALL INFORMATION**

FIGURE 3-2 - EPA SPILL REPORT FORM, CONTINUED

INITIAL IMPACT

Number of Injuries:	Number of Deaths:

Were there Evacuations? ☐ Yes ☐ No	Number Evacuated:
Was there any Damage? ☐ Yes ☐ No	
Damage in dollars (estimate):	
Is the Spill Contained within the boundaries of the facility? ☐ Yes ☐ No	
Direction of Flow:	

RESPONSE ACTION(S)

Action(s) Taken to Correct, Control or Mitigate Incident:

ADDITIONAL INFORMATION

Any information about the incident not recorded elsewhere in the report (e.g., duration of spill, treatment or disposal measures).

COMPLETED NOTIFICATIONS

Report	Phone Number	Date	Case Number	Time	Name	Title
NRC ☐	(800) 424-8802*					

*** INITIAL NOTIFICATION SHOULD NOT BE DELAYED PENDING COLLECTION OF ALL INFORMATION**

FIGURE 3-3 - INTERNAL NOTIFICATIONS AND TELEPHONE NUMBERS

*24-Hour Number

FACILITY RESPONSE TEAM		
NAME/TITLE	**PHONE NUMBER**	**RESPONSE TIME (hours)**
Jeff Carlton Terminal Manager Deputy Incident Commander, Operations Section	(925) 372-5219 (Office) (b) (6) [redacted] (925) 765-3275 *(Mobile)	1

Qualified Individual		
Mike Rounds District Manager Incident Commander, Deputy Incident Commander **Qualified Individual**	(925) 372-5212 (Office) (b) (6) [redacted] (925) 890-4879 *(Mobile)	1
Dennis Webb Lead Operator Operations Section **Qualified Individual**	(925) 228-3227 (Office) (b) (6) [redacted] (925) 766-5048 *(Mobile)	1
Walter Eckhoff Terminal Manager Deputy Incident Commander, Operations Section **Qualified Individual**	(510) 232-7447 (Office) (b) (6) [redacted] (925) 348-1309 *(Mobile)	1

Refer to **FIGURE A.2-3** in the Emergency Response Plan for personnel training records

FIGURE 3-3 - INTERNAL NOTIFICATIONS AND TELEPHONE NUMBERS, CONTINUED

*24-Hour Number

EMERGENCY RESPONSE PERSONNEL AND BUSINESS UNIT NOTIFICATIONS						
NAME/TITLE	**PHONE NUMBER**	**RESPONSE TIME (hours)**	**ICS POSITION**	**RESPONSE TRAINING TYPE[1]**		
				1	**2**	**3**
Tom McLane Sr. E&R/C Director	713-646-4109 (Office) 832-584-3314 *(Mobile)	48	Corporate Support			
Ngiabi Gicuhi Western Division Dir., Environmental & R/C	562-728-2358 (Office) (b) (6) [redacted] (Home) 562-216-0120 *(Mobile)	8	Planning Section, Compliance			
Kathy Randall Operations Supervisor	805-922-9897 (Office) (b) (6) [redacted] (Home) 805-657-6764 *(Mobile)	8	Operations Section, Staging			
	(661) 336-7908		Incident			

Darren Palmer District Manager **Qualified Individual**	(Office) (b) (6) [redacted] (Home) (661) 978-4915 *(Mobile)	8	Commander, Deputy Incident Commander, Oil Spill Group Supervisor	x	x	x
Craig Johnson Sr. Division Safety Manager	661-336-7912 (Office) (b) (6) [redacted] (Home) 661-203-7096 *(Mobile)	8	Safety Officer			
Bob Osborn Maintenance Planner	661-336-7907 (Office) (b) (6) [redacted] (Home) 661-979-7003 *(Mobile)	8	Logistics Section			

EMERGENCY RESPONSE TRAINING TYPE	
TYPE	**DESCRIPTION**
1	29 CFR 1910.120 HAZWOPER
2	OPA (Training Reference for Oil Spill Response) All Facility Personnel, SMT, QI Components
3	Qualified Individual/Incident Command Training

Note: Refer to **APPENDIX A** in the Emergency Response Plan for training dates.

FIGURE 3-3 - INTERNAL NOTIFICATIONS AND TELEPHONE NUMBERS, CONTINUED

*24-Hour Number

EMERGENCY RESPONSE PERSONNEL AND BUSINESS UNIT NOTIFICATIONS						
NAME/TITLE	**PHONE NUMBER**	**RESPONSE TIME (hours)**	**ICS POSITION**	**RESPONSE TRAINING TYPE[1]**		
				1	**2**	**3**
Lanny Kippes District Operations Manager	562-728-2342 (Office) (b) (6) [redacted] (Home) 562-221-4510 *(Mobile)	8	Incident Commander			
Richard Hartig Western Division	(562) 728-2023 (Office) (b) (6) [redacted]					

Assistant Operations Manager **Qualified Individual**	(Home) (562) 453-6926 *(Mobile)	8	Deputy Incident Commander			
Steve Caddell Western Division Operations Manager	562-728-2895 (Office) (b) (6) [redacted] (Home) 562-607-7991 *(Mobile)	8	Incident Commander			
John Rifilato Long Beach Terminal Manager	562-728-2346 (Office) (b) (6) [redacted] (Home) 562-216-3863 *(Mobile)	8	Operations Section Chief			
Andrew Hall Maintenance Supervisor	(562) 728-2365 (Office) (b) (6) [redacted] (Home) (562) 843-3544 *(Mobile)	8	Operations Section			
Steven Franks Operations Supervisor	(562) 728-2094 (Office) (b) (6) [redacted] (Home) (562) 355-8685, (562) 355-2094 *(Mobile)	8	Deputy Operations Section Chief			

EMERGENCY RESPONSE TRAINING TYPE	
TYPE	**DESCRIPTION**
1	29 CFR 1910.120 HAZWOPER
2	OPA (Training Reference for Oil Spill Response) All Facility Personnel, SMT, QI Components
3	Qualified Individual/Incident Command Training

Note: Refer to **APPENDIX A** in the Emergency Response Plan for training dates.

FIGURE 3-3 - INTERNAL NOTIFICATIONS AND TELEPHONE NUMBERS, CONTINUED

*24-Hour Number

EMERGENCY RESPONSE PERSONNEL AND BUSINESS UNIT NOTIFICATIONS				
				RESPONSE

NAME/TITLE	PHONE NUMBER	RESPONSE TIME (hours)	ICS POSITION	TRAINING TYPE[1]		
				1	2	3
Brendan Geraghty Consultant - O'Brien's Group	(714) 577-2115 (Office) (562) 217-0791 *(Mobile)	8	Planning Section			
Jeremy Wiggins E&R/C Specialist	(661) 336-7913 (Office) (661) 204-1065 *(Mobile)	8	Wildlife/Environmental Branch			
Guy Castro Project Engineer	(562) 728-2339 (Office) (b) (6) [redacted] (Home) (562) 756-2647 *(Mobile)	8	Incident Commander, Logistics Section			
John-Paul Nepote Sr. Env., R/C, and Safety Specialist	(925) 372-5220 (Office) (b) (6) [redacted] (Home) (925) 765-3177 *(Mobile)	1	Planning Section, Safety Officer			
Lloyden Wall Operations Supervisor, Long Beach	(562) 728-2800 (Office) (562) 254-5645 *(Mobile)	8	Operations Section			
Troy E. Valenzuela Vice President, EH&S	(713) 646-4614, (713) 739-6724 (Office) (b) (6) [redacted] (Home) (713) 444-6984 *(Mobile)	48	Corporate Support Personnel, Information Officer			

EMERGENCY RESPONSE TRAINING TYPE	
TYPE	**DESCRIPTION**
1	29 CFR 1910.120 HAZWOPER
2	OPA (Training Reference for Oil Spill Response) All Facility Personnel, SMT, QI Components
3	Qualified Individual/Incident Command Training

Note: Refer to **APPENDIX A** in the Emergency Response Plan for training dates.

FIGURE 3-3 - INTERNAL NOTIFICATIONS AND TELEPHONE NUMBERS, CONTINUED

*24-Hour Number

EMERGENCY RESPONSE PERSONNEL AND BUSINESS UNIT NOTIFICATIONS						
NAME/TITLE	PHONE NUMBER	RESPONSE TIME (hours)	ICS POSITION	RESPONSE TRAINING TYPE[1]		
				1	2	3
John Cook Lead Operator **Qualified Individual**	(510) 232-7447 (Office) (b) (6) [redacted] (Home) (510) 719-8134 *(Mobile)	1	Operations Section			
Walter Eckhoff Terminal Manager **Qualified Individual**	(510) 232-7447 (Office) (b) (6) [redacted] (Home) (925) 348-1309 *(Mobile)	1	Deputy Incident Commander, Operations Section			
Christine McIntosh Customer Relations	(925) 228-3227 (Office) (b) (6) [redacted] (Home) (925) 766-9750 *(Mobile)	1	Liaison Officer			
Steve Varnardo Dir. Terminals, Marketing	(713) 993-5141 (Office) (713) 898-4878 *(Mobile)	48	Customer Relations			
Salvador Rodriguez Jr. Maintenance Manager	(925) 228-3227 (Office) (b) (6) [redacted] (Home) (925) 349-8269 *(Mobile)	1	Operations Section			
Bill Senner E&R/C Specialist	562-728-2056 (Office) 562-221-8211 *(Mobile)	8	Planning Section			
EMERGENCY RESPONSE TRAINING TYPE						

TYPE	DESCRIPTION
1	29 CFR 1910.120 HAZWOPER
2	OPA (Training Reference for Oil Spill Response) All Facility Personnel, SMT, QI Components
3	Qualified Individual/Incident Command Training

Note: Refer to **APPENDIX A** in the Emergency Response Plan for training dates.

FIGURE 3-3 - INTERNAL NOTIFICATIONS AND TELEPHONE NUMBERS, CONTINUED

*24-Hour Number

EMERGENCY RESPONSE CONTRACTORS						
NAME/TITLE	PHONE NUMBER	RESPONSE TIME (hours)	RESPONSIBILITY DURING RESPONSE ACTION	RESPONSE TRAINING TYPE[1]		
				1	2	3
Worley Catastrophe Response	(888) 887-8070 (office) (504) 908-4537 (mobile) (b) (6) [redacted] (home) (866) 753-3619 (claims)	0				
So. Cal Ship Services	(707) 745-8411	1	Pre-booming, initial response/recovery on water.			
O'Briens Response Management	(985) 781-0804 (714) 577-2115 (562) 217-0791 (Brendon Geraghty Mobile)	2				
NRC Environmental Service	(800) 899-4672 (510) 432-1304 (510) 385-3253 (cell)	2	Response/recovery on water or land, industrial cleaning, and sorbent supply; 350 personnel including supervisors			

EMERGENCY RESPONSE TRAINING TYPE	
TYPE	**DESCRIPTION**
1	29 CFR 1910.120 HAZWOPER
2	OPA (Training Reference for Oil Spill Response) All Facility Personnel, SMT, QI Components
3	Qualified Individual/Incident Command Training

Note: Refer to **APPENDIX A** in the Emergency Response Plan for training dates.

FIGURE 3-4 - EXTERNAL NOTIFICATIONS AND TELEPHONE NUMBERS

*24-Hour Number

AFFILIATION	PHONE NUMBER	TIME CONTACTED
Initial		
Contra Costa Health Services Note: Call will roll over to Sheriff Dept. after hours	(925) 335-3232	
National Response Center http://www.nrc.uscg.mil/nrchp.html	(800) 424-8802* (202) 267-2675* (202) 267-1322 (Fax)	
Recommended		
Federal Agencies		
EPA Region IX	(800) 300-2193 (800) 241-1754 (415) 947-8000	
Federal Bureau of Investigation	(415) 553-7400	
National Oceanic and Atmospheric Admin. (NOAA) Scientific Support Coordinator (SSC)	(510) 437-5844 (800) SKY-PAGE	
U.S. Fish and Wildlife Service (USFWS)	(916) 414-6600	
USCG Sector San Francisco Command Center	(415) 399-3545 (415) 399-3521 (fax)	
State Agencies		
CA Department of Fish and Game - OSPR - Dispatch Oil Spill Prevention & Response	(916) 358-1300	
Cal-EPA, Dept. of Toxic Substances Control (contact to determine waste permit needs)	(510) 540-3739 (916) 255-2002	

California Emergency Management Agency	(800) 852-7550 (916) 262-1621	

FIGURE 3-4 - EXTERNAL NOTIFICATIONS AND TELEPHONE NUMBERS

*24-Hour Number

AFFILIATION	PHONE NUMBER	TIME CONTACTED
Recommended, Continued		
State Agencies		
California Highway Patrol	(510) 450-3821	
California Office of Historic Preservation CA Dept. Parks and Recreation	(916) 445-7000 (916) 445-7053 (fax)	
California Oiled Wildlife Care Network (OWCN)	(877) 823-6926	
California State Fire Marshal Office Pipeline Safety	(916) 445-8477 (8am-5pm M-F) (562) 497-9100 (So. Cal.)	
State Lands Commission Northern California Division	(510) 741-4950 (562) 590-5201*	
Local Agencies		
Bay Area Air Quality Management District	(415) 749-4979 (800) 334-6367	
Bay Conservation and Development Comm. - Oil Spill Program (BCDC) (request for emergency permits)	(415) 352-3600	
Contra Costa County Office of Emergency Services	(925) 646-4461*	
Regional Water Quality Control Board (San Francisco Bay)	(510) 622-2300	
Fire Departments		
Central Contra Costa Fire Protection District	911 (925) 941-3300	

FIGURE 3-4 - EXTERNAL NOTIFICATIONS AND TELEPHONE NUMBERS

*24-Hour Number

AFFILIATION	PHONE NUMBER	TIME CONTACTED
Recommended, Continued		
Emergency Medical Services		
Paramedics	911 (510) 620-6901	
Hospitals		
Advanced Industrial Care	(925) 680-0230	
Brookside (Burn Center), San Pablo	(925) 235-7006	
Childrens Hospital Oakland	(510) 428-3000	
John Muir Medical Center	911 (925) 682-8200	
Law Enforcement		
Contra Costa County Sheriff	(925) 646-2402	
Martinez Police Department	911 (925) 372-3440	
USCG CLASSIFIED OSRO		
NRC Environmental Service Richmond, CA	(800) 899-4672*	
NRC Environmental Service San Francisco, CA	(800) 899-4672*	
NRC Environmental Service Pittsburgh, CA	(800) 899-4672*	

FIGURE 3-4 - EXTERNAL NOTIFICATIONS AND TELEPHONE NUMBERS

*24-Hour Number

AFFILIATION	PHONE NUMBER	TIME CONTACTED
Recommended, Continued		
USCG CLASSIFIED OSRO		
NRC Environmental Service Eureka, CA	(800) 899-4672*	
NRC Environmental Service Sacramento, CA	(800) 899-4672*	
NRC Environmental Service Stockton, CA	(800) 899-4672*	

NRC Environmental Service Richmond, CA	(800) 899-4672*	
NRC Environmental Service Carson, CA	(800) 899-4672*	
NRC Environmental Service Long Beach, CA	(800) 899-4672* (562) 432-1304* (562) 432-1826* (fax)	
NRC Environmental Service Pt. Hueneme, CA	(800) 899-4672*	
NRC Environmental Service Selby, CA	(800) 899-4672*	
NRC Environmental Service Martinez, CA	(800) 899-4672*	
NRC Environmental Service Alameda, CA	(800) 899-4672 (510) 432-1304 (510) 385-3253 (cell)	

FIGURE 3-4 - EXTERNAL NOTIFICATIONS AND TELEPHONE NUMBERS

*24-Hour Number

AFFILIATION	PHONE NUMBER	TIME CONTACTED
Recommended, Continued		
USCG CLASSIFIED OSRO		
So. Cal Ship Services Benicia, CA	(707) 745-8411	
NON USCG CLASSIFIED OSRO		
C-K Associates, LLC	225 755-1000 (office) 225 751-2010 (fax) 225 252-6526 (cell)	
Martinez Terminal	(925) 228-3227 (925) 228-5617 (fax)	
O'Briens Response Management	(985) 781-0804 (714) 577-2115 (562) 217-0791 (Brendon Geraghty Mobile)	
Robert J. Myers and Associates	(281) 635-5217 (281) 635-5214	
Worley Catastrophe Response	(888) 887-8070 (office)	

	(504) 908-4537 (mobile) (b) (6) [redacted] (home) (866) 753-3619 (claims)	
Additional Services		
Petrochemical Mutual Aid Organization (PMAO)	(510) 242-5555	
Contract Spill Management Technical Advisors		
Centers for Toxicology and Environmental Health, LLC	(866) 869-2834* Emergency Response	
Neighboring Facilities		
Conoco Phillips Rodeo Refinery	(510) 799-4411	
Crockett Marina	(510) 787-1049	

FIGURE 3-4 - EXTERNAL NOTIFICATIONS AND TELEPHONE NUMBERS

*24-Hour Number

AFFILIATION	PHONE NUMBER	TIME CONTACTED
Recommended, Continued		
Neighboring Facilities		
East Bay Regional Parks	(510) 881-1121	
Glen Cove Marina	(707) 552-3236	
Martinez Marina	(925) 313-0942	
MOTCO Naval Weapons Station	(925) 260-6584	
Rhodia, Inc.	(925) 228-5530	
Rodeo Sanitary	(510) 799-2970 (510) 799-5403	
Shell Martinez Refinery	(925) 313-3000	
Tesoro (Avon)	(925) 228-1220	
Valero Benicia Refinery	(707) 745-7011	
Radio Stations		

KALW 91.7 FM San Francisco	(415) 841-4121	

FIGURE 3-4 - EXTERNAL NOTIFICATIONS AND TELEPHONE NUMBERS

*24-Hour Number

AFFILIATION	PHONE NUMBER	TIME CONTACTED
Recommended, Continued		
Radio Stations		
KDFC 102.1 FM San Francisco	(415) 546-8710	
KNBR 680 AM San Francisco	(415) 995-6800	
Service Providers		
BlueWater & Assoc. Terry Joslin	(415) 492-2882 (415) 990-2583 (Mobile)	
Native American Heritage Commission	(916) 653-4082 (916) 657-5390 (fax)	
Ponder Environmental Services	(707) 748-7775	
Television Stations		
KBHK 44 UPN San Francisco	(415) 765-8144	
KGO 7 ABC San Francisco	(415) 954-7777	
KSBW 8 NBC Salinas	(831) 758-8888	
Waste Management		
Clean Harbors, Buttonwillow, CA	(661) 762-6200 (661) 762-7681 (fax)	
Clean Harbors, Los Angeles, CA	(323) 277-2500 (323) 277-2523 (fax)	

FIGURE 3-4 - EXTERNAL NOTIFICATIONS AND TELEPHONE NUMBERS

*24-Hour Number

AFFILIATION	PHONE NUMBER	TIME CONTACTED
Recommended, Continued		
Waste Management		
Clean Harbors, Phoenix, AZ	(602) 462-2300 (602) 462-2391 (fax)	
Demenno Kerdoon	(310) 537-7100 (310) 639-2946 (fax)	
Evergreen Environmental, Carson, CA	(800) 972-5284 (310) 769-0157 (fax)	
TPS Technologies Soil Recycling, Adelanto, CA	(760) 246-8001 (760) 246-8004 (fax)	
U.S. Filter, Parker, AZ	(928) 669-5758 (928) 669-5775 (fax)	
Water Intakes		
Contra Costa Water District	(925) 688-8095 (925) 688-8374	
Weather		
National Weather Service (NWS)	(510) 936-1212 (415) 364-6854 (408) 656-1717 (831) 656-1725 (SF Bay/Monterey)	

4.0 RESOURCES

FIGURE 4-1 - EMERGENCY MANAGEMENT TEAM (EMT) ORGANIZATION CHART*

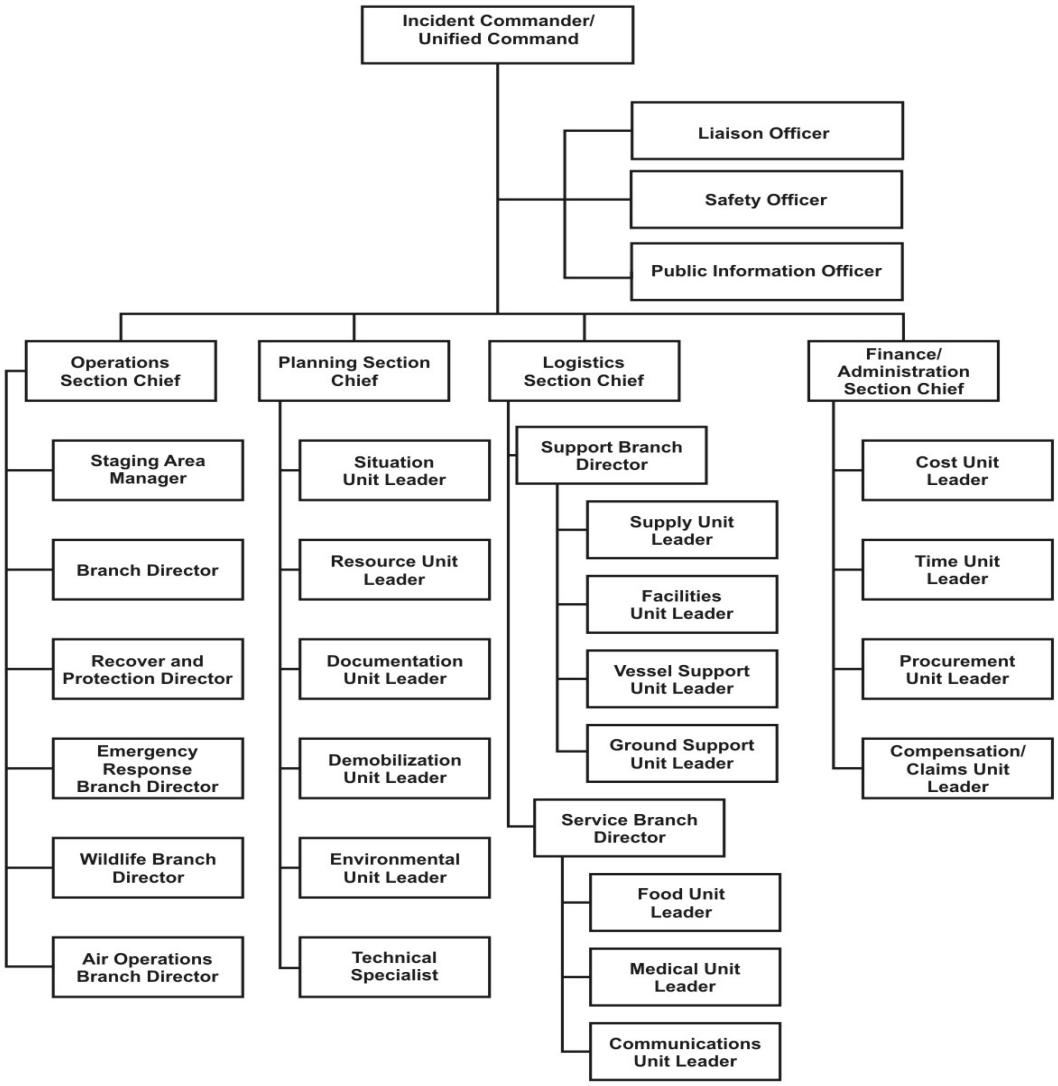


FIGURE 4-2 - FACILITY EQUIPMENT*

BOOM					
TYPE/MODEL/YEAR	QUANTITY	SIZE	CONTAINMENT AREA (sq ft)	STORAGE LOCATION	
Containment Boom	1,400 feet	20 in.		Dock	
Absorbent pads / booms	2 Boxes	15"x19"	4,750	Emergency Response Trailers	
SORBENTS					
TYPE/YEAR	QUANTITY	ABSORPTION CAPACITY (gal)	STORAGE LOCATION	OPERATIONAL STATUS	
Sorbent Pads	5		Emergency Response Trailers	Operational	

Sorbent Sweep	3	100 ft. pak	Emergency Response Trailers	Operational	
HAND TOOLS					
TYPE/YEAR	QUANTITY	STORAGE LOCATION	OPERATIONAL STATUS		
Rakes	5	Emergency Response Trailers	Operational		
Shovels	5	Emergency Response Trailers	Operational		
Pitchforks	5	Emergency Response Trailers	Operational		
Brooms	5	Emergency Response Trailers	Operational		
Wheel barrows	2	Emergency Response Trailers	Operational		
FIRE FIGHTING AND PERSONNEL PROTECTIVE EQUIPMENT					
TYPE/YEAR	QUANTITY	STORAGE LOCATION	OPERATIONAL STATUS		
150 lb Capacity Extinguisher	1	Next to the Control Room	Operational		
50 lb Capacity Extinguishers	2	Next to the Control Room	Operational		
One Portable ANSUL 1501b. Wheeled Extinguisher For Types B&C Fires	1	Next to the Technician Shelter	Operational		
Portable Sentry 20 Lb. Purple -K- Tri-Class Extinguishers	3	On the Wharf, one at each end of the Main Platform mounted on the Inside Handrail and one inside the Wharf Fire Pump House	Operational		
Permanently Mounted Fire Monitors	4	Monitors around the Loading Arm Area are pointed at locations high	Operational		

		on the Loading Arm Supports			

***Note:** Response equipment is tested and deployed as described in **APPENDIX A** of the Emergency Response Plan.

FIGURE 4-2 - FACILITY EQUIPMENT*

OTHER					
TYPE/YEAR	QUANTITY	STORAGE LOCATION	OPERATIONAL STATUS		
Stretcher	1	Terminal Shelter	Operational		
2000 GPM Diesel Engine-Driven Pump.	1	Firewater Pump House on the Trestle, 300 feet from the Wharf	Operational		
Oil Snare	3	Emergency Response Trailers	Operational		
Open Top Drums	2	Emergency Response Trailers	Operational		
Flashlights	5	Emergency Response Trailers	Operational		
Polypropylene Rope (100 ft)	1	Emergency Response Trailers	Operational		
Rubber Gloves (12/pak)	1	Emergency Response Trailers	Operational		
Large Trash Bags	1 Box	Emergency Response Trailers	Operational		
Visqueen (10 ft x 20 ft)	2	Emergency Response Trailers	Operational		
Rain suits sets	6	Emergency Response Trailers	Operational		
Rubber Boots	5	Emergency Response Trailers	Operational		

Safety Glasses	5	Emergency Response Trailers	Operational		

***Note:** Response equipment is tested and deployed as described in **APPENDIX A** of the Emergency Response Plan.

FIGURE 4-3 - REGIONAL COMPANY AND RESPONSE CONTRACTOR'S EQUIPMENT LIST / RESPONSE TIME

*USCG Classified OSRO for facility

COMPANY/CONTRACTOR	EQUIPMENT	RESPONSE TIME
Martinez Terminal Martinez, CA		0 hours
Worley Catastrophe Response Hammond, LA	None - Claims Company	0 hours
*NRC Environmental Service Selby, CA	Full Response Capabilities per U.S. Coast Guard Classification, including aerial tracking and dispersants	1 hours
*NRC Environmental Service Martinez, CA	Full Response Capabilities per U.S. Coast Guard Classification, including aerial tracking and dispersants	1 hours
*NRC Environmental Service Richmond, CA	Full Response Capabilities per U.S. Coast Guard Classification, including aerial tracking and dispersants	1 hours
*NRC Environmental Service San Francisco, CA	Full Response Capabilities per U.S. Coast Guard Classification, including aerial tracking and dispersants	1 hours
*NRC Environmental Service Pittsburgh, CA	Full Response Capabilities per U.S. Coast Guard Classification, including aerial tracking and dispersants	1 hours
*So. Cal Ship Services Benicia, CA		1 hours
*NRC Environmental Service Sacramento, CA	Full Response Capabilities per U.S. Coast Guard Classification, including aerial tracking and dispersants	1 hours
*NRC Environmental Service Richmond, CA	Full Response Capabilities per U.S. Coast Guard Classification, including aerial tracking and dispersants Full	1 hours

	Response Capability	
O'Briens Response Management Brea, CA	Spill management company - no response equipment	2 hours
*NRC Environmental Service Alameda, CA	Full Response Capability	2 hours
*NRC Environmental Service Stockton, CA	Full Response Capabilities per U.S. Coast Guard Classification, including aerial tracking and dispersants	2.2 hours
*NRC Environmental Service Eureka, CA	Full Response Capabilities per U.S. Coast Guard Classification, including aerial tracking and dispersants	7.8 hours
*NRC Environmental Service Pt. Hueneme, CA	Full Response Capabilities per U.S. Coast Guard Classification, including aerial tracking and dispersants	11 hours
*NRC Environmental Service Carson, CA	Full Response Capabilities per U.S. Coast Guard Classification, including aerial tracking and dispersants	11.2 hours
*NRC Environmental Service Long Beach, CA	Full Response Capabilities per U.S. Coast Guard Classification, including aerial tracking and dispersants	11.4 hours
C-K Associates, LLC Baton Rouge, LA		12 hours
Robert J. Myers and Associates Tomball, TX	None	12 hours

Note: Response equipment is tested and deployed as described in **APPENDIX A** of the Emergency Response Plan.

FIGURE 4-4 - EPA REQUIRED RESPONSE EQUIPMENT TESTING AND DEPLOYMENT DRILL LOG

(Other versions of this form may be used)

Item:	Date of Last Update:
ACTIVITY	**INFORMATION**
Last inspection or response equipment test date	
Inspection frequency	
Last deployment drill date	
Deployment frequency	

OSRO Certification* (if applicable)	

Item:	Date of Last Update:
ACTIVITY	**INFORMATION**
Last inspection or response equipment test date	
Inspection frequency	
Last deployment drill date	
Deployment frequency	
OSRO Certification* (if applicable)	

Item:	Date of Last Update:
ACTIVITY	**INFORMATION**
Last inspection or response equipment test date	
Inspection frequency	
Last deployment drill date	
Deployment frequency	
OSRO Certification* (if applicable)	

Item:	Date of Last Update:
ACTIVITY	**INFORMATION**
Last inspection or response equipment test date	
Inspection frequency	
Last deployment drill date	
Deployment frequency	
OSRO Certification* (if applicable)	

***Note:** The Company will rely on the contracted OSRO's to maintain their equipment per their USCG Certification requirements.

5.0 PLOT PLANS / TANK TABLE

FIGURE 5-1 - DRAINAGE DIAGRAM

Click here for Drainage Diagram

FIGURE 5-2 - EVACUATION DIAGRAM

Click here for Evacuation Diagram

FIGURE 5-3 - TANK TABLE

Container/ Source	Major Type of Failure	Total Capacity (gal)	Secondary Containment Volume Type (gal)	Tank Type	Year Constructed/ Installed	Quantity Stored (gal)	Direction of Flow/Rate (See Plot Plan)	Product Stored
ABOVEGROUND CONTAINERS - (b) (7)(F) [redacted]								
8101	Overfill / Rupture / Leakage	(b) (7)(F) [redacted]		CR	1973	(b) (7)(F) [redacted]	North / Instantaneous	Refined Product
8102	Overfill / Rupture / Leakage			CR	1973		North / Instantaneous	Refined Product
5003	Overfill / Rupture / Leakage			CR	1973		North / Instantaneous	Refined Product
5004	Overfill / Rupture / Leakage			CR	1973		North / Instantaneous	Refined Product
5005	Overfill / Rupture / Leakage			CR	1973		North / Instantaneous	Refined Product
5006	Overfill / Rupture / Leakage			CR	1973		North / Instantaneous	Refined Product
5007	Overfill / Rupture / Leakage			CR	1973		North / Instantaneous	Refined Product
2008	Overfill /			CR	1973		North / Instantaneous	Refined Product

	Rupture / Leakage	(b) (7)(F) [redacted]			(b) (7)(F) [redacted]		
1109	Overfill / Rupture / Leakage	[redacted]	CR	1973	[redacted]	North / Instantaneous	Refined Product
310	Overfill / Rupture / Leakage	[redacted]	CR	1973	[redacted]	North / Instantaneous	Slop Tank
11	Overfill / Rupture / Leakage	[redacted]	CR	1973	[redacted]	North / Instantaneous	Petroleum Products
12	Overfill / Rupture / Leakage	[redacted]	CR	1973	[redacted]	North / Instantaneous	Petroleum Products
500-13	Overfill / Rupture / Leakage	[redacted]	EFR	1974	[redacted]	East / Instantaneous	Dark Oils
500-14	Overfill / Rupture / Leakage	[redacted]	EFR	1974	[redacted]	East / Instantaneous	Dark Oils
500-15	Overfill / Rupture / Leakage	[redacted]	EFR	1974	[redacted]	East / Instantaneous	Dark Oils

Containment Type: 1=Earthen Berm and Floor, 2=Concrete Berm and Floor, 3=Earthen Berm and Concrete Floor, 4=Metal Berm and Floor, 5=Portable Containment or Inside Building, 6=Double Walled, 7=Coated Asphalt Materials, * Not in Containment Area, ** Curbing and containment system

Tank / Roof Type: C=Cylinder, CR=Cone Roof, DW=Double Wall, EFR=External Floating Roof, FG=Fiberglass, GD=Geodesic Dome, H=Horizontal, HSM=Horizontal Skid Mounted, IF=Internal Floater, OOS=Out of Service, OT=Open Top, R=Riveted, S=Steel, SM=Skid Mounted, V=Vertical, W=Welded

FIGURE 5-3 - TANK TABLE , CONTINUED

Container/	Major	Total	Secondary Containment	Tank	Year	Quantity	Direction of Flow/Rate	Product

Source	Type of Failure	Capacity (gal)	Volume Type (gal)	Type	Constructed/ Installed	Stored (gal)	(See Plot Plan)	Stored
ABOVEGROUND CONTAINERS - (b) (7)(F) [redacted]								
500-16	Overfill / Rupture / Leakage	(b) (7)(F) [redacted]		EFR	1974	(b) (7)(F) [redacted]	East / nstantaneous	Dark Oils
17	Overfill / Rupture / Leakage	[redacted]		CR	1974	[redacted]	East / nstantaneous	N/A
34	Overfill / Rupture / Leakage	[redacted]		CR	1973	[redacted]	East / nstantaneous	Water
35	Overfill / Rupture / Leakage	[redacted]		CR	1973	[redacted]	East / nstantaneous	Water
170-39	Overfill / Rupture / Leakage	[redacted]		CR	1980	[redacted]	East / nstantaneous	Light Oils
170-40	Overfill / Rupture / Leakage	[redacted]		CR	1980	[redacted]	East / nstantaneous	Light Oils
100-38	Overfill / Rupture / Leakage	[redacted]		IFR	2003	[redacted]	East / nstantaneous	Light Oils
100-45	Overfill / Rupture / Leakage	[redacted]		IFR	2003	[redacted]	East / nstantaneous	Light Oils
100-44	Overfill / Rupture / Leakage	[redacted]		IFR	2003	[redacted]	East / nstantaneous	Light Oils
200-43	Overfill / Rupture	[redacted]		IFR	2006	[redacted]	East / nstantaneous	Light Oils

	/ Leakage	(b) (7)(F) [redacted]			(b) (7)(F) [redacted]		
200-42	Overfill / Rupture / Leakage	[redacted]	IFR	2006	[redacted]	East / nstantaneous	Light Oils
150-52	Overfill / Rupture / Leakage	[redacted]	IFR	2007	[redacted]	East / nstantaneous	Light Oils
150-53	Overfill / Rupture / Leakage	[redacted]	IFR	2007	[redacted]	East / nstantaneous	Light Oils
150-54	Overfill / Rupture / Leakage	[redacted]	IFR	2007	[redacted]	East / nstantaneous	Light Oils
150-55	Overfill / Rupture / Leakage	[redacted]	IFR	2007	[redacted]	East / nstantaneous	Light Oils

Containment Type: 1=Earthen Berm and Floor, 2=Concrete Berm and Floor, 3=Earthen Berm and Concrete Floor, 4=Metal Berm and Floor, 5=Portable Containment or Inside Building, 6=Double Walled, 7=Coated Asphalt Materials, * Not in Containment Area, ** Curbing and containment system

Tank / Roof Type: C=Cylinder, CR=Cone Roof, DW=Double Wall, EFR=External Floating Roof, FG=Fiberglass, GD=Geodesic Dome, H=Horizontal, HSM=Horizontal Skid Mounted, IF=Internal Floater, OOS=Out of Service, OT=Open Top, R=Riveted, S=Steel, SM=Skid Mounted, V=Vertical, W=Welded

FIGURE 5-3 - TANK TABLE , CONTINUED

Container/ Source	Major Type of Failure	Total Capacity (gal)	Secondary Containment Volume Type (gal)	Tank Type	Year Constructed/ Installed	Quantity Stored (gal)	Direction of Flow/Rate (See Plot Plan)	Product Stored
ABOVEGROUND CONTAINERS - (b) (7)(F) [redacted]								
150-41	Overfill / Rupture / Leakage	(b) (7)(F) [redacted]		IFR	2007	(b) (7)(F) [redacted]	East / Instantaneous	Light Oils
100-37	Overfill /	[redacted]		IFR	2007	[redacted]	East / Instantaneous	Light Oils

	Rupture / Leakage	(b) (7)(F) [redacted]			(b) (7)(F) [redacted]		
100-56	Overfill / Rupture / Leakage	[redacted]	IFR	2007	[redacted]	East / Instantaneous	Light Oils
100-57	Overfill / Rupture / Leakage	[redacted]	IFR	2007	[redacted]	East / Instantaneous	Light Oils
100-58	Overfill / Rupture / Leakage	[redacted]	IFR	2007	[redacted]	East / Instantaneous	Light Oils
150-51	Overfill / Rupture / Leakage	[redacted]	IFR	2007	[redacted]	East / Instantaneous	Light Oils
Facility Total:	(b) (7)(F) [redacted]						

Containment Type: 1=Earthen Berm and Floor, 2=Concrete Berm and Floor, 3=Earthen Berm and Concrete Floor, 4=Metal Berm and Floor, 5=Portable Containment or Inside Building, 6=Double Walled, 7=Coated Asphalt Materials, * Not in Containment Area, ** Curbing and containment system

Tank / Roof Type: C=Cylinder, CR=Cone Roof, DW=Double Wall, EFR=External Floating Roof, FG=Fiberglass, GD=Geodesic Dome, H=Horizontal, HSM=Horizontal Skid Mounted, IF=Internal Floater, OOS=Out of Service, OT=Open Top, R=Riveted, S=Steel, SM=Skid Mounted, V=Vertical, W=Welded

6.0 ENDANGERED AND THREATENED SPECIES BY STATE

ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Chub, bonytail entire	*Gila elegans*	Main stream of mid-sized to large rivers	E	California
Orcutt grass, California	*Orcuttia californica*	Vernal pools	E	California
Spineflower, Orcutt's	*Chorizanthe*	Open areas with sandy soils within low, southern	E	California

	orcuttiana	maritime chaparral communities		
Beetle, delta green ground	*Elaphrus viridis*	Vernal pools	T	California
Pussypaws, Mariposa	*Calyptridium pulchellum*	Sandy soils of decomposed granite, primarily in foothill oak woodlands	T	California
Abalone, White North America (West Coast from Point Conception, CA, U.S.A., to Punta Abreojos, Baja California, Mexico)	*Haliotis sorenseni*	Open low and high relief rock or boulder habitat that is interspersed with sand channels	E	California
Albatross, short-tailed	*Phoebastria (=Diomedea) albatrus*	Pelagic; often in regions of high productivity	E	California
Allocarya, Calistoga	*Plagiobothrys strictus*	Geyser- and hot spring-fed vernal pools and swales in meadows	E	California
Alopecurus, Sonoma	*Alopecurus aequalis var. sonomensis*	Moist soils in freshwater marshes in Sonoma and Marin counties	E	California
Ambrosia, San Diego	*Ambrosia pumila*	Coastal scrub, grasslands, open floodplains and low valley bottoms	E	California
Barberry, island	*Berberis pinnata ssp. insularis*	Rocky soils of cool, moist, north-facing slopes and canyons	E	California
Barberry, Nevin's	*Berberis nevinii*	Steep slopes with coarse soils and chaparral communities	E	California
Bedstraw, El Dorado	*Galium californicum ssp. sierrae*	Oak woodland areas with ponderosa pine and gray pine	E	California
Bedstraw, island	*Galium*	Sea cliffs, bluffs, and dry, rocky	E	California

	buxifolium	slopes in coastal sage scrub		
Beetle, Mount Hermon June	*Polyphylla barbata*	Sand parkland and other sandy areas within chaparral and ponderosa pine stands	E	California
Bird's beak, palmate-bracted	*Cordylanthus palmatus*	Alkaline soils of valley lowlands	E	California
Bird's-beak, Pennell's	*Cordylanthus tenuis ssp. capillaris*	Serpentine soil flats within chaparral	E	California
Bird's-beak, salt marsh	*Cordylanthus maritimus ssp. maritimus*	Coastal salt marshes	E	California

6.0 ENDANGERED AND THREATENED SPECIES BY STATE, CONTINUED

ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Bird's-beak, soft	*Cordylanthus mollis ssp. mollis*	Salt grass/pickleweed marshes at or near the limits of tidal action	E	California
Bladderpod, San Bernardino Mountains	*Lesquerella kingii ssp. bernardina*	Dry flats, yellow pine forest, east end of Bear Valley, San Bernardino Mts	E	California
Bluegrass, Napa	*Poa napensis*	Geyser- and hot spring-fed moist meadows	E	California
Bluegrass, San Bernardino	*Poa atropurpurea*	Edges of moist meadows	E	California
Broom, San Clemente Island	*Lotus dendroideus ssp. traskiae*	Shrublands and disturbed grasslands	E	California
Buckwheat, cushenbury	*Eriogonum ovalifolium var. vineum*	Limestone slopes, joshua tree woodland, Cushenbury Canyon, San Bernardino Mts	E	California
Buckwheat, Ione (incl. Irish Hill)	*Eriogonum apricum incl. var. prostratum*	Coarse, very acidic, nutrient-poor soils with cement-like, iron oxide crusts	E	California
Bush-mallow, San Clemente Island	*Malacothamnus clementinus*	Valley and foothill grasslands, and rocky canyon walls in coastal scrub	E	California

Bush-mallow, Santa Cruz Island	*Malacothamnus fasciculatus var. nesioticus*	Shrub	E	California
Butterfly, Behren's silverspot	*Speyeria zerene behrensii*	Coastal prairie	E	California
Butterfly, callippe silverspot	*Speyeria callippe callippe*	Native grassland and adjacent habitats	E	California
Butterfly, El Segundo blue	*Euphilotes battoides allyni*	Sand dune remnants	E	California
Butterfly, Lange's metalmark	*Apodemia mormo langei*	Coastal sand dunes	E	California
Butterfly, lotis blue	*Lycaeides argyrognomon lotis*	Coastal bogs	E	California
Butterfly, mission blue	*Icaricia icarioides missionensis*	Coastal scrub	E	California
Butterfly, Myrtle's silverspot	*Speyeria zerene myrtleae*	Dunes, scrub, and grasslands	E	California
Butterfly, Palos Verdes blue	*Glaucopsyche lygdamus palosverdesensis*	Mountain meadows, open woodlands, brush, canyons, seeps, and streamsides	E	California
Butterfly, Quino checkerspot	*Euphydryas editha quino (=E. e. wrighti)*	Chaparral and coastal sage scrubland	E	California

6.0 ENDANGERED AND THREATENED SPECIES BY STATE, CONTINUED

ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Butterfly, San Bruno elfin	*Callophrys mossii bayensis*	Rocky outcrops and cliffs in coastal scrub on the San Francisco peninsula	E	California
Butterfly, Smith's blue	*Euphilotes enoptes smithi*	Coastal dune, coastal scrub, chaparral, and grassland	E	California
Button-celery, San Diego	*Eryngium aristulatum var. parishii*	Vernal pools or mima mound areas with vernally moist conditions	E	California
Cactus, Bakersfield	*Opuntia treleasei*	Valley grassland	E	California

Ceanothus, coyote	*Ceanothus ferrisae*	Serpentine chaparral on dry slopes	E	California
Ceanothus, Pine Hill	*Ceanothus roderickii*	Openings in chaparral communities on gabbro-derived soils	E	California
Checker-mallow, Keck's	*Sidalcea keckii*	Grassy slopes	E	California
Checker-mallow, Kenwood Marsh	*Sidalcea oregana ssp. valida*	Freshwater marshes surrounded by grasslands	E	California
Checker-mallow, pedate	*Sidalcea pedata*	Loamy clay of annually-moist pebble plain meadows	E	California
Chub, Mohave tui	*Gila bicolor mohavensis*	Highly modified refuge sites in San Bernardino County	E	California
Chub, Owens tui	*Gila bicolor snyderi*	Lakes and quiet, vegetated, mud or sand-bottomed pools of headwaters, creeks and rivers	E	California
Clarkia, Pismo	*Clarkia speciosa ssp. immaculata*	Grasslands between Pismo Beach and Nipomo Mesa	E	California
Clarkia, Presidio	*Clarkia franciscana*	Grassland communities with serpentine soils	E	California
Clarkia, Vine Hill	*Clarkia imbricata*	Open grasslands near a freshwater marsh	E	California
Clover, Monterey	*Trifolium trichocalyx*	Openings in and edges of Monterey pine forest	E	California
Clover, showy Indian	*Trifolium amoenum*	Low, wet swales in grasslands	E	California
Condor, California U.S.A. only	*Gymnogyps californianus*	Large trees or snags, or on isolated rocky outcrops and cliffs	E	California
Crayfish, Shasta	*Pacifastacus fortis*	Rocky, gravelly bottoms, usually volcanic rubble	E	California

6.0 ENDANGERED AND THREATENED SPECIES BY STATE, CONTINUED

ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Crownscale, San Jacinto Valley	*Atriplex coronata var. notatior*	Playas, vernal-pools	E	California

Cypress, Santa Cruz	*Cupressus abramsiana*	Coastal chaparral communities	E	California
Dudleya, Santa Clara Valley	*Dudleya setchellii*	Rocky outcrops within serpentine grasslands	E	California
Evening-primrose, Antioch Dunes	*Oenothera deltoides ssp. howellii*	Sandy soil type (Oakley or Delhi sand) found at the Antioch dunes	E	California
Evening-primrose, Eureka Valley	*Oenothera avita ssp. eurekensis*	Sandy dunes of the Eureka Valley	E	California
Fairy shrimp, Conservancy	*Branchinecta conservatio*	Turbid, ephemeral water of swales and vernal pools in grassland areas	E	California
Fairy shrimp, longhorn	*Branchinecta longiantenna*	Ephemeral water of swales and vernal pools	E	California
Fairy shrimp, Riverside	*Streptocephalus woottoni*	Vernal pools, in earth slump basins, patches of grassland and coastal sage scrub vegetation	E	California
Fairy shrimp, San Diego	*Branchinecta sandiegonensis*	Vernal pools, which are shallow and on chaparral covered mesas	E	California
Fiddleneck, large-flowered	*Amsinckia grandiflora*	Inner coast range grasslands; steep slopes, sandy soil	E	California
Flannelbush, Mexican	*Fremontodendron mexicanum*	Slopes covered with southern mixed chaparral	E	California
Flannelbush, Pine Hill	*Fremontodendron californicum ssp. decumbens*	Serpentine soils near Grass Valley	E	California
Fly, Delhi Sands flower-loving	*Rhaphiomidas terminatus abdominalis*	Sandy soil, known as Delhi series sands	E	California
Flycatcher, southwestern willow	*Empidonax traillii extimus*	Streamside thickets, brushy fields, and willows	E	California
Fox, San Joaquin kit	*Vulpes macrotis mutica*	Dens near freshwater marshes	E	California
Fox, San Miguel Island	*Urocyon Littoralis littoralis*	Southern coastal dune, bluff, sage, scrub, chaparral, woodlands, pine forests and marsh	E	California
Fox, Santa Catalina	*Urocyon littoralis*	Southern coastal dune, bluff, sage, scrub, chaparral, woodlands,	E	California

Island	*catalinae*	pine forests and marsh		
Fox, Santa Cruz Island	*Urocyon littoralis santacruzae*	Southern coastal dune, bluff, sage, scrub, chaparral, woodlands, pine forests and marsh	E	California

6.0 ENDANGERED AND THREATENED SPECIES BY STATE, CONTINUED

ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Fox, Santa Rosa Island	*Urocyon littoralis santarosae*	Southern coastal dune, bluff, sage, scrub, chaparral, woodlands, pine forests and marsh	E	California
Fringepod, Santa Cruz Island	*Thysanocarpus conchuliferus*	Dry canyon slopes, rocky ridges, and rock outcrops	E	California
Fritillary, Gentner's	*Fritillaria gentneri*	Open, somewhat dry, low elevation, mixed oak-madrone woodlands	E	California
Frog, mountain yellow-legged southern California DPS	*Rana muscosa*	Sunny riverbanks, meadow streams, isolated pools and lake borders in the Sierra Nevada	E	California
Gilia, Hoffmann's slender-flowered	*Gilia tenuiflora ssp. hoffmannii*	Dunes, coastal	E	California
Gilia, Monterey	*Gilia tenuiflora ssp. arenaria*	Coastal sand dunes, washes, and canyons	E	California
Goby, tidewater Entire	*Eucyclogobius newberryi*	Small coastal lagoons, lower reaches of streams and uppermost portions of large bays	E	California
Goldfields, Burke's	*Lasthenia burkei*	Meadows (mesic), vernal pools	E	California
Goldfields, Contra Costa	*Lasthenia conjugens*	Vernal pools in open grassy areas	E	California
Grass, Eureka Dune	*Swallenia alexandrae*	Desert dunes	E	California
Grass, Solano	*Tuctoria mucronata*	Germinates in warm, turbid, somewhat alkaline vernal pools	E	California
Grasshopper, Zayante band-	*Trimerotropis infantilis*	Sandy parklands among chapparral or ponderosa pine stands on the Zayante sand	E	California

winged		hills		
Indian paintbrush, San Clemente Island	*Castilleja grisea*	Coastal scrub, steep canyon walls	E	California
Jewelflower, California	*Caulanthus californicus*	Slightly alkaline sandy loam in native grassland or shrub land	E	California
Jewelflower, Metcalf Canyon	*Streptanthus albidus ssp. albidus*	Serpentine outcrops with little soil development	E	California
Jewelflower, Tiburon	*Streptanthus niger*	Rocky serpentine slopes and outcrops in grassland communities	E	California
Kangaroo rat, Fresno	*Dipodomys nitratoides exilis*	Arid, flat plains with sparse vegetation of grasses or sometimes orache	E	California
Kangaroo rat, giant	*Dipodomys ingens*	Open desert grasslands in valleys	E	California

6.0 ENDANGERED AND THREATENED SPECIES BY STATE, CONTINUED

ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Kangaroo rat, San Bernardino Merriam's	*Dipodomys merriami parvus*	Sandy to rocky soils in desert locations with little vegetation	E	California
Kangaroo rat, Stephens'	*Dipodomys stephensi (incl. D. cascus)*	Annual grassland and coastal sage scrub with sparse shrub cover	E	California
Kangaroo rat, Tipton	*Dipodomys nitratoides nitratoides*	Sandy to rocky soils in desert locations with little vegetation	E	California
Larkspur, Baker's	*Delphinium bakeri*	Coastal scrub habitats and valley grasslands	E	California
Larkspur, San Clemente Island	*Delphinium variegatum ssp. kinkiense*	San Clemente Island grassland	E	California
Larkspur, yellow	*Delphinium luteum*	Rocky places within coastal scrub and coastal prairie communities	E	California
Layia, beach	*Layia carnosa*	Sparsely vegetated semi-stabilized dunes	E	California
	Lessingia			

Lessingia, San Francisco	*germanorum (=L.g. var. germanorum)*	Dune scrub	E	California
Lily, Pitkin Marsh	*Lilium pardalinum ssp. pitkinense*	Freshwater marshes and wet meadows in Sonoma County	E	California
Lily, Western	*Lilium occidentale*	Pacific coastal wetlands	E	California
Liveforever, Santa Barbara Island	*Dudleya traskiae*	Cliffs and exposed rocky slopes on Santa Barbara Island	E	California
Lizard, blunt-nosed leopard	*Gambelia silus*	Sandy areas, alkali flats, canyon floors, foothills, with sparse, open vegetation	E	California
Lupine, clover	*Lupinus tidestromii*	Coastal dunes	E	California
Lupine, Nipomo Mesa	*Lupinus nipomensis*	Stabilized coastal sand dunes	E	California
Malacothrix, island	*Malacothrix squalida*	Coastal bluffs and rocky areas	E	California
Malacothrix, Santa Cruz Island	*Malacothrix indecora*	Dunes, coastal	E	California
Mallow, Kern	*Eremalche kernensis*	Eroded hillsides, alkali flats with shadscale	E	California
Manzanita, Del Mar	*Arctostaphylos glandulosa ssp. crassifolia*	Sandy mesas and bluffs, chaparral	E	California

6.0 ENDANGERED AND THREATENED SPECIES BY STATE, CONTINUED

ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Manzanita, Presidio	*Arctostaphylos hookeri var. ravenii*	Serpentine or related soils on the San Francisco Peninsula	E	California
Manzanita, Santa Rosa Island	*Arctostaphylos confertiflora*	Chaparral, mixed woodland, and pine woodland communities	E	California
Meadowfoam, Butte County	*Limnanthes floccosa ssp. californica*	Vernal pools	E	California
Meadowfoam, Sebastopol	*Limnanthes vinculans*	Vernally or permanently wet meadows	E	California
Mesa-mint,	*Pogogyne*	Vernal pools	E	California

Otay	*nudiuscula*			
Mesa-mint, San Diego	*Pogogyne abramsii*	Vernal pools on coastal terraces	E	California
Milk-vetch, Applegate's	*Astragalus applegatei*	Flat seasonally moist remnants of alkaline floodplain grasslands of the Klamath Basin	E	California
Milk-vetch, Braunton's	*Astragalus brauntonii*	Brush/chaparral communities	E	California
Milk-vetch, Clara Hunt's	*Astragalus clarianus*	Openings in manzanita and oak woodlands	E	California
Milk-vetch, Coachella Valley	*Astragalus lentiginosus var. coachellae*	Loose, wind-blown or alluvial sands located on dunes or flats	E	California
Milk-vetch, coastal dunes	*Astragalus tener var. titi*	Coastal dunes	E	California
Milk-vetch, Cushenbury	*Astragalus albens*	Soils derived directly from decomposing limestone bedrock	E	California
Milk-vetch, Lane Mountain	*Astragalus jaegerianus*	Granitic soils; shallow, rocky and coarse sands	E	California
Milk-vetch, triple-ribbed	*Astragalus tricarinatus*	Sandy and gravelly soils of dry washes or canyon slopes	E	California
Milk-vetch, Ventura Marsh	*Astragalus pycnostachyus lanosissimus*	Coastal wetlands	E	California
Monardella, willowy	*Monardella linoides ssp. Viminea*	"Rocky washes, coastal sage scrub, chaparral, southwest Peninsular Range"	E	California
Morning-glory, Stebbins'	*Calystegia stebbinsii*	Mixed chaparral communities on gabbro- and serpentine-derived soils	E	California
Mountain balm, Indian Knob	*Eriodictyon altissimum*	Maritime chaparral and oak woodlands, mostly on sandstone ridges	E	California

6.0 ENDANGERED AND THREATENED SPECIES BY STATE, CONTINUED

ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Mountain beaver, Point Arena	*Aplodontia rufa nigra*	Underground burrow systems or in gullies	E	California
Mountain-		Slopes of a steep-sided, narrow,		

mahogany, Catalina Island	*Cercocarpus traskiae*	dry arroyo within a coastal sage scrub community	E	California
Mouse, Pacific pocket	*Perognathus longimembris pacificus*	Coast on finegrained sandy substrates in coastal sage scrub, coastal strand, and river alluvium	E	California
Mouse, salt marsh harvest	*Reithrodontomys raviventris*	Salt and brackish marshes	E	California
Mustard, slender-petaled	*Thelypodium stenopetalum*	Mesic, alkaline meadows	E	California
Navarretia, few-flowered	*Navarretia leucocephala ssp. pauciflora (=N. pauciflora)*	Vernal pools	E	California
Navarretia, many-flowered	*Navarretia leucocephala ssp. plieantha*	Vernal pools	E	California
Niterwort, Amargosa	*Nitrophila mohavensis*	Playas (clay, mesic)	E	California
Onion, Munz's	*Allium munzii*	Grassy openings in coastal-sage scrub. Soils are moist, heavy clays	E	California
Orcutt grass, hairy	*Orcuttia pilosa*	Vernal pools	E	California
Orcutt grass, Sacramento	*Orcuttia viscida*	Large, deep vernal pools	E	California
Oxytheca, cushenbury	*Oxytheca parishii var. goodmaniana*	Pinyon-juniper woodland	E	California
Paintbrush, soft-leaved	*Castilleja mollis*	Coastal dunes with coastal scrub associates	E	California
Paintbrush, Tiburon	*Castilleja affinis ssp. neglecta*	Serpentine bunchgrass communities on north to west facing slopes	E	California
Penny-cress, Kneeland Prairie	*Thlaspi californicum*	Serpentine rock outcrops in coastal prairie habitat	E	California
Pentachaeta, Lyon's	*Pentachaeta lyonii*	Small grassland sites that intergrade with shrublands	E	California
Pentachaeta, white-rayed	*Pentachaeta bellidiflora*	Bunchgrass communities associated with serpentine soils	E	California
Phacelia,	*Phacelia insularis*	Over island on sea bluffs and inland on dry, rocky slopes and	E	California

island	*ssp. insularis*	ridges		

6.0 ENDANGERED AND THREATENED SPECIES BY STATE, CONTINUED

ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Phlox, Yreka	*Phlox hirsuta*	Serpentine talus in lower and upper montane coniferous forest communities	E	California
Pikeminnow(=squawfish, Colorado except Salt and Verde R. drainages, AZ	*Ptychocheilus lucius*	Deep turbid strongly flowing water, eddies, runs, flooded bottoms, or backwaters	E	California
Piperia, Yadon's	*Piperia yadonii*	Monterey pine forest and maritime chaparral communities	E	California
Polygonum, Scotts Valley	*Polygonum hickmanii*	Gently sloping to nearly level shallow soils over outcrops of Santa Cruz mudstone and Purisima sandstone	E	California
Potentilla, Hickman's	*Potentilla hickmanii*	Freshwater marshes, seeps and streamlets in open forested areas near the coast	E	California
Pupfish, desert	*Cyprinodon macularius*	Desert springs and outflow marshes, backwaters, saline pools, and streams	E	California
Pupfish, Owens	*Cyprinodon radiosus*	Silt or sand-covered bottom; near margins of bulrush marshes	E	California
Rabbit, riparian brush	*Sylvilagus bachmani riparius*	Riverside shrub and woodland communities	E	California
Rail, California clapper	*Rallus longirostris obsoletus*	Saltmarshes	E	California
Rail, light-footed clapper U.S.A. only	*Rallus longirostris levipes*	Coastal salt and freshwater marshes containing cordgrass, cattails or tules, and rushes	E	California
	Rallus	Freshwater and brackish		

Rail, Yuma clapper U.S.A. only	*longirostris yumanensis*	(mixed fresh and salt-water) marshes	E	California
Rock-cress, Hoffmann's	*Arabis hoffmannii*	Cliffs and ledges of loose volcanic rock	E	California
Rock-cress, McDonald's	*Arabis mcdonaldiana*	Rocky serpentine areas	E	California
Rockcress, Santa Cruz Island	*Sibara filifolia*	Sunny, volcanic screes	E	California
Salamander, California tiger U.S.A. (CA - Santa Barbara County)	*Ambystoma californiense*	Subterranean retreats near ponds in grasslands and open woodlands	E	California
Salamander, California tiger U.S.A. (CA - Sonoma County)	*Ambystoma californiense*	Subterranean retreats near ponds in grasslands and open woodlands	E	California
Salamander, desert slender	*Batrachoseps aridus*	Chaparral, coastal live-oak woodlands, canyons, washes at base of grass-govered hills, rural gardens, urban areas, and trash	E	California
Salamander, Santa Cruz long-toed	*Ambystoma macrodactylum croceum*	Chaparral and pine-oak woodlands; breeds in ephemeral pools	E	California

6.0 ENDANGERED AND THREATENED SPECIES BY STATE, CONTINUED

ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Salmon, chinook winter Sacramento R.	*Oncorhynchus (=Salmo) tshawytscha*	Mainly oceanic, gravel riffles in main streams	E	California
Salmon, coho central CA coast	*Oncorhynchus (=Salmo) kisutch*	Inshore waters at mid-depths or near surface; spawns in coastal streams, sometimes far inland	E	California
Sandwort, Marsh	*Arenaria paludicola*	Freshwater marshes	E	California
Sea turtle, leatherback	*Dermochelys coriacea*	Warm sands of tropical beaches	E	California
Seablite, California	*Suaeda californica*	Upper intertidal zone of a coastal salt marsh along the perimeter of a bay	E	California
Sedge, white	*Carex albida*	Sphagnum bogs	E	California
Sheep,				

Peninsular bighorn Peninsular CA pop.	*Ovis canadensis nelsoni*	Desert, grasses and shrub mosaic, shrublands	E	California
Sheep, Sierra Nevada bighorn Sierra Nevada	*Ovis canadensis sierrae*	Visually open and contains steep, generally rocky, slopes	E	California
Shrew, Buena Vista Lake ornate	*Sorex ornatus relictus*	Wetlands and riparian forests of Buena Vista Lake	E	California
Shrike, San Clemente loggerhead	*Lanius ludovicianus mearnsi*	Trees and shrubs primarily in the canyon woodlands of the island	E	California
Shrimp, California freshwater	*Syncaris pacifica*	Clean, clear running water, some emergent vegetation	E	California
Skipper, Carson wandering	*Pseudocopaeodes eunus obscurus*	Grassland habitats on alkaline substrates	E	California
Skipper, Laguna Mountains	*Pyrgus ruralis lagunae*	Montane meadows	E	California
Snail, Morro shoulderband (=Banded dune)	*Helminthoglypta walkeriana*	Sandy soils in coastal dune and sage scrub communities	E	California
Snake, San Francisco garter	*Thamnophis sirtalis tetrataenia*	Ponds, marshes, roadside ditches, streams, meadows, and city lots near water	E	California
Spineflower, Ben Lomond	*Chorizanthe pungens var. hartwegiana*	Coastal sandy	E	California
Spineflower, Howell's	*Chorizanthe howellii*	Coastal dunes and adjacent sandy soils of coastal prairies	E	California
Spineflower, Robust (incl. Scotts Valley)	*Chorizanthe robusta incl. vars. robusta and hartwegii*	Sandy/gravelly soils and sandstone or mudstone bedrock	E	California

6.0 ENDANGERED AND THREATENED SPECIES BY STATE, CONTINUED

ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
	Chorizanthe			

Spineflower, Scott's Valley	*robusta hartwegii*	Sandy/gravelly soils and sandstone or mudstone bedrock	E	California
Spineflower, slender-horned	*Dodecahema leptoceras*	Old sandy benches or floodplain terraces containing alluvial fan scrub	E	California
Spineflower, Sonoma	*Chorizanthe valida*	Sandy soil of a coastal prairie	E	California
Steelhead southern CA coast	*Oncorhynchus (=Salmo) mykiss*	Small headwater streams, large rivers, lakes, or reservoirs	E	California
Stickleback, unarmored threespine	*Gasterosteus aculeatus williamsoni*	Marine, estuarine, and fresh water, usually in vegetation	E	California
Stonecrop, Lake County	*Parvisedum leiocarpum*	Margins of vernal pools and depressions in bedrock which act as shallow vernal pools	E	California
Sucker, Lost River	*Deltistes luxatus*	Deep water lakes and impoundments; deep pools of small to medium rivers	E	California
Sucker, Modoc	*Catostomus microps*	Shallow mud-bottomed pools of cool creeks	E	California
Sucker, razorback entire	*Xyrauchen texanus*	Slow areas, backwaters, and eddies of medium to large rivers	E	California
Sucker, shortnose	*Chasmistes brevirostris*	Open waters of large shallow lakes and river channels	E	California
Sunburst, Hartweg's golden	*Pseudobahia bahiifolia*	Non-native grasslands; grassland-blue oak woodland community ecotones	E	California
Sunflower, San Mateo woolly	*Eriophyllum latilobum*	Moist, steep slopes of serpentine-influenced rocky soil	E	California
Sunshine, Sonoma	*Blennosperma bakeri*	Vernal pools in valley grassland	E	California
Tadpole shrimp, vernal pool	*Lepidurus packardi*	Vernal pools, swales, ephemeral drainages, stock ponds, reservoirs, and ditches	E	California
Taraxacum, California	*Taraxacum californicum*	Edges of moist meadows	E	California
Tarplant, Gaviota	*Deinandra increscens ssp. Villosa*	Annual grassland in associate with coastal sage scrub	E	California
Tern, California least	*Sterna antillarum browni*	Coastal waters, beaches	E	California
Thistle,	*Cirsium*			

Chorro Creek bog	*fontinale var. obispoense*	Seeps and bogs on serpentine substrates	E	California

6.0 ENDANGERED AND THREATENED SPECIES BY STATE, CONTINUED

ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Thistle, fountain	*Cirsium fontinale var. fontinale*	Moist clay openings in riparian or serpentine chaparral	E	California
Thistle, La Graciosa	*Cirsium loncholepis*	Wetlands, mesic coastal dunes, and brackish marshes and swamps	E	California
Thistle, Loch Lomond coyote	*Eryngium constancei*	Within the borders of the meadow-like bed of the Loch Lomond lake	E	California
Thistle, Suisun	*Cirsium hydrophilum var. hydrophilum*	Upper reaches of tidal marshes	E	California
Thornmint, San Mateo	*Acanthomintha obovata ssp. duttonii*	Serpentine soils of chaparral, valley and foothill grasslands	E	California
Tiger beetle, Ohlone	*Cicindela ohlone*	Native grasslands with California oatgrass, and purple needlegrass	E	California
Toad, arroyo (=arroyo southwestern)	*Bufo californicus (=microscaphus)*	Washes, streams, and adjacent uplands (desert, shrubland)	E	California
Tuctoria, Greene's	*Tuctoria greenei*	Bottom of dried vernal pools in open grassland of the Sacramento and San Joaquin Valleys	E	California
Vireo, least Bell's	*Vireo bellii pusillus*	Dense willow thickets from southern California into Baja California	E	California
Vole, Amargosa	*Microtus californicus scirpensis*	Bulrush dominated marshes bordering springs or other permanent sources of open water	E	California
Wallflower, Ben Lomond	*Erysimum teretifolium*	Inland pockets of sandstone-derived coarse sandy soils	E	California
Wallflower, Contra Costa	*Erysimum capitatum var. angustatum*	Dry stony banks, slopes, open flats, open hills and plains	E	California
Wallflower,	*Erysimum*	Open sand areas, sparsely vegetated dunes, and the borders	E	California

Menzies'	*menziesii*	of lupine scrub		
Watercress, Gambel's	*Rorippa gambellii*	Permanent wetlands, marshes or borders of lakes and slow-flowing streams or ditches	E	California
Whale, blue	*Balaenoptera musculus*	Open seas	E	California
Whale, finback	*Balaenoptera physalus*	Offshore ocean waters	E	California
Whale, humpback	*Megaptera novaeangliae*	Surface of the ocean	E	California
Whale, killer Southern Resident DPS	*Orcinus orca*	Open ocean and coastal waters	E	California

6.0 ENDANGERED AND THREATENED SPECIES BY STATE, CONTINUED

ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Whale, Sei	*Balaenoptera borealis*	Deep offshore ocean	E	California
Whale, sperm	*Physeter catodon (=macrocephalus)*	Deep waters of all the oceans	E	California
Woodland-star, San Clemente Island	*Lithophragma maximum*	Coastal bluff scrub and coastal scrub	E	California
Woodrat, riparian (=San Joaquin Valley)	*Neotoma fuscipes riparia*	Riparian forests along major streams of the northern San Joaquin Valley	E	California
Woolly-star, Santa Ana River	*Eriastrum densifolium ssp. sanctorum*	Sandy floodplain areas in Southern California	E	California
Wooly-threads, San Joaquin	*Monolopia (=Lembertia) congdonii*	Shadscale scrub, valley grassland	E	California
Yerba santa, Lompoc	*Eriodictyon capitatum*	Sandstone soils in chaparral and coastal sage scrub communities	E	California
Amole, purple	*Chlorogalum purpureum*	Cismontane woodland, valley and foothill grassland	T	California
Baccharis, Encinitas	*Baccharis vanessae*	Steep slopes, sandstone and volcanic substrates	T	California
Beetle, valley elderberry	*Desmocerus californicus*	Elderberry trees in California	T	California

longhorn	*dimorphus*			
Bluecurls, Hidden Lake	*Trichostema austromontanum ssp. compactum*	Lake-margins edges	T	California
Brodiaea, Chinese Camp	*Brodiaea pallida*	Seeps and springs in serpentine and volcanic soils	T	California
Brodiaea, thread-leaved	*Brodiaea filifolia*	Grasslands, often in association with vernal pools and in floodplains	T	California
Butterfly, bay checkerspot	*Euphydryas editha bayensis*	Serpentine grassland	T	California
Butterfly, Oregon silverspot	*Speyeria zerene hippolyta*	Coastal salt spray meadows, stabilized dunes, montane meadows	T	California
Butterweed, Layne's	*Senecio layneae*	Chaparral communities primarily on gabbro-derived soils	T	California
Ceanothus, Vail Lake	*Ceanothus ophiochilus*	Dry ridgetops, chaparral-covered slopes with phosphorous deficient soils	T	California
Clarkia, Springville	*Clarkia springvillensis*	Open sites, including roadbanks, in blue oak woodland communities	T	California

6.0 ENDANGERED AND THREATENED SPECIES BY STATE, CONTINUED

ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Crownbeard, big-leaved	*Verbesina dissita*	Rugged coastal hillsides and canyons in dense southern maritime chaparral communities	T	California
Cypress, Gowen	*Cupressus goveniana ssp. goveniana*	Coastal Redwood forests	T	California
Daisy, Parish's	*Erigeron parishii*	Limestone or dolomite on dry rocky slopes and outwash plains	T	California
Dudleya, Conejo	*Dudleya abramsii ssp. parva*	Rock outcrops and soils derived from Miocene Conejo volcanics in grassland and scrubs	T	California
Dudleya,	*Dudleya cymosa ssp.*	Lower reaches of sheer volcanic rock surfaces and	T	California

marcescent	*marcescens*	canyon walls adjacent to perennial streams		
Dudleya, Santa Cruz Island	*Dudleya nesiotica*	Rocky clay soils derived from Quaternary alluvium	T	California
Dudleya, Verity's	*Dudleya verityi*	North-facing volcanic outcrops	T	California
Dudleyea, Santa Monica Mountains	*Dudleya cymosa ssp. ovatifolia*	Shaded rock slopes, chaparral, Santa Monica Mountains	T	California
Dwarf-flax, Marin	*Hesperolinon congestum*	Grasslands and chaparral on serpentine soils	T	California
Evening-primrose, San Benito	*Camissonia benitensis*	Stream terraces whose soils are derived from serpentine rock	T	California
Fairy shrimp, vernal pool	*Branchinecta lynchi*	Ephemeral water of swales and vernal pools	T	California
Frog, California red-legged subspecies range clarified	*Rana draytonii*	Coastal drainages in central California and scattered streams in the Sierra Nevada	T	California
Gnatcatcher, coastal California	*Polioptila californica californica*	Deserts and arid country; dry washes in the low desert	T	California
Grass, Colusa	*Neostapfia colusana*	Vernal pools	T	California
Gumplant, Ash Meadows	*Grindelia fraxino-pratensis*	Saltgrass meadows along streams and pools	T	California
Howellia, water	*Howellia aquatilis*	Shallow water and the edges of deep ponds	T	California
Liveforever, Laguna Beach	*Dudleya stolonifera*	North-facing, sandstone or conglomerate cliffes in coastal sage	T	California
Lizard, Coachella Valley fringe-toed	*Uma inornata*	Sparsely vegetated windblown sand dunes and sandy flats	T	California

6.0 ENDANGERED AND THREATENED SPECIES BY STATE, CONTINUED

ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Lizard, Island night	*Xantusia riversiana*	Grassland, chaparral, and oak savannah, clumps of cactus, rocky streambeds, cliffs	T	California
Lynx, Canada	*Lynx*	Mature forests with dense		

(Contiguous U.S. DPS)	*canadensis*	undergrowth	T	California
Manzanita, Ione	*Arctostaphylos myrtifolia*	Acidic sandy soil on hard pan	T	California
Manzanita, Morro	*Arctostaphylos morroensis*	Sand dunes	T	California
Manzanita, pallid	*Arctostaphylos pallida*	Maritime chaparral communities	T	California
Mariposa lily, Tiburon	*Calochortus tiburonensis*	Serpentine grassland; open, rocky slopes	T	California
Milk-vetch, Fish Slough	*Astragalus lentiginosus var. piscinensis*	Loamy fine sand of alkali flats and mounds	T	California
Milk-vetch, Peirson's	*Astragalus magdalenae var. peirsonii*	Desert dunes	T	California
Moth, Kern primrose sphinx	*Euproserpinus euterpe*	Open weedy areas in desert scrub	T	California
Murrelet, marbled CA, OR, WA	*Brachyramphus marmoratus*	Coastal, old-growth forests of the Pacific Northwest	T	California
Navarretia, spreading	*Navarretia fossalis*	Freshwater-marsh, vernal pools	T	California
Orcutt grass, San Joaquin	*Orcuttia inaequalis*	Vernal pools	T	California
Orcutt grass, slender	*Orcuttia tenuis*	Valley grassland and blue oak woodland	T	California
Otter, southern sea except where EXPN	*Enhydra lutris nereis*	A narrow band along the coast	T	California
Owl, northern spotted	*Strix occidentalis caurina*	Forest, woodlands	T	California
Owl's-clover, fleshy	*Castilleja campestris ssp. succulenta*	Vernal pools along the rolling lower foothills and valleys along the eastern San Joaquin Valley	T	California
Paintbrush, ash-grey	*Castilleja cinerea*	Pebble plains, dense clay soils, usually covered with a cobble pavement	T	California
Plover, western snowy Pacific coast pop.	*Charadrius alexandrinus nivosus*	Coastal wetlands and coastal dune	T	California

6.0 ENDANGERED AND THREATENED SPECIES BY STATE, CONTINUED

ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Rush-rose, island	*Helianthemum greenei*	Dry, open, rocky areas, mostly in chaparral vegetation	T	California
Salamander, California tiger U.S.A. (Central CA DPS)	*Ambystoma californiense*	Subterranean retreats near ponds in grasslands and open woodlands	T	California
Salmon, chinook CA Central Valley spring-run	*Oncorhynchus (=Salmo) tshawytscha*	Mainly oceanic, gravel riffles in main streams	T	California
Salmon, chinook CA coastal	*Oncorhynchus (=Salmo) tshawytscha*	Mainly oceanic, gravel riffles in main streams	T	California
Salmon, coho OR, CA pop.	*Oncorhynchus (=Salmo) kisutch*	Inshore waters at mid-depths or near surface; spawns in coastal streams, sometimes far inland	T	California
Sandwort, Bear Valley	*Arenaria ursina*	Pebble plains, dense clay soils	T	California
Sea turtle, green except where endangered	*Chelonia mydas*	Coasts, open sea	T	California
Sea turtle, loggerhead	*Caretta caretta*	Estuaries, coastal streams and salt marshes	T	California
Sea turtle, olive ridley except where endangered	*Lepidochelys olivacea*	Tropical open water, mainland shores and beaches	T	California
Seal, Guadalupe fur	*Arctocephalus townsendi*	Island shores with solid rock and large lava blocks	T	California
Sea-lion, Steller eastern pop.	*Eumetopias jubatus*	Coastal waters near shore and over the continental slope	T	California
Smelt, delta	*Hypomesus transpacificus*	Open waters of bays, tidal rivers, channels, sloughs	T	California
Snake, giant garter	*Thamnophis gigas*	Streams and sloughs, usually with mud bottom	T	California
Sparrow, San Clemente sage	*Amphispiza belli clementeae*	Sagebrush, chaparral, dry foothills	T	California
Spineflower, Monterey	*Chorizanthe pungens var. pungens*	Coastal plain of the Salinas Valley	T	California
	Chamaesyce	Large, deep vernal pools		

Spurge, Hoover's	*hooveri*	among the rolling hills	T	California
Steelhead central CA coast	*Oncorhynchus (=Salmo) mykiss*	Small headwater streams, large rivers, lakes, or reservoirs	T	California
Steelhead Central Valley CA	*Oncorhynchus (=Salmo) mykiss*	Small headwater streams, large rivers, lakes, or reservoirs	T	California

6.0 ENDANGERED AND THREATENED SPECIES BY STATE, CONTINUED

ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Steelhead northern CA	*Oncorhynchus (=Salmo) mykiss*	Small headwater streams, large rivers, lakes, or reservoirs	T	California
Steelhead south central CA coast	*Oncorhynchus (=Salmo) mykiss*	Small headwater streams, large rivers, lakes, or reservoirs	T	California
Sturgeon, North American green U.S.A. (CA) Southern Distinct Population Segment	*Acipenser medirostris*	Freshwater and Saltwater	T	California
Sucker, Santa Ana 3 CA river basins	*Catostomus santaanae*	Pools and runs of small to medium-sized, shallow streams	T	California
Sunburst, San Joaquin adobe	*Pseudobahia peirsonii*	Non-native grasslands; grassland-blue oak woodland community ecotones	T	California
Tarplant, Otay	*Deinandra (=Hemizonia) conjugens*	Clay soils in coastal sage scrub and grassland	T	California
Tarplant, Santa Cruz	*Holocarpha macradenia*	Coastal prairies and grasslands, often with clay or sandy-clay soils	T	California
Thornmint, San Diego	*Acanthomintha ilicifolia*	Heavy clay soils in coastal sage scrub, grasslands, and chapparral	T	California
Tortoise, desert U.S.A., except in Sonoran Desert	*Gopherus agassizii*	Desert, shrubland/chaparral	T	California
		Shady underbrush,		

Towhee, Inyo California	*Pipilo crissalis eremophilus*	open woods, pinyon-juniper woodlands, and suburban gardens	T	California
Trout, Lahontan cutthroat	*Oncorhynchus clarki henshawi*	Inshore marine and estuarine waters; lakes; coastal, inland, and alpine streams	T	California
Trout, Little Kern golden	*Oncorhynchus aguabonita whitei*	Clear cool streams and lakes above 6,600'	T	California
Trout, Paiute cutthroat	*Oncorhynchus clarki seleniris*	Inshore marine and estuarine waters; lakes; coastal, inland, and alpine streams	T	California
Vervain, Red Hills	*Verbena californica*	Along intermittent and perennial streams with serpentine substrates	T	California
Whipsnake (=striped racer), Alameda	*Masticophis lateralis euryxanthus*	Chaparral, scrubland, open woodlands, rocky hillsides, mostly in the foothills	T	California
Wild-buckwheat, southern mountain	*Eriogonum kennedyi var. austromontanum*	Big Bear and Holcomb Valleys, San Bernardino Mountains	T	California
Kangaroo Rat, Morro Bay	*Dipodomys heemanni morroensis*	Sandy to rocky soils within low, southern maritime chapparral communities	E	California

7.0 VULNERABILITY ANALYSIS (DETAILED)

VULNERABILITY ANALYSIS (DETAILED)
Water Intakes:
Schools:
Medical Facilities:

7.0 VULNERABILITY ANALYSIS (DETAILED), CONTINUED

VULNERABILITY ANALYSIS (DETAILED)
Residential Areas:
Businesses:
Much of San Francisco Bay is industrialized.
Wetlands or Other Sensitive Environments:
Much of the bay is industrialized; however, natural mudflats, salt flats, channelized stormwater runoff areas, and rocky shorelines also occur. Additional sensitive environmental protection response priorities for the first 24 hours have been identified by the terminal and listed in SECTION 6.11 of the FRP. These priorities are for guidance purposes only to aid with initial planning and identification of potential risk priorities. The listed priorities should be adjusted as identified by Planning Section and Environmental Unit.

7.0 VULNERABILITY ANALYSIS (DETAILED), CONTINUED

VULNERABILITY ANALYSIS (DETAILED)
Fish and Wildlife:
Much of the "wetland" areas support sensitive biological resources and the shallow, protected nature of the bay provides spawning and nursery habitats for important commercial and sportfish species. Sensitive bird species utilize the open water and wetland habitats for over wintering, resting, and nesting activities and the bay is utilized by the winter run salmon as it migrates up the Sacramento River. In-bay fisheries include the herring roe Shorebased operations. Several rare, threatened and/or endangered birds, mammals, and plants exist along the shorelines and/or utilize the water areas during various seasons.

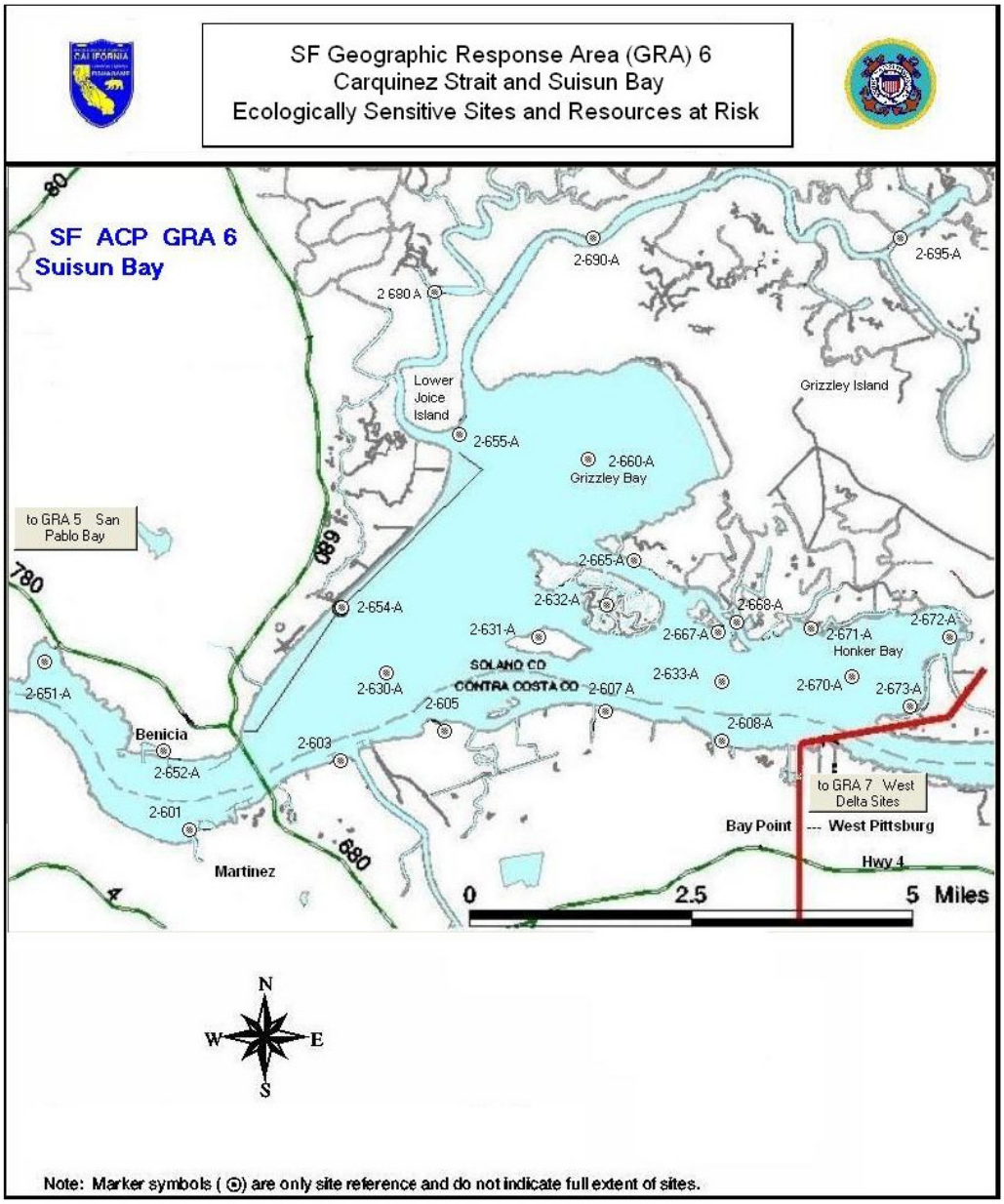
7.0 VULNERABILITY ANALYSIS (DETAILED), CONTINUED

VULNERABILITY ANALYSIS (DETAILED)
Lakes and Streams:
San Francisco Bay, Sacramento River
Endangered Flora and Fauna:
Refer to SECTION 6.5 of the FRP or SECTION 6.0 of the ERAP for a list of endangered and threatened species by state.

7.0 VULNERABILITY ANALYSIS (DETAILED), CONTINUED

VULNERABILITY ANALYSIS (DETAILED)
Recreational Areas:
Recreational areas in the Central San Francisco Bay area that may require special protection in the event of an oil spill follow the guidance provided in the San Francisco Bay ACP sections 4600, 5400, and 9600.
Transportation Routes (Air, Water, Land):
Several ports are present throughout San Francisco Bay; these ports are important economic centers for import and export of material used throughout the world.
Utilities:
Other Applicable Areas:
Economically important areas in the Central San Francisco Bay area that may require special protection in the event of an oil spill follow the guidance provided in the San Francisco Bay ACP sections 4600, 5400, and 9600.

8.0 TACTICAL OVERVIEW MAP



ACP 2 - SF Bay & Delta GRA6 9846.0- 1 October 1, 2008

9.0 TACTICAL PLAN INDEX

SITE #	SITE NAME
1	Under Development

10.0 TACTICAL PLANS

Under Development

11.0 SENSITIVITY MAPS

Click here for Data Sheets

11.0 SENSITIVITY MAPS

Click here for 2-601-A

11.0 SENSITIVITY MAPS

Click here for 2-603-A

11.0 SENSITIVITY MAPS

Click here for 2-605-A

11.0 SENSITIVITY MAPS

Click here for 2-630-B/C

LINK FILES

U.S. Department of Homeland Security
United States Coast Guard

Commander
United States Coast Guard
Sector San Francisco

1 Yerba Buena Island
San Francisco, CA 94130
Phone: 510-437-3145
Fax: 510-437-6690

16611

Plains Products Terminals LLC, Martinez
Attn: Mr. Walter Eckhoff
2801 Waterfront Rd
Martinez, CA 94553

NOV 16 2011

Dear Mr. Eckhoff:

Your Facility Response Plan, MISLE Activity #4149103, submitted to meet the requirements of the Oil Pollution Act of 1990 is approved.

I commend your efforts in developing a response plan that reflects your company's operating procedures and organizational structure. I remind you that your plan is a vital working document and that implementing the plan will help ensure effective oil spill response and mitigation. Please be sure that all parties with responsibilities under the plan are familiar with the plan's procedures and requirements.

You are reminded that Plains Products Terminal LLC, Martinez is prohibited from handling, storing, transporting, transferring, or lightering oil unless it is operating in full compliance with this plan. Compliance includes ensuring that the required resources are in place and available through contact or other approved means. In addition, the facility must have a copy of the plan at the marine transportation related portion of your facility. It is recommended that this copy be placed with your facility's operations manual.

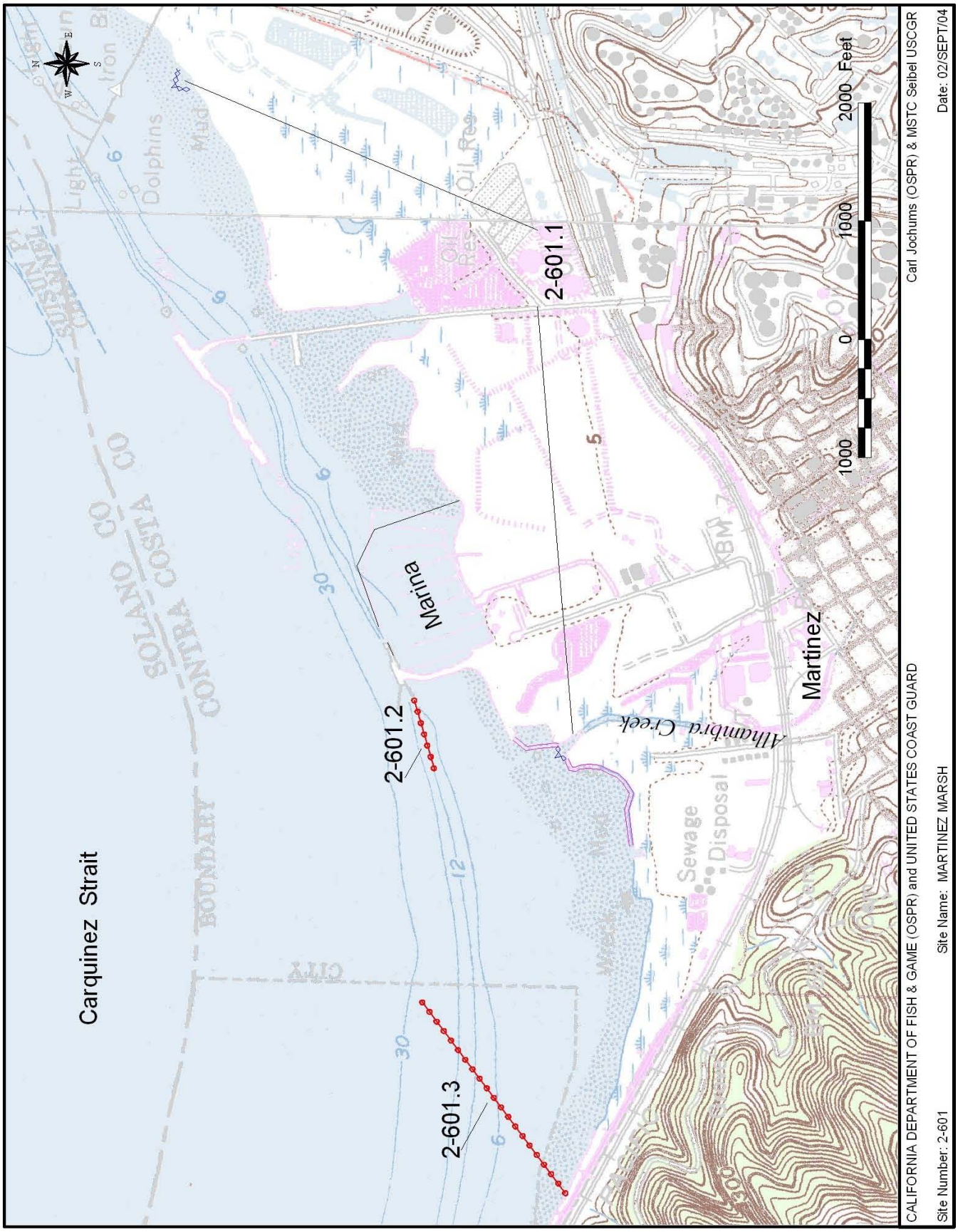
Your plan will remain valid until October 5, 2016. You must review your plan annually and resubmit the plan to Coast Guard for reapproval 6 months before the end of the approval period as required by 33 CFR 154.1065.

A copy of this letter shall be with the plan.

Sincerely,

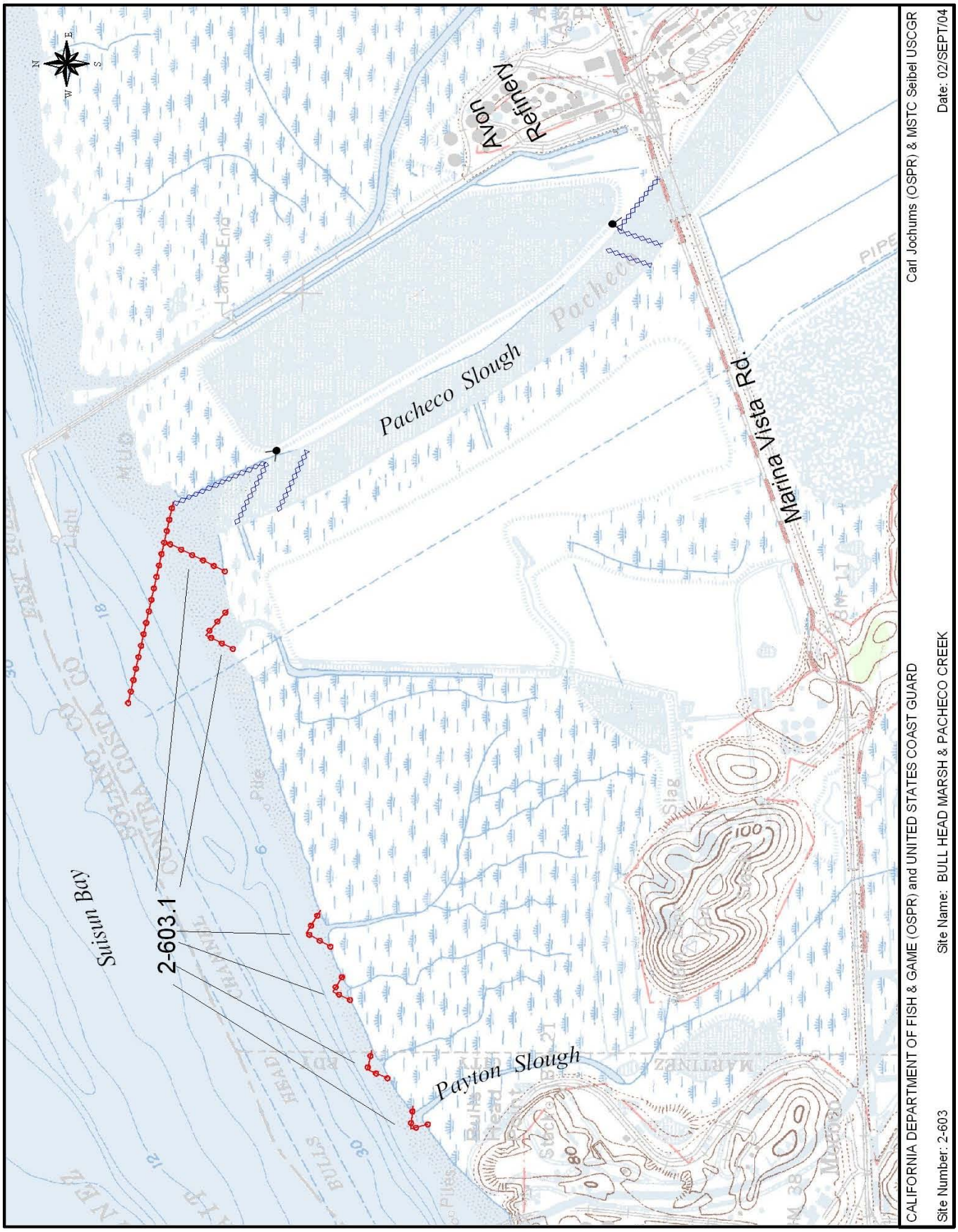
J. P. TAMA
Commander, U. S. Coast Guard
Chief, Prevention Department
By direction

2-601 -A Strategy Diagram- Martinez Marsh 2-601 -A



Harbor / Curtain Boom
Swamp / River Boom
all other boom types
Sorbent boom
Berm, Dam, or Dike
Filter fence
Boom tow
SSS - Shoreside Skimming System
SFS - Stationary Floating Skimmer
SPS - Self Propelled Skimmer
TSA - Towed Skimming Array

2-603 -A Strategy Diagram- Bulls Head Marsh and Pacheco Creek 2-603 -A



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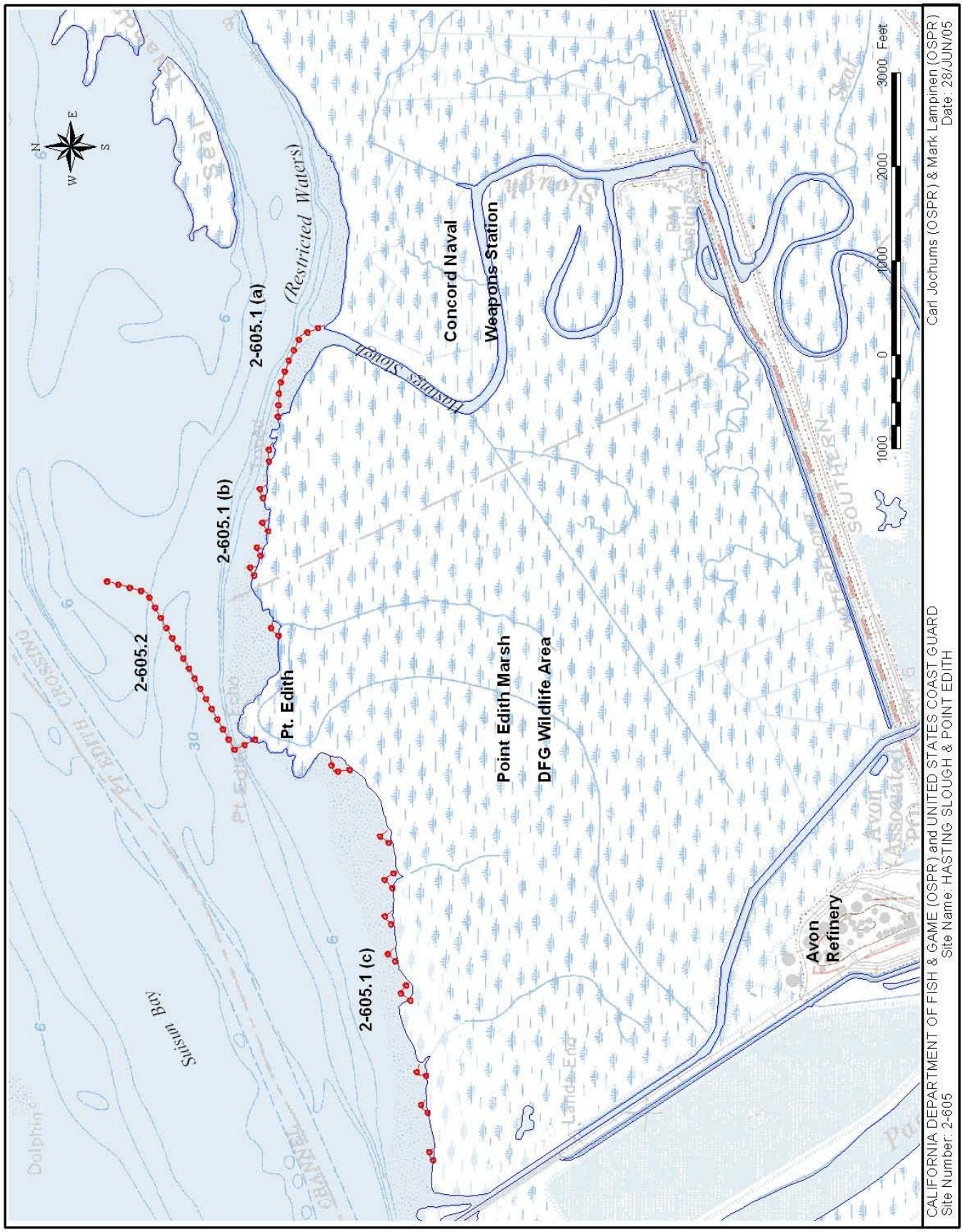
SPS - Self Propelled Skimmer
TSA - Towed Skimming Array

2-605 -A Strategy Diagram- Hastings Slough & Point Edith Marshes 2-605 -A



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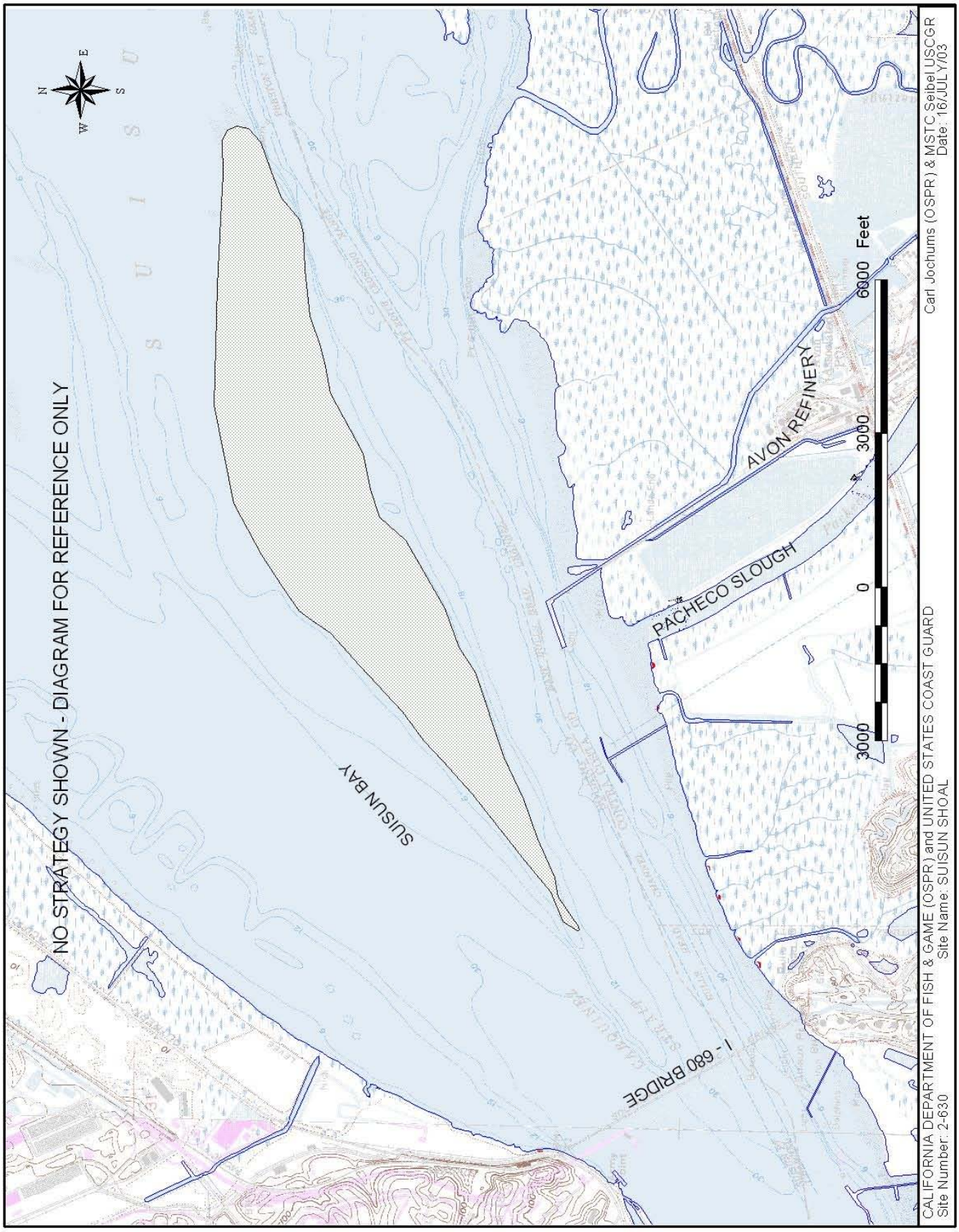
SPS - Self Propelled Skimmer
TSA - Towed Skimming Array

2-630 -B/C Strategy Diagram- Suisun Shoal

2-630 -B/C



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State of California – Natural Resources Agency
DEPARTMENT OF FISH AND WILDLIFE
Office of Spill Prevention and Response
425G Executive Court N
Fairfield, California 94534
Telephone: (707) 864-4900
www.wildlife.ca.gov

EDMUND G. BROWN JR., Governor
CHARLTON H. BONHAM, Director

March 11, 2013

Mr. John-Paul Nepote
Plains Products Terminals
2801 Waterfront Road
Martinez, California 94553

Dear Mr. Nepote:

Your California Facility Oil Spill Contingency Plan has been reviewed for compliance with the California Code of Regulations Title 14, Subchapter 3, Sections 815, 816, and 817. Based on this review the following plan is approved:

Plains Products Terminals (Martinez) **F2-20-3540**

A copy of this letter should be kept on the facility covered by this contingency plan. **This approval expires on March 31, 2018.**

Your California Facility Oil Spill Contingency Plan must be kept current at all times. Promptly send plan revisions to all plan recipients. When submitting plan revisions to OSPR, use the letterhead address, with "attention: Marine Safety Branch."

The current California regulations regarding Oil Spill Contingency Plans can be located through the internet at:

http://www.wildlife.ca.gov

We appreciate your efforts to improve the safety of California's marine environment. If you have any questions regarding this approval, contact Drew Steadman, Oil Spill Prevention Specialist, at 707-416-8204 or by e-mail at drew.steadman@wildlife.ca.gov.

Sincerely,

Roy Mathur
Field Supervisor, Marine Safety Branch
Office of Spill Prevention and Response

cc: Drew Steadman, OSPS
Mr. Ted Mar

PLAINS MARKETING, L.P.

Contract No. 026450-03829-PMLP.2.17.R

REVISED MAJOR SERVICE CONTRACT
PLAINS MARKETING, L. P.

333 Clay, Suite 1600
Houston, Texas 77002

THIS CONTRACT (hereinafter "Contract") is entered into as of the 5th day of October, 2009, by and between **Plains Marketing, L. P.,** a Texas limited partnership, **and Its Affiliates**, with a physical street address of 333 Clay, Suite 1600, Houston, Texas 77002 and a mailing address of P. O. Box 4648, Houston, Texas 77210-4648 (hereinafter "COMPANY") and **C-K Associates, LLC** with a mailing address of 17170 Perkins Road, Baton Rouge, Louisiana 70810(hereinafter "CONTRACTOR"). For purposes of this Contract, the term "COMPANY" includes Plains All American Pipeline, L.P., and Its Affiliates, including but not limited to Plains Marketing, L.P., Plains Pipeline, L.P., Plains Midstream Canada, L.P., Basin Pipeline Holdings, L.P., Pacific Pipeline System LLC, Plains LPG Services, L.P., Rocky Mountain Pipeline System LLC, Plains West Coast Terminals, LLC, CDM Max, LLC, and Pacific L.A. Marine Terminals LLC, as listed above.

WITNESSETH:

THAT for and in consideration of the covenants, contract, terms, provisions and conditions hereinafter set forth, the parties do hereby mutually agree, each with the other, as follows:

ARTICLE 1 – SCOPE OF WORK

1.1 This Contract does not obligate COMPANY to order services from CONTRACTOR nor does it obligate CONTRACTOR to provide services to COMPANY, but shall control and govern all services ordered by COMPANY and accepted by CONTRACTOR hereunder, and shall define the rights and obligations of COMPANY and CONTRACTOR with regard to the matters covered hereby.

1.2 COMPANY may, from time-to-time, request CONTRACTOR to perform services (including any supervision, labor, equipment, materials and any other items necessary to perform the work requested; hereinafter referred to as "Work") hereunder by issuing a Work Order to CONTRACTOR.

The Work shall not commence prior to execution of the Work Order by both COMPANY and CONTRACTOR; however, this Contract shall apply to any Work performed by CONTRACTOR on behalf of COMPANY regardless of whether or not a Work Order is issued unless otherwise agreed by the parties in writing.

1.3 CONTRACTOR shall carry out the Work under this Contract and shall furnish experienced personnel, supervision, small tools, transportation, licenses, insurance, permits, services and all other things necessary or required in and for the proper and timely performance of the Work. Further, CONTRACTOR shall furnish all materials and equipment as specified in the Work Order. CONTRACTOR's equipment, including, but not limited to, small tools and consumables, is the sole responsibility of the CONTRACTOR. COMPANY is not responsible for their cost, maintenance, wear, tear, or destruction.

1.4 Regarding CONTRACTOR's performance of the Work, time is of the essence. CONTRACTOR shall complete the Work in accordance with the Contract within the time limit(s) detailed in the Work Order and shall promptly notify COMPANY upon completion of each major item or portion of the Work.

1.5 Upon request by COMPANY, CONTRACTOR shall furnish a project schedule prior to commencement of the Work.

ARTICLE 2 -TERM

2.1 This Contract shall have a term commencing on October 5, 2009 and ending on December 31, 2014. Work shall be started and shall be completed on the dates specified in the applicable Work Order. The term of this Contract shall be extended until completion of any outstanding Work Order.

ARTICLE 3 - INSPECTION AND APPROVAL

3.1 All fabricated material may be inspected (at COMPANY's discretion) at CONTRACTOR's facility before shipment. CONTRACTOR shall notify COMPANY's representative at least five (5) working days before the inspection is required.

3.2 All Work performed by CONTRACTOR hereunder shall be subject to inspection, testing and approval by COMPANY. COMPANY may, at its discretion, employ the services of specialist inspection and testing agencies for this purpose. Unless otherwise specified in the Work Order, all drawings will be approved by COMPANY, in writing, prior to commencement of any Work based on the drawings.

3.3 Any inspection or approval of the Work given under this Contract by COMPANY shall not relieve CONTRACTOR of its responsibility for compliance with this Contract, nor from its responsibility for the quality of the Work, nor from any warranty, guarantee or liability under law, either expressed or implied, in this Contract.

3.4 When the Work has been completed in accordance with this Contract, CONTRACTOR shall so notify COMPANY in writing. COMPANY shall then inspect the Work and if it is found not to be in compliance with this Contract, COMPANY shall so notify CONTRACTOR in writing specifying the details of such non-compliance. At CONTRACTOR's expense, CONTRACTOR shall promptly correct all Work noted to be in noncompliance and notify COMPANY once corrections have been made. COMPANY shall then reinspect the Work to determine Contract compliance. If COMPANY rejects the Work or any part thereof which is reinspected, then the procedure set forth above shall be repeated until Work not in compliance is corrected and the Work is accepted by COMPANY.

ARTICLE 4 - COMPENSATION

4.1 Work to be furnished during the term of this Contract shall be furnished at the rates agreed to in writing by the parties (the "Rate Sheet") unless otherwise provided in the applicable Work Order.

4.2 No overtime Work or premium rates will be paid or authorized by CONTRACTOR unless COMPANY has expressly approved such payment in writing.

4.3 CONTRACTOR must give thirty (30) days advance written notice of proposed rate changes to the Rate Sheet. No rate change or cost change will be effective until accepted by COMPANY in writing. Such change will not apply to any Work in progress at time of notice without COMPANY's written consent.

ARTICLE 5 - PAYMENT

5.1 For lump sum work, CONTRACTOR shall have the right to request that COMPANY make partial payments; provided, however, that COMPANY shall have the right to withhold up to and including fifteen percent (15%) of the amount of any invoice submitted to COMPANY by CONTRACTOR for labor, supervision and materials furnished by CONTRACTOR up to the time of completion and acceptance of the Work by COMPANY. Payment of said retainage shall be due upon COMPANY's acceptance of all Work. For retainage, if any, CONTRACTOR shall invoice COMPANY for the same following COMPANY's acceptance of the Work and COMPANY shall pay the same within thirty (30) days from receipt of said invoice.

5.2 Unless specifically waived in writing by COMPANY, each invoice must, in addition to total charges, show separately on its face the labor costs or equipment costs, as applicable, material costs, and any applicable freight charges and sales and use taxes. For reimbursable Work, COMPANY's representative must sign time sheets, equipment logs, material tickets, or similar supporting documentation. This substantiation or any other evidence COMPANY may require shall be attached to the invoice. In addition, any applicable markups such as fringe benefits, unemployment taxes, workers' compensation insurance, payroll taxes, overhead and profit, etc. must be itemized. Equipment rental must be invoiced separately, on a monthly basis. The invoice must list each piece of equipment separately, with the description taken verbatim from the Rate Sheet submitted with the Contract. A Monthly Equipment Time Log, signed by COMPANY's representative, must be attached to the invoice. Material and/or Third Party Equipment Rentals shall include third party invoices as support.

5.3 Subject to paragraph 5.2 above, COMPANY shall pay CONTRACTOR's invoice within thirty (30) days of receipt of such invoice by COMPANY's Accounts Payable Department.

5.4 COMPANY may withhold payment for a disputed invoice or part thereof, without interest, until such dispute is resolved.

5.5 Sums due CONTRACTOR shall be adjusted by deducting any amounts paid by COMPANY to prevent or remove liens, claims, debts and encumbrances which are the responsibility of CONTRACTOR, or its subcontractors, or to satisfy other obligations of CONTRACTOR or its subcontractors hereunder.

5.6 No payment made under this Contract shall constitute a waiver by COMPANY of the performance by CONTRACTOR of any of CONTRACTOR's obligations hereunder and any payment withheld shall be without prejudice to any other rights and remedies available to COMPANY.

ARTICLE 6 - CHANGES IN THE WORK

6.1 All changes in the Work shall be approved by means of a written Change Order to the Work Order.

6.2 COMPANY shall have authority to make minor changes in the Work not involving extra cost. No extra Work or claim for additional compensation or time to complete the Work shall be made without a written Change Order, signed on behalf of COMPANY and delivered to CONTRACTOR. Where CONTRACTOR considers that any change or variation in the Work would be beneficial, CONTRACTOR shall advise COMPANY of its proposal, and COMPANY shall decide whether to proceed with such change or variation.

ARTICLE 7 - WARRANTY

7.1 CONTRACTOR warrants that it is experienced in the Work to be undertaken on behalf of COMPANY, possesses the skills and resources to complete the Work and has the authority to fulfill its obligations under this Contract. The Work shall be performed in a

good and workmanlike manner by qualified, careful and efficient workers in accordance with the Contract, in strict conformity with the best standard practices and in a manner protective of its employees, the public and the environment.

7.2 CONTRACTOR will warrant the foregoing warranties in paragraph 7.1 above for a period of one (1) year from the date the Work is completed and accepted by COMPANY. In the event any Work fails to meet any of the foregoing warranties within the period specified above, without waiving any other rights or remedies COMPANY may have at law, CONTRACTOR agrees forthwith to correct, repair or replace the Work and any damage to other work or material at CONTRACTOR's expense without cost to COMPANY.

7.3 Labor, equipment and materials furnished by CONTRACTOR pursuant to paragraph 7.2 to correct defects shall be warranted by CONTRACTOR in accordance with the warranties set forth in paragraphs 7.1 and 7.2 for a period of twelve (12) months from the date of completion of the correction.

7.4 In the event CONTRACTOR was notified of any failure of CONTRACTOR's foregoing warranties and failed to correct promptly and adequately such Work, COMPANY shall have the right to correct or to have such Work corrected and COMPANY shall be entitled to deduct the cost of such corrective Work from any monies due or becoming due to CONTRACTOR under this Contract or otherwise. In the event that no monies are due or shall become due to CONTRACTOR under this Contract then CONTRACTOR shall promptly pay COMPANY the costs incurred in correcting such Work.

7.5 COMPANY may be contracting for this Work and the benefits derived therefrom as agent for its affiliate. All of CONTRACTOR's warranties under this Contract, and any warranties made by manufacturers, suppliers, subcontractors or others acting in the interest of the parties to this Contract, shall inure to the benefit of affiliate, as well as to COMPANY. CONTRACTOR shall make certain that all warranties not previously issued to such affiliate, where the Work is performed for such affiliate, are assigned to such affiliate upon completion of the Work.

ARTICLE 8 - INDEMNITY

8.1 CONTRACTOR AGREES TO PROTECT, INDEMNIFY, HOLD HARMLESS, AND DEFEND COMPANY, ITS SUBSIDIARIES AND AFFILIATED COMPANIES, AND THE OFFICERS, DIRECTORS, EMPLOYEES, WORKMEN, AGENTS, SERVANTS AND INVITEES OF COMPANY, ITS SUBSIDIARIES AND AFFILIATED COMPANIES, FROM AND AGAINST ALL LOSSES, DAMAGES (INCLUDING PUNITIVE DAMAGES), DEMANDS, CLAIMS, SUITS AND OTHER LIABILITIES, INCLUDING ATTORNEY FEES AND OTHER EXPENSES OF LITIGATION OR DEFENSE (ALL HEREINAFTER REFERRED TO AS "CLAIMS"), BECAUSE OF

(I) BODILY INJURY, INCLUDING DEATH AT ANY TIME RESULTING THEREFROM,

(II) DAMAGES TO ALL PROPERTY, INCLUDING LOSS OF USE THEREOF AND DOWNTIME (BUT EXCLUDING LOSS OF USE THEREOF AND DOWNTIME OF COMPANY AND PROPERTY DAMAGE TO COMPANY AS PROVIDED IN PARAGRAPH 8.2 BELOW),

(III) CONTAMINATION OF OR ADVERSE EFFECTS ON THE ENVIRONMENT, INCLUDING BUT NOT LIMITED TO THE COST OF ASSESSMENT, REMEDIATION AND ALL OTHER RELATED ACTIVITIES,

(IV) VIOLATION OF OR FAILURE TO COMPLY WITH ANY APPLICABLE LAW, ORDINANCE, REGULATION, RULE OR ORDER, AND

(V) A BREACH BY CONTRACTOR, ITS EMPLOYEES, WORKMEN, AGENTS, SERVANTS, SUBCONTRACTORS, OR VENDORS, OF ANY TERM, PROVISION OR WARRANTY CONTAINED HEREIN, AND

(VI) INFRINGEMENT OF PATENT OR MISAPPROPRIATION OF TRADE SECRET OR PROPRIETARY RIGHTS OF ANY THIRD PARTY BY ANY DEVICE, PROCESS OR MATERIAL NOT SPECIFIED BY COMPANY.

WHICH ARISE FROM CONTRACTOR'S NEGLIGENT ACT OR OMISSION IN PERFORMANCE OF SERVICES HEREUNDER

8.2 NOTWITHSTANDING PARAGRAPH 8.1 ABOVE, CONTRACTOR SHALL NOT BE LIABLE TO COMPANY IN RESPECT OF ANY PHYSICAL LOSS OR DAMAGE (EXCLUDING THE COST OF CORRECTING DEFECTIVE WORK) TO THE WORK, TOGETHER WITH THE MATERIALS SUPPLIED BY CONTRACTOR AND ANY MATERIALS SUPPLIED BY COMPANY OR THIRD PARTIES WHICH ARE UNDER THE CARE, CUSTODY AND CONTROL OF CONTRACTOR, ITS EMPLOYEES, WORKMEN, AGENTS, SERVANTS, SUBCONTRACTORS AND VENDORS TO THE EXTENT SUCH LOSS OR DAMAGE EXCEEDS FIFTY THOUSAND DOLLARS ($50,000) WITH RESPECT TO ANY SINGLE OCCURRENCE.

8.3 CONTRACTOR'S SAID AGREEMENT TO PROTECT, INDEMNIFY, HOLD HARMLESS AND DEFEND AS SET FORTH IN PARAGRAPH 8.1 ABOVE SHALL NOT BE NEGATED OR REDUCED BY VIRTUE OF CONTRACTOR'S INSURANCE CARRIER'S DENIAL OF INSURANCE COVERAGE OF THE OCCURRENCE OR EVENT WHICH IS THE SUBJECT MATTER OF THE CLAIMS AND/OR REFUSAL TO DEFEND CONTRACTOR OR COMPANY. IN ADDITION, CONTRACTOR WILL PAY ALL COSTS AND EXPENSES, INCLUDING ATTORNEY FEES AND ALL OTHER EXPENSES OF LITIGATION INCURRED BY COMPANY TO ENFORCE THE FOREGOING AGREEMENT TO PROTECT, INDEMNIFY, HOLD HARMLESS AND DEFEND COMPANY.

8.4 THIS PARAGRAPH 8.4 APPLIES ONLY TO WORK PERFORMED IN THE STATE OF LOUISIANA. FOR PURPOSES OF THE LOUISIANA WORKER'S COMPENSATION LAW, La. R.S. 23:1021 *et seq.*, COMPANY AND CONTRACTOR AGREE THAT THE WORK PERFORMED BY CONTRACTOR AND ITS EMPLOYEES PURSUANT TO THIS CONTRACT ARE AN INTEGRAL PART OF AND ARE ESSENTIAL TO THE ABILITY OF COMPANY TO GENERATE COMPANY'S GOODS, PRODUCTS AND SERVICES, AND THAT CONTRACTOR'S WORK AND SERVICES SHALL BE CONSIDERED PART OF COMPANY'S TRADE, BUSINESS, AND OCCUPATION, FOR PURPOSES OF La. R.S. 23:1061(A)(1). FURTHERMORE, COMPANY AND CONTRACTOR AGREE THAT COMPANY IS THE PRINCIPAL OR STATUTORY EMPLOYER OF CONTRACTOR'S EMPLOYEES FOR PURPOSES OF La. R.S. 23:1061(A) ONLY. IRRESPECTIVE OF COMPANY'S STATUS EITHER AS THE STATUTORY EMPLOYER OR AS THE SPECIAL EMPLOYER (AS DEFINED IN La. R.S. 23:1031(C)) OF CONTRACTOR'S EMPLOYEES, AND REGARDLESS OF ANY OTHER RELATIONSHIP OR ALLEGED RELATIONSHIP BETWEEN COMPANY AND CONTRACTOR'S EMPLOYEES, CONTRACTOR SHALL BE AND REMAIN AT ALL TIMES PRIMARILY RESPONSIBLE FOR THE PAYMENT OF LOUISIANA WORKER'S COMPENSATION BENEFITS TO ITS EMPLOYEES, AND NEITHER CONTRACTOR NOR ITS UNDERWRITERS SHALL BE ENTITLED TO SEEK CONTRIBUTION FOR ANY SUCH PAYMENTS FROM COMPANY.

8.5 CONTRACTOR SHALL DEFEND, INDEMNIFY AND HOLD HARMLESS COMPANY FROM AND AGAINST ALL CLAIMS, DEMANDS AND LIABILITIES ARISING FROM POLLUTION, INCLUDING CONTROL AND REMOVAL THEREOF, CAUSED BY CONTRACTOR'S NEGLIGENT ACT OR OMISSION, WHETHER ACTIVE OR PASSIVE, IN PERFORMANCE OF SERVICES HEREUNDER.

ARTICLE 9 - INSURANCE

9.1 Without limiting in any way the scope of any obligations or liabilities assumed hereunder by CONTRACTOR, CONTRACTOR shall procure or cause to be procured and maintained at its expense, for the duration of this Contract, and with insurance companies acceptable to COMPANY, the insurance policies described below. Contractor acknowledges that the endorsements and the type of Insurance coverage and the limits thereof, are minimum limits which shall not be reduced without the prior written consent of Company, which consent is solely in the discretion of the Company.

9.1.1 Workers' Compensation and Employer's Liability Insurance covering the employees of CONTRACTOR for all compensation and other benefits required of CONTRACTOR by the Worker's Compensation or other statutory insurance laws in the state having jurisdiction over such employees, and over the location where the Work is being performed, including Alternate Employer. Employer's Liability Insurance with limits of not less than Three Million Dollars ($3,000,000) per occurrence.

9.1.2 General Liability Insurance including contractual liability, XCU hazards (explosion, collapse and underground) and completed operations to cover liability for bodily injury and property damage with a combined single limit of not less than Three Million Dollars ($3,000,000) per occurrence.

9.1.3 Business Automobile Liability Insurance, if owned, hired or non-owned automotive equipment is used in the performance of this Contract, to cover liability for bodily injury and property damage with a combined single limit of not less than Three Million Dollars ($3,000,000) per occurrence.

9.1.4 Aircraft Liability, If Applicable to cover bodily injury and property damage liability with a combined single limit of not less than Three Million Dollars ($3,000,000) per occurrence.

9.1.5 Marine Liability, If Applicable involving work to be performed on or over water including docks, wharves, etc., Worker's Compensation and Employer's Liability coverage shall also include Maritime Employer's Liability including Transportation, Wages, Maintenance and Cure, U. S. Longshore and Harbor Workers' Act, and Outer Continental Shelf Land Act with limits of not less than Three Million Dollars ($3,000,000) per occurrence.

For work involving barges and other watercraft, Worker's Compensation and Employer's Liability coverage shall also include Maritime Employer's Liability including Transportation, Wages, Maintenance and Cure, U. S. Longshore and Harbor Workers' Act, and Outer Continental Shelf Land Act with limits of not less than Three Million Dollars ($3,000,000) per occurrence. Marine liability insurance for owned or chartered watercraft shall include liability for bodily injury and property damage with a combined single limit of not less than Ten Million Dollars ($10,000,000) per occurrence. Insurance shall be endorsed to specifically include full crew coverage (unless provided under Worker's Compensation); coverage for diving operations, if applicable; liability for seepage, pollution, containment and cleanup; collision liability; and, contractual liability.

9.1.6 Special Provisions Concerning Policies Placed by CONTRACTOR.
All policies (except Worker's Compensation) shall include COMPANY and Its Affiliates as additional insured for liabilities arising out of the performance under this Contract and shall be primary to any other insurance of COMPANY. Such insurance shall specifically provide that it applies separately to each insured against which claim is made or suit is brought, except with respect to the limits of the insurer's liability. All policies shall provide that all rights of subrogation against COMPANY and its affiliates are waived when permitted by law. Such

insurance shall be primary over any coverage's maintained by the Certificate Holder. All policies must include thirty (30) days written notice of cancellation to Certificate Holder.

The policy limits specified above are minimum requirements and not limits of liability and shall not be construed in any way as COMPANY's acceptance of responsibility for financial liabilities in excess of such limits. CONTRACTOR shall pay all deductibles and self-insured retentions, including defense costs, applicable to the insurance.

Prior to commencement of any Work, CONTRACTOR shall furnish COMPANY with Certificates of Insurance, which document that all coverages and endorsements required by this Article have been obtained. CONTRACTOR shall obtain renewal certificates as and when necessary and copies thereof shall be forwarded to COMPANY as soon as same are available and in any event prior to the expiration of the policy so renewed. These certificates shall provide that the insurer shall give thirty (30) days written notice to COMPANY prior to change or cancellation of any policy. In no event shall COMPANY's acceptance of an insurance certificate that does not comply with this paragraph constitute a waiver of any requirement of this Article.

9.1.7 Subcontractors
CONTRACTOR shall require all its subcontractors to provide statutory Workers' Compensation insurance coverage. To the extent not provided for by the subcontractors and not covered by CONTRACTOR's insurance, deficiencies shall be the sole responsibility of CONTRACTOR.

ARTICLE 10 – SAFETY

10.1 Contractor shall perform all work in such manner as to cause a minimum of interference with Company's operations and shall conduct its work in accordance with the then currently acceptable industry safety standards to maintain adequate protection of persons and property during Contractor's performance hereunder. Contractor will perform its duties in a safe manner and will have in effect and will enforce a set of safety and loss prevention standards which comply with all laws, and CONTRACTOR MINIMUM SAFETY REQUIREMENTS, as may be amended or modified from time-to-time, attached hereto as Exhibit C. Prior to commencement of each job, Contractor shall inspect the premises and facilities on which said work is to be performed in order to be apprised of any and all apparent risk incident thereto. Upon completion of the work, Contractor shall leave the premises clean and free of all waste materials and rubbish. Contractor agrees to limit smoking and the use of heat and/or fire implements, including welding and torch cutting tools, to such locations and occasions as are specifically authorized in writing by COMPANY.

ARTICLE 11 – CONTROLLED SUBSTANCE ABUSE POLICY

11.1 The Company maintains a drug and alcohol free workplace. CONTRACTOR acknowledges that it has been advised and agrees to advise all its employees, subcontractors, agents and business invitees of any subcontractor, agent, or business invitee, of the following safety regulations or policies concerning controlled substances (alcohol, misuse of prescription drugs and illegal drugs):

(a) It is the policy of Company that the use, possession, sale, transfer, purchase, or the presence in one's system of a controlled substance on Company property is prohibited;

(b) CONTRACTOR is to have in place a drug and alcohol free workplace policy;

(c) Entry onto Company property constitutes consent to an inspection of the person (including, but not limited to, the taking of a urine sample) and personal effects, as well as any vehicle(s) when entering or leaving Company property, and;

(d) Any person who is found in violation of the policy or who refuses to permit an inspection may be removed and barred from Company's property, at the sole discretion of Company.

ARTICLE 12 – ACCIDENT REPORTS

12.1 All accidents must be reported. In the event an accident involving the property, equipment, or personnel of CONTRACTOR, Company, or any third party occurs on Company's property, or which arises out of, results from or is in any way connected with CONTRACTOR's work or presence upon Company's property or other activities pursuant to this Contract, CONTRACTOR shall immediately report such accident to Company's designated representative set forth in Article 25 hereof. In addition, a written report of such accident must be prepared by CONTRACTOR and delivered to Company's representative within 24 hours after CONTRACTOR becomes aware of each such accident. This report should contain factual information only and should not contain opinion, speculation, or supposition as to fault, liability, or prevention. CONTRACTOR shall also provide Company with a copy of each and every report of each such accident, including statements or other investigative material or documents which CONTRACTOR completes, or is required to submit, or does submit, to any entity other than Company, including without limitation, any governmental agency or body, CONTRACTOR's insurers, or others.

12.2 Each party hereto, whether performing or non-performing, breaching or non-breaching, defaulting or non-defaulting shall be entitled to setoffs, claims, counterclaims, and credits (disregarding whether a party failed to perform, breached first, or defaulted first) in connection with any payment or the performance of any obligations under or in connection with this Contract or termination of this Contract. In case of a breach of this Contract by either party, the non-breaching party shall give the breaching party notice of the breach and a reasonable period to cure under the circumstances.

ARTICLE 13 - LIENS

13.1 Where required by COMPANY, progress payments and the final payment shall be substantiated by notarized lien affidavits and lien waivers evidencing that all suppliers, subcontractors and laborers have been paid in full for Work performed and materials furnished, up to and including the date(s) of such affidavits. COMPANY shall not be obligated to make any payment for Work performed until requested affidavits and lien waivers are received.

13.2 CONTRACTOR shall keep the Work free and clear of all liens. CONTRACTOR shall promptly and satisfactorily settle all claims, including lien claims of its subcontractors, for labor performed and supplies or materials furnished in connection with such Work. In the event CONTRACTOR fails or refuses to promptly and satisfactorily settle all such claims, COMPANY shall, after so notifying CONTRACTOR in writing, have the right to settle such claims on behalf of and for the account of CONTRACTOR, and deduct the amount from the contract price. Alternatively, COMPANY shall have the right to hold all sums due or to become due CONTRACTOR, without interest, until satisfactory evidence is furnished to it that all such claims and liens have been settled and released.

ARTICLE 14 - TERMINATION

14.1 COMPANY shall have the right to terminate this Contract or the Work in whole or in part, without cause, at any time by notice in writing to CONTRACTOR. Upon receipt of any such notice, CONTRACTOR shall cease all Work as provided in said notice and this Contract or the Work shall terminate effective as of the date such notice is received by CONTRACTOR. COMPANY shall assume all obligations and shall be entitled to all privileges of CONTRACTOR in connection with any Work Order(s) issued prior to the termination of this Contract, including any contract which CONTRACTOR has entered into for the supply of services, equipment, or materials. In the event COMPANY

terminates this Contract during CONTRACTOR's performance of Work under a Work Order, the total settlement price through the date of cancellation shall be valued at rates and prices consistent with the amounts applicable to the Work or, if on a cost reimbursable basis, consistent with the time and material rates under this Contract. In no event shall CONTRACTOR be entitled to anticipated profits or any damages because of such termination. CONTRACTOR will not be permitted to terminate this Contract while any Work under outstanding Work Order(s) is not complete.

ARTICLE 15 - SUSPENSION

15.1 COMPANY shall have the right to suspend all or any part of the Work at any time and for any reason not defined in Article 21 as "force majeure" by giving written notice of suspension to CONTRACTOR. Upon receipt of such notice, CONTRACTOR shall immediately take such measures as are, in the opinion of COMPANY's Representative, necessary or appropriate in order to effect such suspension and to safeguard and store the Work or part thereof during the period of suspension. In the event of suspension, COMPANY shall pay CONTRACTOR all reasonable and verifiable additional costs incurred in effecting suspension and in safeguarding and storing the Work or part thereof.

15.2 Upon termination of any such suspension, CONTRACTOR agrees to re-commence the Work under the terms and conditions of the Contract.

ARTICLE 16 - AUDIT RIGHTS

16.1 CONTRACTOR agrees to retain all records and accounts related to charges or CONTRACTOR invoices for a period of at least three (3) years from the completion date of any Work performed pursuant to this Contract.

16.2 CONTRACTOR shall permit COMPANY access to, either in the field or at the home office, for review and audit, at all reasonable times, all records and accounts relating to costs and expenses invoiced to COMPANY under this Contract, including, but not limited to, DOT and OSHA records and reports, supporting documentation, and all reimbursable costs and expenses for the Work.

16.3 CONTRACTOR shall respond in writing to COMPANY within thirty (30) days of submission by COMPANY of its audit findings. CONTRACTOR shall work diligently with COMPANY to resolve any differences with respect to the audit. Any adjustments or payments which must be made as a result of any such audit, inspection or examination of CONTRACTOR's invoices and/or records shall be made available within thirty (30) days of resolution of any adjustments to be made.

ARTICLE 17 - CONFIDENTIALITY

17.1 All information obtained by the CONTRACTOR in the performance of this Contract not in the public domain shall be considered confidential by CONTRACTOR. CONTRACTOR agrees to prevent information and data which it or its employees, agents or subcontractors obtained, directly or indirectly, concerning the Work, the Work site, or any of COMPANY's property, plans or operations, from being disclosed to others without the prior written consent of COMPANY. CONTRACTOR will use the information solely for performance of the Work and for no other purpose. CONTRACTOR will not make or consent to publicity releases or announcements concerning this Contract or CONTRACTOR's participation in the Work. CONTRACTOR shall not take photographs of the Work site or any of COMPANY's property without first obtaining COMPANY's written consent. CONTRACTOR shall require each of its subcontractors and agents to agree to the same limitations and obligations provided for in this paragraph. The provisions of this paragraph shall remain binding obligations on CONTRACTOR until the earlier of the date which is five (5) years after the expiration or termination of this Contract or the date the confidential information has become part of the public domain by means other than disclosures or releases prohibited by this Contract.

17.2 Upon completion of the Work under this Contract, CONTRACTOR will (i) return all originals and copies of the confidential information to COMPANY, (ii) destroy any documents, reports, or drawings developed by CONTRACTOR and embracing confidential information of COMPANY, and (iii) remove from computer memory all of said confidential information therein residing.

ARTICLE 18 - PROPRIETARY RIGHTS

18.1 To the extent that the "work made for hire" rule under the Copyright Act of 1976 applies, CONTRACTOR acknowledges and agrees that the product of all Work by CONTRACTOR for COMPANY is a work made for hire and, as such, all rights in the Work belong to and are assigned to COMPANY. In addition, if the "work made for hire" rule under the Copyright Act of 1976 does not apply, CONTRACTOR agrees and hereby acknowledges that all rights in such Work are assigned and belong to COMPANY, and CONTRACTOR agrees to execute all documents requested by COMPANY to effect such assignment. CONTRACTOR specifically acknowledges and agrees that all right, title and interest in and to the product of all Work, including copyright of computer software and related work, is assigned to COMPANY.

18.2 All drawings, flow diagrams, sketches, specifications, computer programs and printouts, computer data or other records, regardless of form (hereinafter collectively referred to as "Records"), prepared by CONTRACTOR under the provisions of this Contract, shall be the property of COMPANY and may be used by COMPANY for any purpose. As part of the fulfillment of this Contract, CONTRACTOR shall deliver to COMPANY physical possession of all Records upon completion of the Work, or in the event the Work is terminated for any reason, then immediately upon such termination of the Work.

ARTICLE 19 - COMPLIANCE WITH LAWS, ENVIRONMENTAL LAWS AND REGULATIONS

19.1 CONTRACTOR will fully comply with all applicable laws and regulations pertaining to working conditions including, but not limited to, workers' compensation, social security, federal, state and local income tax withholding, unemployment insurance, the Occupational Safety and Health Act, the Immigration Reform and Control Act of 1986, the Americans with Disabilities Act, and all applicable federal, state and local laws including without limitation those laws affecting employment, business opportunities, and the environment. CONTRACTOR is responsible for the timely payment of any and all employment-related taxes with respect to Work performed by CONTRACTOR. In the event that CONTRACTOR's employees or its subcontractors' employees are deemed to be COMPANY employees by any government authority,
CONTRACTOR shall reimburse COMPANY for any corresponding taxes or fees paid by the COMPANY.

19.2 CONTRACTOR acknowledges receipt of, has read and understands, and shall abide by COMPANY POLICIES APPLICABLE TO CONTRACTORS, a copy of which is attached as Exhibit A. COMPANY may amend Exhibit A from time-to-time at its sole discretion.

19.3 CONTRACTOR acknowledges receipt of, has read and understands, and shall abide by Exhibit B made a part hereof, covering certain Equal Opportunity Certifications and Agreements applicable to business and operations.

19.4 CONTRACTOR expressly guarantees that for all tools, materials and equipment to be furnished and used, and for all work and labor to be performed under the terms of this Contract and in every activity connected therewith, Contractor shall comply fully with all applicable Federal, State and local laws, ordinances, rules and regulations, and shall furnish Company evidence of such compliance as COMPANY may require at any time. If the services rendered under this Contract are licensed by the State in which the work is to be performed, Contractor must obtain and maintain the State license and **must** submit a copy to COMPANY prior to the performance of work covered by this Contract.

19.5 CONTRACTOR agrees that all products furnished or work performed shall be in compliance with all applicable Federal, State and local laws and regulations respecting the environment, including, but not limited to, the Clean Air Act, the Toxic Substance Control Act, the Safe Drinking Water Act, the Comprehensive Environmental Response, Compensation and the Liability Act, the Superfund Amendments and Reauthorization Act, the Environmental Planning and Community Right-To-Know Act, the Oil Pollution Act of 1990, the Clean Air Act Amendments of 1990, the Migratory Bird Treaty Act, the Endangered Species Act, and the Resource Conservation and Recovery Act. The handling of any solid or hazardous waste subject to the Resource Conservation and Recovery Act shall be in compliance with EPA Regulations at Parts 260 through 265, and Parts 122 through 125 of Title 40, Code of Federal Regulations, and any other applicable regulation under the Resource Conservation and Recovery Act, Contractor agrees at all times in performance of the work hereunder, to abide by all the Federal, State, and local laws listed above as said laws or regulations may be amended from time-to-time subsequent to the effective date of this Major Service Contract and all other laws, orders, rules and regulations, prescribed by any governmental body having jurisdiction.

ARTICLE 20 - INDEPENDENT CONTRACTOR

20.1 CONTRACTOR is an independent CONTRACTOR with the right to supervise, manage, control, and direct the manner and methods for performing the Work. COMPANY is interested only in the results to be obtained; provided, however, the COMPANY shall be entitled to review and inspect the Work.

20.2 Right of Removal. COMPANY shall have the right to request removal from services hereunder any employee(s) of CONTRACTOR who in COMPANY's sole opinion, has engaged in improper conduct, is not performing in a satisfactory manner or is not qualified to perform assigned work. CONTRACTOR shall promptly comply with such request.

ARTICLE 21 - FORCE MAJEURE

21.1 The term "*force majeure*", as used herein, shall mean an unforeseen event or occurrence beyond the reasonable control and without the fault or negligence of the affected party including, but not limited to, earthquakes, inclement weather, fire, explosions, malicious mischief, insurrection, riot, strikes, lockouts, boycotts, picketing, labor disputes or disturbances (excluding strikes, lockouts, boycotts, pickets, labor disputes or disturbances or other industrial disputes or action involving the CONTRACTOR or CONTRACTOR's employees or its subcontractors or vendors or any of their employees), acts of the public enemy, war (declared or undeclared), compliance with any order or directive of any governmental agencies or authorities or representatives of any government acting under claim or color of authority, loss of transportation facilities ordinarily available to and used by a party in the performance of the obligations imposed by this Contract; where such event, occurrence or compliance would render the affected party's performance illegal or physically impossible.

21.2 Neither CONTRACTOR nor COMPANY shall be under any obligation or subject to any liability for failure to carry out respectively the terms and provisions of this Contract during the time and to the extent that such failure is due solely to *force majeure*. The party affected by *force majeure* must give notice stating the time of occurrence and full particulars of the *force majeure* in writing to the other party as soon as possible after the occurrence of the *force majeure*. The obligation of the party giving notice of *force majeure* shall be suspended during the continuance of the *force majeure* event. Nothing in this Article shall be construed to relieve either party of its obligation to pay monies due under the Contract.

ARTICLE 22 - SUBCONTRACTING AND ASSIGNMENTS

22.1 CONTRACTOR may subcontract any part of the Work with prior written approval of COMPANY, but CONTRACTOR shall not be relieved of or released from, any of its obligations or responsibilities under this Contract. For purposes of this Contract, Work performed by subcontractors shall be deemed to be Work performed by CONTRACTOR. If requested, CONTRACTOR shall provide COMPANY with an executed copy of each subcontract and purchase order issued by CONTRACTOR for the performance of the Work. CONTRACTOR shall ensure that the terms and conditions of any such subcontract or purchase order shall comply with and correspond to the terms and conditions of this Contract. Changes in subcontractors, nature of Work sublet, or scope of Work sublet shall also be subject to the prior written approval of COMPANY.

22.2 Neither this Contract nor any rights thereunder shall be assignable by CONTRACTOR without the prior written consent of the COMPANY and any such assignment without COMPANY's prior written consent will be void as to COMPANY.

22.3 CONTRACTOR shall provide, or cause to provide, in any subcontract of the Work or purchase order with respect to the Work that COMPANY may, upon termination of the Contract, assume the rights and obligations (first arising after the assumption of the subcontract or purchase order) of the CONTRACTOR under any subcontract or purchase order entered into by CONTRACTOR with respect to the Work. Any subcontract of the Work shall provide that the obligations, representations and duties owed to CONTRACTOR by a subcontractor shall also be owed to COMPANY. CONTRACTOR shall include the following, or a substantially similar provision, in all subcontracts for the Work or purchase order with respect to the Work:

"Upon the termination or suspension, for any reason, of the prime contract between Owner and Contractor, Owner may assume this purchase order or this subcontract between Contractor and subcontractor, effective from and after the date of assumption."

CONTRACTOR, at the request of COMPANY, shall provide a list, with address and phone number, of all subcontractors and purchase order vendors engaged upon the Work.

ARTICLE 23 - GOVERNING LAW

23.1 The validity, interpretation and performance of this Contract shall be governed and construed in accordance with the laws of the state where the COMPANY's site is located as referenced in the applicable Work Order without reference to the choice of law doctrine of such state.

ARTICLE 24 – PERMITS

24.1 Prior to commencing any activities contemplated under this Major Service Contract, Contractor warrants that it shall obtain and maintain all permits, bonds, and licenses that Contractor is required by law to obtain in connection with performance of work covered herein and Contractor shall, upon request, provide copies of said permits, bonds and licenses to COMPANY.

ARTICLE 25 – NOTICES

25.1 All statements, insurance certificates and other routine correspondence shall be sent to Company by registered or certified mail, postage prepaid, return receipt requested, or delivered in person or by commercial courier or sent by facsimile to:

Plains Marketing, L. P.
333 Clay Street, Suite 1600
Houston, Texas 77002
Attn: Kelly M. Tarr, Contracts and Insurance Specialist
Facsimile: 713-289-7422

25.2 No legal notice required or permitted hereunder concerning a claim or breach arising hereunder or notice of termination shall be valid unless given in writing and shall be deemed to have been validly given only if delivered in person or sent by registered or certified mail, postage prepaid, return receipt requested, facsimile or commercial courier to:

Plains Marketing, L.P.
333 Clay Street, Suite 1600
Houston, Texas 77002
Attn: Lawrence J. Dreyfuss, Vice President
and General Counsel
Facsimile: 713-646-4216

ARTICLE 26 - ENTIRETY OF CONTRACT

26.1 This Contract, any Work Order issued hereunder and attachments to this Contract or any Work Order represent the entire understanding and agreement between the parties hereto and supersedes any and all prior contracts, whether written or oral, that may exist between the parties regarding the Work. No terms, conditions, prior course of dealings, course of performance, usage or trade, understandings, purchase orders, or contract purporting to modify, vary, supplement or explain any provision of this Contract shall be effective unless in writing and signed by representatives of both parties authorized to amend this Contract.

26.2 This Contract may be amended or modified only by written amendment signed by both parties. Any attempt by either party, through a Work Order, purchase order, invoice, or other document, to vary in any degree any of the terms of this Contract shall be deemed immaterial and shall be void, unless this provision is expressly waived in an amendment executed as specified hereinabove.

26.3 Drafts of this Contract and prior correspondence regarding this Contract shall not be used by either party as evidence of the intent of the parties or otherwise be admissible in evidence in interpreting this Contract.

ARTICLE 27 - SEVERABILITY

27.1 The provisions of this Contract are severable, and if any clause or provisions hereof shall be held invalid or unenforceable in whole or in part in any jurisdiction, then such invalidity or unenforceability shall affect only such clause or provision, or part thereof, in such jurisdiction and shall not in any manner affect such clause or provision in any other jurisdiction, or any other clause or provision in this Contract in any jurisdiction. Any such clause or provision held invalid or unenforceable, in whole or in part, to the extent permitted by law, shall be restricted in applicability or reformed to the minimum extent required for such clause or provision to be enforceable.

ARTICLE 28 - BINDING EFFECT

28.1 All rights conferred by this Contract shall be binding upon, inure to the benefit of, and be enforceable by or against the respective successors and assigns of the parties hereto.

28.2 It is expressly understood that the provisions of this Contract do not impart enforceable rights in anyone who is not a party or a successor or assign of a party hereto. No third party (including an employee or a contractor of a party) is intended to have or shall have any rights under this Contract.

ARTICLE 29 - HEADINGS

29.1 The headings shown for each section in this Contract are general descriptions only and not for limitation or alteration of the contents of this Contract in any way.

ARTICLE 30 - WAIVER

30.1 Any waiver by either party of any provision or condition of this Contract shall not be construed or deemed to be a waiver of any other provision or condition of this Contract, nor a waiver of a subsequent breach of the same provision or condition, unless such waiver is expressed in writing and signed by the parties. COMPANY's consent to delay in the performance by CONTRACTOR of any obligation shall not be applicable to any other obligation. Delay in the enforcement of any remedy in the event of a breach of any term or condition, or in the exercise by either party of any right, shall not be construed as a waiver of such remedy or right.

ARTICLE 31 - ETHICAL BUSINESS PRACTICES

31.1 No director, officer, employee or agent of CONTRACTOR shall give or receive any commission, fee, rebate, or gift, except those articles of nominal value given as sales promotion or holiday remembrances, or the value of reasonable entertainment consistent with local social and business custom, or enter into any business arrangement with any director, employee or agent of COMPANY without prior written notification thereof to COMPANY. CONTRACTOR shall promptly notify COMPANY of any violation of this paragraph and any consideration received as a result of such violation shall be paid or credited to COMPANY.

31.2 CONTRACTOR shall disclose in writing and shall assist COMPANY in identifying any financial transactions between any employee of COMPANY, including family members, and CONTRACTOR, its officers, directors, shareholders/owners and employees.

ARTICLE 32 - SURVIVAL

32.1 Except as otherwise provided herein warranties, covenants and obligations at Articles 7, 8, 13 and 14 shall survive termination or cancellation of this Contract, regardless of the reason for such termination or cancellation, and shall continue in full force and effect.

IN WITNESS WHEREOF, the parties hereto by their duly authorized representatives have executed this Contract as of the day and year first above written.

C-K ASSOCIATES, LLC

By: _____

Printed Name: Patrick A. Long

Title: Chief Financial Officer

Date: 10/8/2009

Taxpayer ID #: 41-2096955

PLAINS MARKETING, L. P.
By Plains Marketing GP Inc.,
Its General Partner

By: _____

Printed Name: Mark J. Gorman

Title: Senior Vice-President – Operations

Date: 10/20/09

Approved as to form and content by Legal and Contracts

Exhibit A

COMPANY POLICIES
APPLICABLE TO CONTRACTORS

CONTRACTOR agrees to comply as follows:

(I) (No Smoking Policy). To require its employees, subcontractors, agents and representatives to adhere to COMPANY's No Smoking Policy. The Policy generally prohibits smoking in COMPANY's buildings and on COMPANY's property except as otherwise designated.

(II) (Anti-Harassment Policy). To require its employees, subcontractors, agents and representatives to adhere to COMPANY's Anti-Harassment Policy while on the premises or engaged in COMPANY business. The Policy prohibits all forms of harassment, including sexual harassment, which create an intimidating, hostile or offensive working environment.

(III) (Weapons Policy). To require its employees, subcontractors, agents and representatives to adhere to COMPANY's Weapons Policy. The Policy strictly prohibits the use, possession or concealing of any weapons, whether licensed or not and including all firearms and explosives, while on COMPANY's premises.

COMPANY reserves the right to conduct personal searches at any time. COMPANY intends to use personal searches when it believes the Policy may have been violated and/or for the purpose of deterrence and assurance that there is compliance with this Policy.

(IV) (Safety and Security Policy). To establish, administer, and enforce safety rules and procedures and shall require its employees, subcontractors, agents and representatives to adhere to COMPANY's Safety and Security Policies.

(V) (Drug and Alcohol Policy). To notify its employees, subcontractors, agents and representatives of COMPANY's Drug and Alcohol Policy which prohibits CONTRACTOR's employees, subcontractors, agents, and representatives from:

A. using, possessing, distributing, purchasing or selling drugs or alcohol while on COMPANY premises or while engaged in COMPANY business, including travel to and from a particular work area or areas;

B. reporting to and/or performing work for the COMPANY with unauthorized drugs or alcohol in excess of the Policy limit (.04% B.A.C.) in their body; or

C. refusing to submit to routine searches of their person, their personal property, and COMPANY or CONTRACTOR assigned property, while entering on or leaving COMPANY premises.

CONTRACTOR agrees to remove and replace, for the purposes of fulfilling its obligations to the COMPANY under this Contract, any of its employees, subcontractors, agents and representatives found to be in violation of its own anti-drug plan and/or COMPANY's Drug and Alcohol Policy, or those that the COMPANY believes to be in violation of the Drug and Alcohol Policy whose compliance with the Policy cannot be certified to by CONTRACTOR based upon laboratory testing acceptable to the COMPANY.

The following paragraphs addressing contractor drug testing policies and procedures are not applicable to contractors providing non-safety sensitive activities and/or services. Contractors providing non-safety activities and/or services (including but not limited to labor, equipment and materials) under the terms and conditions of this Contract are not required to have their own drug testing policies and procedures in place. However, while performing said services for COMPANY, contractor and its employees, agents and representatives are required to comply with the COMPANY's applicable Drug and Alcohol policies, as outlined herein. COMPANY shall be solely responsible for determining whether or not any particular contract services or activities are considered safety sensitive with respect to whether or not a specific contractor must have its own drug and alcohol misuse and prevention program in place.

If applicable, CONTRACTOR certifies that all of its employees, subcontractors, agents and representatives who may perform work covered by this Contract are subject to Laboratory Testing Provisions which are substantially equal to COMPANY's Policy in all respects

(COMPANY's Laboratory Testing Provisions are described in paragraphs 1 through 4 listed below). CONTRACTOR agrees to permit COMPANY, or its authorized representative, access to CONTRACTOR's property and records, without prior notification, for the purposes of examining/auditing CONTRACTOR's policies, practices and procedures pertaining to this requirement. Any deficiencies, as determined by COMPANY, can result in CONTRACTOR being removed from the work and/or being required to implement specified modifications prior to proceeding with work.

A. The facilities performing the test (laboratory analysis) shall be properly licensed and fully accredited.

B. COMPANY conducts drug and alcohol testing under the following circumstances:

1. Pre-employment Testing - All applicants for employment are required to submit to Laboratory Testing following their acceptance of a contingent job offer and prior to beginning work (drug screen only).

2. Reasonable Suspicion Testing - Undertaken when responsible officials have reasonable suspicion to believe an employee is in violation of COMPANY's Policy. For example, Laboratory Testing may be conducted in connection with a search if contraband is found in common areas and ownership cannot be determined; if an employee's performance, involvement in an accident, actions or appearance leads local management to believe there may be a violation of the Policy; or if an employee is charged with or being investigated in connection with a drug-related or alcohol-related criminal offense. The foregoing examples are not meant to be exclusive; other circumstances may arise which would constitute reasonable suspicion to request Laboratory Testing.

3. Random Testing - All employees performing work in safety sensitive positions at all COMPANY locations are subject to random drug and alcohol testing as outlined below, with the exception of employees who are covered by a D.O.T. random testing program.

   COMPANY defines a safety sensitive position as one in which requires that the employee perform the duties which are related to the safe operation or security of a facility or a piece of equipment and which, if not performed properly, could result in a serious safety risk or environmental hazard to employees, a facility, or the general public. All employees who have the direct responsibility of supervising employees who perform such duties are considered as occupying a safety-sensitive position.

   Random Testing will be conducted at an annualized rate of 25% for those who work on pipelines and associated equipment and at 50% for those who fall under FHWA regulations.

4. Return to Work Testing - Employees who are permitted to return to work following a positive laboratory test or other Policy violation and/or rehabilitation are subject to Laboratory Testing as determined by Health Services, and as outlined in a Return to Work Agreement.

5. Aviation Department Testing - Employees in COMPANY's Aviation Department are subject to periodic unannounced testing at least once per year.

6. Government Required Testing - Employees will be required to submit to Laboratory Testing as required by the U.S. Department of Transportation or by other federal, state or local governmental agencies.

C. Definitions Contained in COMPANY's Policy

1. Company

   "COMPANY" shall mean **Plains Marketing, L. P.** and any of **its affiliates** which are listed herein.

2. Unauthorized Drugs

For the purpose of this Policy, the term "Unauthorized Drugs" shall mean any substance, other than an Authorized Substance, which is, or has the effect on the human body of being, a narcotic, depressant, stimulant, hallucinogen, or cannabinoid, their precursors, derivatives, or analogues, and includes, but is not limited to, those substances scheduled as controlled substances pursuant to the Federal Controlled Substances Act, inhalants, "designed drugs", and "look-a-likes".

3. Authorized Substances

Substances having a physiological, psychological, or biochemical effect which are lawfully prescribed or which are available without a prescription, which are lawfully obtained by an employee and which an employee possesses and uses in the appropriate manner, in the dosages and for the purposes for which the substances were prescribed or manufactured, are considered "Authorized Substances" for the purposes of this Policy. In the case of alcohol, such is excluded from this definition to the extent its possession of consumption places an employee in violation of the "Alcohol Policy".

4. Company Premises

"Company Premises" includes, but is not limited to, **Plains Marketing, L. P. and Its Affiliates** owned, rented, used, or leased property, including lodging furnished or paid for by the COMPANY; COMPANY work site locations, offices, and/or parking lots; or COMPANY owned, leased, or rented vehicles, aircraft, vessels, or equipment.

5. Alcohol

"Alcohol" includes, but not limited to, distilled spirits, liquor, beer, wine, malt liquor or any other intoxicants used for beverage purposes.

6. Under the Influence of Alcohol

"Under the Influence" shall mean that an individual is affected by Alcohol in any detectable manner. Evidence of being under the influence may be established by a professional or lay person's opinion, a physiological test/analysis, or a biochemical test/analysis. An "Under the Influence" determination is not limited to nor must it consist of evidence of impairment of physical or mental ability or misconduct. An employee whose blood alcohol content is found to be equivalent to or greater than the governmentally recognized level for being under the influence shall be presumed to be Under the Influence of Alcohol.

7. Blood Alcohol Content

Additionally, an employee whose blood alcohol level content is determined during work hours to be equivalent to or greater than .04 percent Blood Alcohol Content will be in violation of this Policy.

8. Contraband

"Contraband" for purposes of this Policy shall mean drug paraphernalia.

9. Laboratory Testing

"Laboratory Testing" includes, but is not limited to, a physiological test/analysis or a biochemical test/analysis, including urinalysis, breath analysis, and blood analysis.

10. Personal Search

"Personal Search" includes a search of employees' personal property located on COMPANY Premises, including but not limited to, their personal effects, lockers, baggage, desks, lunch boxes, containers, purses, billfolds, parcels; private

vehicles if on COMPANY Premises and living quarters, if furnished or paid for by the COMPANY; any COMPANY property assigned to employees; and a limited search of the person.

11. Policy Violations

COMPANY considers any of its employees who have a positive drug test result; have a blood alcohol content .04% or higher during working hours; possess prohibited materials, fail to cooperate with COMPANY requests for testing and/or searches; or who otherwise violate any provision of its Policy are subject to severe disciplinary action up to and including discharge for the first violation.

D. Resource Listing

American Council for Drug Education	800-488-DRUG
Compliance Services	318-457-2443
DISA Contractors Consortium	800-752-6432
Drug Regulations Compliance, Inc.	318-868-7569
Institute for a Drug Free Workplace	202-842-7400
National Clearinghouse for Alcohol & Drug Information Workplace Helpline	800-843-4971
National Institute on Drug Abuse	301-443-6245
Pipeline Testing Consortium, Inc.	316-669-8800
DOT 49CFR, Parts 192, 195 & 199	

EXHIBIT B

I. EQUAL OPPORTUNITY
(applicable to all contracts and purchase orders in excess of $10,000)

During the performance of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer, recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The contractor will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions including sanctions for noncompliance: *Provided, however*, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

II. EQUAL OPPORTUNITY FOR WORKERS WITH DISABILITIES
(applicable to all contracts and purchase orders in excess of $10,000)

(1) The contractor will not discriminate against any employee or applicant for employment because of physical or mental disability in regard to any position for which the employee or applicant for employment is qualified. The contractor agrees to take affirmative action to employ, advance in employment and otherwise treat qualified individuals with disabilities without discrimination based on their physical or mental disability in all employment practices, including the following:
   (i) Recruitment, advertising, and job application procedures;
   (ii) Hiring, upgrading, promotion, award of tenure, demotion, transfer, layoff, termination, right of return from layoff and rehiring;
   (iii) Rates of pay or any other form of compensation and changes in compensation;
   (iv) Job assignments, job classifications, organizational structures, position descriptions, lines of progression, and seniority lists;
   (v) Leaves of absence, sick leave, or any other leave;
   (vi) Fringe benefits available by virtue of employment, whether or not administered by the contractor;

(vii) Selection and financial support for training, including apprenticeship, professional meetings, conferences, and other related activities, and selection for leaves of absence to pursue training;
(viii) Activities sponsored by the contractor including social or recreational programs; and
(viii) Any other term, condition, or privilege of employment.

(2) The contractor agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the act.

(3) In the event of the contractor's noncompliance with the requirements of this clause, actions for noncompliance may be taken in accordance with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the act.

(4) The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices in a form to be prescribed by the Deputy Assistant Secretary for Federal Contract Compliance Programs, provided by or through the contracting officer. Such notices shall state the rights of applicants and employees as well as the contractor's obligation under the law to take affirmative action to employ and advance in employment qualified employees and applicants with disabilities. The contractor must ensure that applicants and employees with disabilities are informed of the contents of the notice (e.g., the contractor may have the notice read to a visually disabled individual, or may lower the posted notice so that it might be read by a person in a wheelchair).

(5) The contractor will notify each labor organization or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the contractor is bound by the terms of section 503 of the Rehabilitation Act of 1973, as amended, and is committed to take affirmative action to employ and advance in employment individuals with physical or mental disabilities.

(6) The contractor will include the provisions of this clause in every subcontract or purchase order in excess of $10,000, unless exempted by the rules, regulations, or orders of the Secretary issued pursuant to section 503 of the act, as amended, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the Deputy Assistant Secretary for Federal Contract Compliance Programs may direct to enforce such provisions, including action for noncompliance.

III. AFFIRMATIVE ACTION FOR DISABLED AND VIETNAM ERA VETERANS
(applicable to contracts and purchase orders in excess of $10,000)

(a) The contractor will not discriminate against any employee or applicant for employment because he or she is a disabled veteran or veteran of the Vietnam era in regard to any position for which the employee or applicant for employment is qualified. The contractor agrees to take affirmative action to employ, advance in employment and otherwise treat qualified disabled veterans and veterans of the Vietnam era without discrimination based upon their disability or veterans status in all employment practices such as the following: Employment, upgrading, demotion or transfer, recruitment, advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship.

(b) The contractor agrees to list all employment openings which exist at the time of the execution of this contract and those which occur during the performance of this contract, including those not generated by this contract and including those occurring at an establishment of the contractor other than the one wherein the contract is being performed, but excluding those of independently operated corporate affiliates, at an appropriate local office of the State employment service system wherein the opening occurs. The contractor further agrees to provide such reports to such local office regarding employment openings and hires as may be required. State and local government agencies holding Federal contracts of $10,000 or more shall also list all their employment openings with the appropriate office of the State employment service, but are not required to provide those reports set forth in paragraphs (d) and (e).

(c) Listing of employment openings with the employment service system pursuant to this clause shall be made at least concurrently with the use of any other recruitment source or effort and shall involve the normal obligations which attach to the placing of a bona fide job order, including the acceptance of referrals of veterans and nonveterans. The listing of employment openings does not require the hiring of any particular job applicant or from any particular group of job applicants, and nothing herein is intended to relieve the contractor from any requirements in Executive orders or regulations regarding nondiscrimination in employment.

(d) The reports required in paragraph (b) of this clause shall include, but not be limited to, periodic reports which shall be filed at least quarterly with the appropriate local office or, where the contractor has more than one hiring location in a State, with the central office of that State employment service. Such reports shall indicate for each hiring location (1) the number of individuals hired during the reporting period, (2) the number of non-disabled veterans of the Vietnam era hired, (3) the number of disabled veterans of the Vietnam era hired, and (4) the total number of disabled veterans hired. The reports should include covered veterans hired for on-the-job training under 38 U.S.C. 1787. The contractor shall submit a report within 30 days after the end of each reporting period wherein any performance is made on this contract identifying data for each hiring location. The contractor shall maintain at each hiring location copies of the reports submitted until the expiration of one year after final payment under the contract, during which time these reports and related documentation shall be made available, upon

request, for examination by any authorized representatives of the contracting officer or of the Secretary of Labor. Documentation would include personnel records respecting job openings, recruitment and placement.

(e) Whenever the contractor becomes contractually bound to the listing provisions of this clause, it shall advise the employment service system in each State where it has establishments of the name and location of each hiring location in the State. As long as the contractor is contractually bound to these provisions and has so advised the State system, there is no need to advise the State system of subsequent contracts. The contractor may advise the State system when it is no longer bound by this contract clause.

(f) This clause does not apply to the listing of employment openings which occur and are filled outside of the 50 States, the District of Columbia, Puerto Rico, Guam, and the Virgin Islands.

(g) The provisions of paragraphs (b), (c), (d), and (e) of this clause do not apply to openings which the contractor proposes to fill from within his own organization. This exclusion does not apply to a particular opening once an employer decides to consider applicants outside his own organization for that opening.

(h) As used in this clause:

(1) "All employment openings" includes all positions except executive and top management, those positions that will be filled from within the contractor's organization, and positions lasting three days or less. This term includes full-time employment, temporary employment of more than three days' duration, and part-time employment.

(2) "Appropriate office of the state employment service system" means the local office of the Federal-state national system of public employment offices with assigned responsibility for serving the area where the employment opening is to be filled, including the District of Columbia, Guam, the Commonwealth of Puerto Rico, and the Virgin Islands.

(3) "Positions that will be filled from within the contractor's organization" means employment openings for which no consideration will be given to persons outside the contractor's organization (including any affiliates, subsidiaries, and parent companies) and includes any openings which the contractor proposes to fill from regularly established "recall" lists. The exception does not apply to a particular opening once an employer decides to consider applicants outside of his or her own organization.

(i) The contractor agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the Act.

(j) In the event of a contractor's noncompliance with the requirements of this clause, actions for noncompliance may be taken in accordance with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the Act.

(k) The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices in a form to be prescribed by the Director, provided by or through the contracting officer. Such notice shall state the contractor's obligation under the law to take affirmative action to employ and advance in employment qualified disabled veterans and veterans of the Vietnam era for employment, and the rights of applicants and employees.

(l) The contractor will notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the contractor is bound by the terms of the Vietnam Era Veterans Readjustment Assistance Act, and is committed to take affirmative action to employ and advance in employment qualified disabled veterans and veterans of the Vietnam era.

(m) The contractor will include the provisions of this clause in every subcontract or purchase order of $10,000 or more unless exempted by rules, regulations, or orders of the Secretary issued pursuant to the Act, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the Director of the Office of Federal Contract Compliance Programs may direct to enforce such provisions, including action for noncompliance.

IV. EMPLOYMENT REPORTS ON DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA

(applicable to all contracts containing the clause "Affirmative Action for Disabled and Vietnam Era Veterans")

(a) The contractor shall report at least annually, as required by the Secretary of Labor, on:

(1) The number of special disabled veterans and the number of veterans of the Vietnam era in the workplace of the contractor by job category and hiring location; and

(2) The total number of new employees hired during the period covered by the report, and of that total, the number of special disabled veterans, and the number of veterans of the Vietnam era.

(b) The above items shall be reported by completing the form entitled *Federal Contractor Veterans' Employment Report VETS-100.*

(c) Reports shall be submitted no later than September 30 of each year.

(d) The employment activity report required by paragraph (a)(2) of this clause shall reflect total hires during the most recent 12-month period as of the ending date selected for the employment profile report required by paragraph (a)(1) of this clause. Contractors may select an ending date: (1) As of the end of any pay period during the period July 1 through September 1 of the year the report is due, or (2) as of December 31, if the contractor has previous written approval from the Equal Employment Opportunity Commission to do so for purposes of submitting the Employer Information Report EEO-1 (Standard Form 100).

(e) The count of veterans reported according to paragraph (a) of this clause shall be based on voluntary disclosure. Each contractor subject to the reporting requirements at 38 U.S.C. 2012(d) shall invite all special disabled veterans and veterans of the Vietnam era who wish to benefit under the affirmative action program at 38 U.S.C. 2012 to identify themselves to the contractor. The invitation shall state that the information is voluntarily provided, that the information will be kept confidential, that disclosure or refusal to provide the information will not subject the applicant or employee to any adverse treatment and that the information will be used only in accordance with the regulations promulgated under 38 U.S.C. 2012.

(f) *Subcontracts.* The Contractor shall include the terms of this clause in every subcontract or purchase order of $10,000 or more unless exempted by rules, regulations, or orders of the Secretary.

V. UTILIZATION OF SMALL, SMALL DISADVANTAGED AND WOMEN-OWNED SMALL BUSINESS SUBCONTRACTING PLAN (applicable to contracts in excess of $500,000)

Where required by the Contracting Officer and applicable regulations, the subcontractor shall agree to submit and negotiate a subcontracting plan which separately addresses subcontracting with small business concerns, with small disadvantaged business concerns and with women-owned small business concerns. The plan shall be included in and made a part of the resultant contract. The subcontracting plan shall be negotiated within the time specified by the Contracting Officer. Failure to submit and negotiate the subcontracting plan shall make the offeror ineligible for award of a contract.

VI. DRUG-FREE WORKPLACE

(applicable to contracts of any dollar value if the contract is with an individual, otherwise applicable to contracts in excess of $100,000, except contracts for the acquisition of commercial items)

(a) Definitions. As used in this clause---

Controlled substance means a controlled substance in schedules I through V of section 202 of the Controlled Substances Act (21 U.S.C. 812) and as further defined in regulation at 21 CFR 1308.11-1308.15.

Conviction means a finding of guilt (including a plea of nolo contendere) or imposition of sentence, or both, by any judicial body charged with the responsibility to determine violations of the Federal or State criminal drug statutes.

Criminal drug statue means a Federal or non-Federal criminal statute involving the manufacture, distribution, dispensing, possession or use of any controlled substance.

Drug-free workplace means the site(s) for the performance of work done by the Contractor in connection with a specific contract at which employees of the Contractor are prohibited from engaging in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance.

Employee means an employee of a Contractor directly engaged in the performance of work under a Government contract. *Directly engaged* is defined to include all direct cost employees and any other Contractor employee who has other than a minimal impact or involvement in contract performance.

Individual means an offeror/contractor that has no more than one employee including the offeror/contractor.

(b) The Contractor, if other than an individual, shall--within 30 days after award (unless a longer period is agreed to in writing for contracts of 30 days or more performance duration); or as soon as possible for contracts of less than 30 days performance duration--

(1) Publish a statement notifying its employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition;

(2) Establish an ongoing drug-free awareness program to inform such employees about--
(i) The dangers of drug abuse in the workplace;
(ii) The contractor's policy of maintaining a drug-free workplace;
(iii) Any available drug counseling, rehabilitation, and employee assistance programs; and
(iv) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace.

(3) Provide all employees engaged in performance of the contract with a copy of the statement required by subparagraph (b)(1) of this clause;

(4) Notify such employees in writing in the statement required by subparagraph (b)(1) of this clause that, as a condition of continued employment on this contract, the employee will--
(i) Abide by the terms of the statement; and
(ii) Notify the employer in writing of the employee's conviction under a criminal drug statute for a violation occurring in the workplace no later than 5 days after such conviction.
(5) Notify the Contracting Officer in writing within 10 days after receiving notice under subdivision (b)(4)(ii) of this clause, from an employee or otherwise receiving actual notice of such conviction. The notice shall include the position title of the employee;
(5) Within 30 days after receiving notice under subdivision (b)(4)(ii) of this clause of a conviction, take one of the following actions with respect to any employee who is convicted of a drug abuse violation occurring in the workplace:
(i) Taking appropriate personnel action against such employee, up to and including termination; or
(ii) Require such employee to satisfactorily participate in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency; and
(6) Make a good faith effort to maintain a drug-free workplace through implementation of subparagraphs (b)(1) through (b)(6) of this clause.

(c) The Contractor, if an individual, agrees by award of the contract or acceptance of a purchase order, not to engage in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance while performing this contract.

(d) In addition to other remedies available to the Government, the Contractor's failure to comply with the requirements of paragraph (b) or (c) of this clause may, pursuant to FAR 23.506, render the Contractor subject to suspension of contract payments, termination of the contract for default, and suspension or debarment.

EXHIBIT C

CONTRACTOR MINIMUM SAFETY REQUIREMENTS

NOTE: The following information is intended to set forth the minimum safety requirements expected by Company from its Contractors (including their subcontractors) in the performance of their obligations hereunder. Each Contractor shall be responsible for ensuring that its subcontractors comply with all of the following requirements. It is at all times the responsibility of each Contractor to implement and enforce any additional safety practices that may be necessary for the safe performance of operations by Contractor personnel and its sub-contractors. Additional job or site specific requirements may be specified by Company Management in its sole discretion as necessary to assure the safety of all persons involved with such operations.

A. PRE-JOB MEETING

Complete understanding of the safety and health requirements of the job are critical to the overall success of the project. After awarding of bids, Contractor(s) may be required to attend a pre-job meeting to discuss Contractor and subcontractor safety requirements and job site safety/hazard information. Contractor shall, at each work location, assign one of its employees, agents or subcontractor's as the "Person in Charge" for the purposes herein identified and stipulated.

B. REPORTING TO WORK:

All Contractor personnel shall report to the appropriate Company representative upon arrival at a work location. Contractor Management shall assure that Contractor personnel are given safety orientations for familiarization with potential job site hazards and emergency procedures specific to the current work location.

C. ACCIDENT, INJURY AND ILLNESS REPORTING PROCEDURES:

All work-related accidents, injuries and illnesses shall be reported immediately, or as soon as is safely possible, to the appropriate Company representative. It is the responsibility of the Contractor's designated person-in-charge to ensure that all accidents on the property or leases of Company involving death, personal injury or illness, fire and/or explosions, property damage, hazardous material spills and vehicles are reported both to Company and to all applicable Federal, State and local governmental bodies and agencies having jurisdiction thereof. Contractor shall provide to the Company, upon request, a list of any recordable injuries (as defined by 29 CFR 1904) that occurred on Company property.

D. CONTRACTOR RESPONSIBILITIES:

1. Contractor shall designate a person-in-charge for administration of these requirements. For contracts involving twenty-five (25) or more contract workers on work location, Contractor shall designate or provide a full-time Site Safety Representative to enforce Company and Contractor's safety requirements.

2. Contractor is to assure that all Contractor personnel are qualified and trained to perform contracted services.

3. Contractor is to provide its personnel with proper and well-maintained equipment, tools and personal protective equipment necessary for the particular job being performed, unless otherwise specified by Contract language.

4. Contractor is to adhere to all applicable Federal, State and local regulations pertaining to a particular operation for which its services are contracted.

5. Contractor is responsible for ensuring that all operations are conducted in a safe manner, and for promptly correcting and reporting to Company and Contractor's employees and subcontractors all known or suspected hazards or unsafe conditions.

6. Contractor is to instruct its personnel to report any known or suspected hazards or unsafe conditions to his/her immediate supervisor.

7. Contractor shall immediately notify the appropriate Company representative if known or suspected hazards or unsafe conditions involve Contractor or Company equipment/personnel.

8. Contractor shall provide to the Company, upon request, a copy of the Contractor's written Injury and Illness Prevention Plan (IIPP) or other written safety program and policy, if required, under Federal, State, or local regulatory agency.

9. Contractor is to assure the work area is maintained in a clean and orderly fashion.

E. PERSONAL PROTECTIVE EQUIPMENT:

This section lists general personal protective equipment requirements for Contractors and Subcontractors working at Company field or plant locations. Company Operations Management may require additional job-specific or site-specific personal protective equipment as necessary to assure the safety of all persons involved with such operations. Always refer to the Company's Personal Protective Equipment Plan for additional requirements at specific field or plant locations.

1. HEAD PROTECTION

It is the policy of the Company that, as a condition of employment, all contractors and visitors while on Company property shall wear hard hats except when in vehicles, in office buildings, or on the parking lots. All visitors shall be provided with a hard hat for temporary use while in the field.

All hard hats must meet ANSI Z89.1-1986 Class B or ANSI Z89.1-1997 Class E requirements for personal Protection – Protective Headwear for Industrial Workers. Metal hard hats are prohibited. The inside of the hard hat should have a label that indicates the following:

Manufacturer's Name ANSI Z89-1986 Class B	or	Manufacturer's Name ANSI Z89.1-1997 Class E

2. FOOT PROTECTION

It is the policy of the Company that, as a condition of employment, all contract and temporary employees working in designated work areas and/or job assignments are required to wear ANSI Z41-1991 Personal Protection – Protective Footwear ® approved safety (steel toe) shoes to help prevent foot injuries, ankle injuries, slips, and falls.

All ANSI Z41 approved safety footwear is acceptable. A low heel is recommended for any worker required to climb ladders. Soles are to be slip, chemical, and oil resistant. A puncture resistant foot bed is recommended. Electrical workers should use safety footwear approved for electrical use. Since leather boots and shoes can absorb chemicals and other irritant substances, rubber boots should be worn when handling chemicals and other materials, which require protection from absorption.

3. EYE/FACE PROTECTION

It is the policy of the Company that as a condition of employment, all contract and temporary employees working in designated work and/or job assignments are required to wear ANSI Z87.1-1989, American National Standard Practice for Occupational and Educational Eye and Face Protection, approved safety glasses (with side shields), goggles, and/or face shields to help prevent eye and face injuries including those resulting from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or light radiation. All ANSI Z-87 approved eye protection will have AZ-87 stamped on the frames and AZ-87 or the manufacturer's code stamped on the lens. Face

shields are never to be worn alone. When the activity requires the use of a face shield, approved safety glasses or goggles will be worn also.

4. HEARING PROTECTION

It is the policy of the Company that as a condition of employment, all contract and temporary employees working in posted work areas or any area where the noise level exceeds 90 dBA are required to wear appropriate hearing protection.

Hearing protection should be worn in areas that are not posted if either of the following applies:

a) There is a potential for temporary elevated noise level such as when high-pressure gases are released.
b) If it is necessary to raise one's voice in order to talk to others at a distance of three (3) feet or less.

5. PROTECTIVE CLOTHING

It is the policy of the Company that as a condition of employment, all contract and temporary employees working in designated work areas and/or job assignments are required to wear clothing suited to the work, weather and environment in which they work. Cotton or wool clothing is preferable due to its natural resistance to fire and static electricity. The hazards present in the office are not the same as those found in the field. Office personnel should utilize good judgment when selecting work apparel.

Shirts shall be worn on the job. They shall be buttoned up the front and at the cuffs. Shirttails shall be tucked into the trousers. Shirtsleeves may be short or rolled up. Tank tops, short tops and sleeveless shirts are not permitted. Full-length pants are required. Shorts or cut-off jeans are not permitted. Loose, ragged, or defective clothing or shoes shall not be worn.

When working around moving or rotating machinery, DO NOT wear any of the following:

- Neckties
- Neck chains
- Gauntlet gloves or gloves that fasten around the wrist
- Loose or ragged clothes
- Handkerchiefs or rags tied in such a way that prevents their movement by one quick, easy pull.

Wearing jewelry such as earrings, rings, wristwatches, or neck chains on the job is discouraged and in some cases, not permitted because they can contribute to accidents or injuries.

Special protective clothing should be used where potential job hazards include:

- Exposure to hazardous chemicals
- Cuts from materials handled
- Other hazards that may be produced by special operations such as short-term exposure to heat or cold

Examples of activities in pipeline operation and maintenance activities that may require special protective clothing include:

- Welding operations
- Electrical work
- Hazardous material handling

(Note: When handling chemicals, follow the protective equipment requirements specified in the MSDS. Contact the Safety Department if you need assistance selecting protective equipment.)

6. HAND PROTECTION

It is the policy of the Company that as a condition of employment, all contract and temporary employees working in designated work areas and/or job assignments are required to wear gloves to help prevent hand injuries including cuts, burns, and chemical exposure, for example.

Rings shall be removed while at work in the field. Rings and wristwatches shall always be removed when working around energized electrical equipment and circuits or around moving or rotating equipment. Do not wear gauntlets or gloves that fasten around the wrist when working around moving or rotating equipment. Caution should be exercised when using other styles of gloves that might cause the hand to be pulled into a dangerous area.

Employees in the following designated work areas are required to wear protective gloves:

- Electricians
- Line Men
- Welders
- Welders' helpers
- Pipe fitters
- Pipe wrappers
- Chemical handling
- Those working around steam or hot equipment

7. FALL PROTECTION

It is the policy of the Company that as a condition of employment, all contract and temporary employees exposed to unprotected work heights over six (6) feet shall use appropriate fall protection. Climbing and fall protection is provided in the workplace to minimize the risk of falls. Protection may be accomplished through the design of the facility and/or provision of personal safety gear. Fall protection equipment may include:

- Full body safety harnesses with appropriate lanyard(s)
- Safety climbs
- Personnel lifts
- Safety nets

8. RESPIRATORY PROTECTION EQUIPMENT

It is the policy of the Company that as a condition of employment, all contract and temporary employees exposed to atmospheres that are oxygen deficient (less than 19.5% O_2), contains asphyxiates (e.g., N_2 or CO_2), contains harmful concentrations of toxic contaminants (e.g., H_2S, NH_3, C_{12}, SO_2 or CO) or contain particulate contaminants (e.g., dust, fumes, chemical mist, smoke, etc.) shall use the appropriate respiratory protective equipment. Respiratory protective equipment and use will meet NIOSH and ANSI Z88.1 requirements.

Contractor Supervisors shall provide approved respiratory protective equipment for all exposed company employees. The correct type of respiratory shall be specified for each job. Contractor Supervisors shall ensure employees are properly trained in the use of the respiratory protective equipment. Contractors required to use respiratory protective equipment will have a written Respiratory Protection Policy in compliance with 29 CFR 1910.134.

Only an air-supplied respirator with an egress bottle shall be used in atmospheres immediately dangerous to life and health – 1DLH (containing harmful concentrations of toxic contaminants such as H_2S, NH_3, C_{12}, SO_2 or CO) or are oxygen deficient (areas that contain less than 19.5% oxygen). Air purifying respirators are not allowed for this kind of environment.

Inspections of all respiratory protective equipment shall be completed before each use including a check of the tightness of connections and the condition of the face piece, valves, connecting tubes and headbands. Cylinders are to be refilled with breathing air certified as Grade AD, or better. Never use pure oxygen in an industrial respirator. Rubber or other elastic parts shall be inspected for pliability and signs of deterioration.

9. PERSONAL FLOTATION DEVICES

Contractor's personnel working or traveling over water shall have access to an U.S.A Coast Guard-approved personal floatation device (PFD).

A personal flotation device (PFD) must be available when riding in a boat. The PFD must be worn when riding anywhere other than inside the cab of the boat. When riding or working in a small open boat, a PFD must be worn at all times.

When working within a platform guardrail, a PFD need not be worn. If the work is being done outside of the guardrail, or if there is no guardrail, each employee must be wearing a personal flotation device.

10. OTHER PERSONAL PROTECTIVE EQUIPMENT

In addition to the protective equipment described above, special situations may required the use of additional personal protective equipment. Each Contractor shall be solely responsible for recognizing when such equipment is required and shall be responsible to provide such equipment. Company Operations Management, at its sole discretion, may also specify additional personal protective equipment requirements.

F. CONTRACTOR PERSONNEL SAFE WORK PRACTICES

This section lists basic safe work practice requirements for Company field or plant locations. Company Operations Management at its sole discretion may require additional job-specific safe work practices as necessary to assure the safety of all persons involved with such operations.

1. SAFETY MEETINGS

Contractors and subcontractors are encouraged to conduct daily tailgate safety meetings to discuss the day's work assignments and proper safety precautions. Contractor personnel may attend Company on-the-job safety meetings when held at Company locations, at the discretion of the appropriate Company representative. Prior to beginning an unfamiliar, hazardous or major project, Contractor personnel will conduct a safety meeting to discuss safe procedures and work practices.

2. SMOKING

Smoking is absolutely prohibited at all facilities except in designated smoking areas.

3. SIGNS

Contractor personnel shall be familiar with and comply with signs posted throughout Company facilities.

4. LOCK-OUT/TAG-OUT

All Contractors are required to be familiar with and comply with Company site-specific lock-out/tag-out procedures while working on powered equipment, when performing confined space entry operations, breaking open lines or closed systems, or other operations where the control of potential hazardous energy releases is necessary for personnel safety. Said procedures shall be made available by Company representative as necessary and required.

5. CONFINED SPACE ENTRY

All Contractors performing work involving Confined Space Entry as defined by pertinent OSHA regulations shall be familiar and comply with Company site-specific confined space entry permit procedures. Confined space entry permits shall be issued by Company personnel ONLY, unless otherwise specified by Company Operations Management. All contract personnel involved in Confined Space Entry shall, if requested, demonstrate that they have completed a Confined Space Entry training program meeting 29 CFR 1910.145, or applicable State regulation, prior to performing any Confined Space Entry operations.

6. HOT WORK/OTHER HAZARDOUS WORK

All Contractors conducting Hot Work (including without limitation welding, cutting, grinding) or other Hazardous Work as defined by Company Operations Management are required to be familiar with and comply with Company site-specific Hot Work / Hazardous Work Permit Procedures. ONLY Company personnel shall issue Hot Work / Hazardous Work permits unless otherwise specified by Company Operations Management.

7. HAZARD COMMUNICATION

a. Contractor shall be familiar with and comply with Company site-specific Hazard Communication Program requirements and procedures.

b. Company will provide to Contractor, upon request, an appropriate Material Safety Data Sheet (MSDS) for hazardous chemicals or materials maintained on a specific site or sites by Company. Such hazardous materials or chemicals will be properly stored and marked in accordance with OSHA Hazard Communications Regulations (29 CRF 1910.1200).

c. Contractor shall provide to Company, upon request, an appropriate MSDS for any hazardous material or chemical, which Contractor brings on site. Such hazardous materials or chemicals will be properly stored and marked in accordance with OSHA Hazard Communication Regulations (29 CRF 1910.1200).

d. Contractor shall provide to Company, upon request, a copy of the contractor's written Hazardous-Communication Program, in compliance with 29 CFR 1910.1200 and/or local state OSHA regulations.

8. PROCESS SAFETY MANAGEMENT

All contractors performing work on or near a Company facility governed by the Process Safety Management regulations (29 CFR 1910.119) will document that they have completed Process Safety Management training prior to performing any work at that facility. Company Operations Management will provide guidelines to the Contractor for this training, if necessary.

9. DEPARTMENT OF TRANSPORTATION

All contractors performing work on or near a Company facility governed by the Department of Transportation regulations (49 CFR Parts 190-199 and/or 49 CFR Part 382) shall have in effect a Drug and Alcohol Prevention Plan which, at a minimum, meets the requirements of those regulations. In addition, if the Contractor provides services that are governed by these regulations, the Contractor must have in effect a current Drug and Alcohol Prevention Plan that meets the requirements of those regulations. Contractor shall provide to the Company, upon request, a copy of the Contractor's written Drug and Alcohol Prevention Plan for review. Contractors providing services governed by these regulations must provide proof of training for Qualified Individuals under their Drug and Alcohol Prevention Plan.

10. HAZWOPER

All Contractors performing work regulated by OSHA HAZWOPER regulations (29 CFR 1910.120) or D.O.T. Hazardous Material regulations (49 CFR Parts 171-181) shall demonstrate that its assigned personnel have completed a training program at or above the level required for the work performed.

11. TRAINING

Contractors are solely responsible for ensuring that their employees are trained in accordance with applicable Federal. State, or local safety and health regulations, and that such training is documented. Such documentation may be subject to review by Company at any time prior to, during, or after the completion of the work throughout the term of this Master Service Contract.

2-601 -A Site Summary- Martinez Marsh 2-601 -A

County:	Contra Costa	Thomas Guide Location	Latitude N	Longitude W
USGS Quad:	Benicia	NOAA Chart: 18656 Suisun Bay	(b) [redacted]	(b) [redacted]

Last Page Update : 1/1/2000

SITE DESCRIPTION:

This site includes the marshes and waterfront from the Benicia-Martinez Bridge to the Ozol pier. This site has pickleweed saltmarshes on both the east and west side of the Martinez marina. The marshes are prograding with emergent species along the very shallow margins. The marsh to the east behind the Shell Oil terminal has some diked impoundments and has a small channel leading back into the marsh. West of the Marina, Alhambra Creek opens to the marsh and has marshy vegetation along some of its length upstream. The shoreline vegetation from Alhambra Creek to Ozol Terminal grades from marsh to riprap. The marsh around the mouth of Alhambra Creek is East Bay Regional Parks shoreline.

SEASONAL and SPECIAL RESOURCE CONCERN

Marshes are A-priority at all times. Threatened and endangered species may be present throughout this site.

RESOURCES OF PRIMARY CONCERN

Pickleweed marshes with emergent marsh margins are on both sides of the marina. Shelter tidal flats in front of the marshes provide habitat for infauna and foraging for birds and fish. The riprap at the western edge along the railroad tracks has low sensitivity.

Marshes provide habitat for marsh birds, ducks, shorebirds, and in winter migratory waterfowl. Clapper rail and black rails may use these marshes occasionally.

Both the endangered salt marsh harvest mouse and endangered salt marsh wandering shrew are found here.

Two rare plants are found here: soft bird's beak and Delta tule pea.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
B	Peter Baye, Ph.D. Coastal Plant Ecologist		(415) 310-5109
	Joseph Didonato Stewardship Manager	East Bay Regional Park District	(510) 544-2346
	EBRP Dispatch EBRP	East Bay Regional Park District	(510) 881-1833
B	Mike Josselyn	NOAA, National Marine Fisheries Service	(415) 454-8868
B	Jerry Karr	Audubon Society, Solano County Chapter	(707) 643-7089
B	Jan Knight	US Fish and Wildlife Service	(916) 978-4866
B	Niall F. McCarten, Ph.D.	Jones & Stokes Associates, Inc.	(916) 737-3000
B,O	Bill Nichols	East Bay Regional Park District	(925) 228-0112
	Mark Ragatz Shoreline Parks Manager	East Bay Regional Park District	(510) 715-7784

ADDITIONAL SITE SUMMARY COMMENTS:

2-601 -A Site Strategy - Martinez Marsh 2-601 -A

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Contra Costa	18656 Suisun Bay	(b)	(b)

Last Page Update : 10/1/2005

CONCERNS and ADVICE to RESPONDERS:

Primary concerns are oiling of marsh east and west, intrusion of oil up Alhambra Creek in the west side marsh, and intrusion up the tidal channel in the east side marsh. Exclude oil from both channels and divert oil away from marshes to catchments or to main channel. Avoid trampling marsh vegetation: rare plants and small endangered mammals are present. Avoid trampling oil into muds. Protect marsh frontage from oil as directed.

HAZARDS and RESTRICTIONS:

Air - Martinez Bridge power lines; Boats - shallow water & currents; ground traffic - railroad tracks, soft substrate

SITE STRATEGIES

Waters west and inshore from Martinez Marina are an eddy and have low current. This slow velocity water extends past OZAL pier. Currents from marina out are very stong. Near shore on both sides of Marina, particularly close to creek mouths is very shallow.

Strategy 2-601.1 Objective: Primary: on the flood tide, exclusion booming mouth Alhambra Creek, other tidal channels, and protect nearby shoreline

a) Exclusion booming Alhambra Creek: 200' of swamp boom in a chevron configuration backed by sorbent boom at the inlet to .
b) Protection booming: Deploy 1100' of sorbent boom along the marsh to the west of Martinez Marina (both sides of creek but mostly on the west side.)
c) Exclude oil from entering the small tidal inlet to the marsh east of the marina with boom and sorbent (50' 4X4+). Tidal inlet mouth is located between Shell and Amoco Terminals/Shore Terminal wharf at bridge.

Strategy 2-601.2 Objective: Deflection for the ebb tide, deflect oil away from and past Alhambra Creek & marsh with boom from old ferry slip

Deploy 600' of deflection boom extending west from inside the old ferry slip at Ferry Point (the pier), Martinez Marina. Set deflection angle into the current as may be possible under prevailing conditions.

Strategy 2-601.3 Objective: Deflection for the Flood Tide: deflect away from Martinez shore

Deflect oil away from shoreline with 2000' 8X8+ Hboom. From the shoreline about a half mile west of treatment plant, deploy boom at a diagonal to the 15' depth contour.

Strategy 2-601.4 Objective: Protection Shoreline Booming: If there is threat of heavy oiling and saturation of the marsh front, deploy protective boom coverage, when resource use will not preclude defending other sites against SO 5 and 6 impacts.

Deploy exclusion boom along the marsh front from the Benicia Bridge to the marina and from Alhambra Creek to the riprap to the west.

Deploy 5200' of protective boom (4X4+) be deployed between Suisun Point and the Martinez Marina seawall, and deploy 3300' of protective boom (9X9+ or 4X4+ depending on presence of wind and chop) from Ferry Point at Martinez Marina to 1000 yards west where marsh ends and riprap begins. Deploy close to shore where shallows will aid with wind chop spillover problems; if there are wind chop conditions, boom layers will need to be backed with a second layer of 4X4+ boom. Because the water is so shallow, very shallow boom boats and skiffs will be required due to grounding and stranding hazards. (A similar strategy for deployment of exclusion boom is illustrated in "Potential Oil Spill Protection Strategies for San Francisco Bay, California" (Hayes and Montello, 1994).)

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No	Special Equipment and kinds	staff deploy	Staff tend
2-601.1	0	250		1300	1	1/12#+/ anchor & stakes	0	1				boat capable of shallow grounding	2	
2-601.2	600				1	1/22+/danforth + 20' chain	1	0					3	
2-601.3	2000				4	4/22+/danforths	3	1					11	
2-601.4	0	8500			9	9/12/danforths & stakes	3	3				bboats - very shallow, strandable.	15	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Proceed on Hwy 680 toward Martinez and exit on Marina Vista just south of the Benicia-Martinez toll bridge and drive west to city center. Turn right and drive across the railroad tracks to Martinez Marina. Marshes are on both sides of the Marina and park. There are access points at the Marina Vista Park (contact East Bay Regional Parks Dispatch). There is also unimproved shoreline access along the Souther Pacific Rail Road tracks on the west side of Alhambra Creek (contact SP Rail Road). This site includes the marshes and waterfront from the Benicia-Martinez Bridge to the Ozol pier.

LAND ACCESS: Thorough land access to west. Foot only to east.

WATER LOGISTICS: Limitations: depth, obstruction — Very shallow near shore. Some obstructions on west half.

Launching, Loading, Docking and Services Available: Launching and full boat services available at Martinez Marina on-site. Most boat services are also available across the river at Benicia.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:
Best for this site is Martinez Marina, but Benicia has good staging facilities. Vallero Wharf also has good staging capacity.

COMMUNICATIONS PROBLEMS: none known

ADDITIONAL OPERATIONAL COMMENTS:

2-603 -A Site Summary- Bulls Head Marsh and Pacheco Creek 2-603 -A

County: Contra Costa
USGS Quad: Vine Hill

Thomas Guide Location

NOAA Chart: 18656 Suisun Bay

Latitude N (b) **Longitude W** (b)

Last Page Update : 1/1/2000

SITE DESCRIPTION:

Site extends from Benicia-Martinez Bridge to the Avon Wharf and includes the tidal marshes tributary to Suisun Bay and Pacheco Creek (also called Walnut Creek and Avon Slough) landward to Hwy 4. There are two extensive marshes south of Waterfront Road (Marina Vista Rd): Shell Marsh (tributary to Peyton Slough and owned by East Bay Regional Parks) and an unnamed marsh tributary to Pacheco Creek. The marshes north of Waterfront Rd between Hwy I-680 and Pacheco Creek are connected to the south shore of Suisun Bay by several small waterways. The marshes south of Waterfront Rd are mostly pickleweed-tule-saltgrass marshes with emergent growths along the edges of waterways and occasional patches of cattail marshes, whereas marshes to the north are dominated by tules and sedges, particularly near the water front and slough margins. Pacheco Creek is very fresh in its more upstream reaches, particularly during high rainfall periods. Salmon and Steelhead are common in Pacheco Creek but do not spawn in the system. There are various dikes and flood control channels throughout the marsh. Pacheco Creek is extremely shallow, has an even shallower bar across its mouth, and has marsh encroaching along its length. The other marsh channels tend to be deep. Regardless, the entire marshfront is mudflats at very low tides. There are three refineries, a chemical plant, and several tank farms adjacent to and tributary to this site.

SEASONAL and SPECIAL RESOURCE CONCERN

The marshes are an "A" priority all year

RESOURCES OF PRIMARY CONCERN

The marshes have a rich flora and range from high pickleweed-spartina marsh to cattail to emergent tule marsh on prograding shorelines and channel margins. Much of the marsh has been manipulated with dike and mosquito abatement channels. Much of the marsh beyond the tidal channels is flood only on high tides and during the rainy season.

A variety of wading and marsh birds use this area year-round and it provides winter habitat for migratory birds and ducks. The endangered California clapper rail uses this habitat.

This is also habitat for the endangered saltmarsh harvest mouse and the saltmarsh ornate shrew.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
B	Peter Baye, Ph.D. Coastal Plant Ecologist		(415) 310-5109
B T	Baylands Nature Preserve Office	Baylands Nature Preserve	(650) 329-2506
B	Brenda Grewell Restoration Ecologist	US Dept. of Agriculture	(530) 752-6260
B	Mike Josselyn	NOAA, National Marine Fisheries Service	(415) 454-8868
B	Jerry Karr	Audubon Society, Solano County Chapter	(707) 643-7089
B T	Jan Knight	US Fish and Wildlife Service	(916) 978-4866
B	Niall F. McCarten, Ph.D.	Jones & Stokes Associates, Inc.	(916) 737-3000

ADDITIONAL SITE SUMMARY COMMENTS:

2-603 -A Site Strategy - Bulls Head Marsh and Pacheco Creek 2-603 -A

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Contra Costa	18656 Suisun Bay	(b)	(b)

Last Page Update : 10/1/2005

CONCERNS and ADVICE to RESPONDERS:

Prime concern is oil being carried into the interior marsh via tidal channels and oiling of marsh margins. So, the first priority is to exclude oil from tidal channels and openings. Secondarily, there is a plan to collect oil at the Pacheco Creek shoreline to prevent its free spread and movement. As time and priority allow, the entire marsh shoreline may be protectively boomed. Avoid trampling the marsh vegetation and be aware that small endangered mammals are present. Avoid trampling oil into the mud.

HAZARDS and RESTRICTIONS:

This area is very shallow and exposed mudflats at low tide.

SITE STRATEGIES

Strategy 2-603.1 Objective: Exclude oil from entering Pacheco Creek, Peyton Slough and four other tidal channels on flood currents Rv 011305

Deploy exclusion booms in a chevron configuration in front of each tidal slough, securing boom ends well up and downstream from the openings to avoid entrainment and short-circuiting. Anchors will be necessary to keep chevron formation. Boom ends may be anchored at shore with stakes.
a) 1000' 8X8+ harbor boom at the mouth of Pacheco Slough with 22# anchors
b) At Peyton Slough and the other four tidal inlets west of Pacheco Slough, use 4X4+ in lengths of 50' and 100'. Back with sorbent boom.
c) If boat passage into launch ramp in Pacheco Creek for response activities, it may be necessary to have boom tending or cascades.

Strategy 2-603.2 Objective: For flood tides, deflect oil to collection site in Pacheco Creek on Avon refinery shoreline to prevent oil spread to other marsh sites, to collect it, and prevent its free movement.

Create a collection site at the northerly most exteme of the levee road on refinery treatment pond east of Pacheco Creek.
a) First, deploy two diagonal barriers of swamp (river) boom (700' 4X4+) to direct the oil from the mouth of the Creek to the collection site. Use stakes to anchor and maintain shape. (If response boat passage into Pacheco Creek is necessary, boom tending may be required.)
b) Then line the marsh along the east bank with swamp (river) boom (1100') and tie the boom into the exclusion boom at the mouth. Use stakes to anchor and maintain shape.
c) After the collection pocket boom is in place (a & b above), deploy a deflection boom (2700' 8X8+ harbor boom total) from the Shore Terminals Wharf to the east side of Pacheco Slough mouth to funnel the oil into collection on the flood tide. Usually exclusion strategy (2-603.1) will have been deployed first, and 1000' of boom will already be at the mouth and must be repositioned as part of the deflection (so the amount of boom needed will be 1000 ft more if that boom is not already onsite.) Use multiple anchors with heavy chain to hold the boom in position in the currents.
d) Improve the shoreside collection site as necessary. Consider excavating a pocket and seek approval from IC. Place plywood or other walking sureface at work site to prevent oil being trampled into muds.

Strategy 2-603.3 Objective: Marsh front protective booming: If there is threat of heavy oiling and saturation of the marsh front, and when such use will not preclude defending other sites with Strategic Objectives 5 and 6 action (seek concurrence of the trustee strategist).

Deploy protective boom along the marsh front from the Benicia Bridge to the Pacheco Slough, using 9,000 ft of harbor boom. If there are high energy wave conditions, a second layer of swamp boom may be required. (A strategy for the deployment of exclusion boom at this site is illustrated in Potential Oil-Spill Protection Strategies for San Francisco Bay, CA (Hayes and Montello, 1994).)

Strategy 2-603.4 Objective: Collection/ containment of upstream threats: If oil is moving down Pacheco Slough from an inland spill, deploy a containment collection as in strategy 2-603.2

Create a collection site at the southerly most convenient site on the windward shore, such as the Waterfront Road Pacheco Creek bridge or launch ramp. Most convenient deployment of boom from shore using skiffs, due to shallows.
a) First, deploy two diagonal barriers of swamp (river) boom (600' 4X4+) to direct the oil in the Creek to the collection site. Use stakes to anchor and maintain shape. (To permit boat passage into Pacheco Creek, it may be necessary to have boom tending.)
b) Line the marsh along the east bank with swamp (river) boom (1000'). Use stakes to anchor and maintain shape.
c) Improve the shore side collection site as necessary. Consider excavating a pocket and seek approval from IC. Place plywood or other walking sureface at work site to prevent oil beng trampled into muds.

Strategy 2-603.5 Objective: Back-up for .1 exclusion in case of over-wash threat

Deploy second layer of exclusion booms in a chevron configuration in front of each tidal slough just behind first layer. As with primary exclusion, secure boom ends well up and downstream from the openings to avoid entrainment and short-circuiting.
a) 1000' 4x4+ swamp (curtin) boom will be needed at the mouth of Pacheco Slough;
b) At Peyton Slough and the other four tidal inlets use 4X4+ in lengths of 50' and 100'.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No	Special Equipment and kinds	staff deploy	Staff tend
2-603.1	1100	400		1000	19	22+ & 5/12+/danforths + chain 10 stak	1	2				bboat: strandable shallow water stakes	7	
2-603.2	1700	2500		300	5	5/22+/danforth + chain	2	2	1	SSS		stakes, bboat: strandable, shallow water	8	
2-603.3	9000				14		3	1					11	
2-603.4	0	1600			6	6/12+ and stakes		1	1	SSS			3	
2-603.5	0	1400	0	0	0		0	0	0		0			

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Exit Hwy I-680 to Marina Visa / Waterfront Road at Martinez (exit just south of Benicia Martinez Bridge) and proceed east. There is access to the shoreline from Shore Terminal's wharf, from the Tosco Avon Refinery, and at the Bridge over Pacheco Creek. By boat, proceed east from the Martinez Marina about a mile to the area east of the Martinez-Benicia Bridge. Site extends from Benicia-Martinez Bridge to the Avon Wharf and includes the tidal marshes tributary to Suisun Bay and Pacheco Creek (also called Walnut Creek and Avon Slough) landward to Hwy 4.

LAND ACCESS: only at Tosco and Shore Terminal wharf; otherwise foot only

WATER LOGISTICS:
Limitations: depth, obstruction — exceedingly shallow - mud at low tide

Launching, Loading, Docking and Services Available: — launch at Tosco to Pacheco Creek during higher tides only, otherwise Martinez Marina and Benicia Marina. Full service at Martinez and Benicia.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:
Best staging is at Martinez because of the amount of services available. Benicia is also a good staging site. Locally, equipment may be staged at Tosco at Pacheco Creek or at Shore Terminal wharf.

COMMUNICATIONS PROBLEMS: none known

ADDITIONAL OPERATIONAL COMMENTS:

2-605 -A Site Summary- Hastings Slough & Point Edith Marshes 2-605 -A

County: Contra Costa
USGS Quad: Vine Hill

Thomas Guide Location

NOAA Chart: 18656 Suisun Bay

Latitude N (b)
Longitude W (b)

Last Page Update : 7/1/2005

SITE DESCRIPTION:

Site extends from the Tosco Avon terminal wharf west to Hastings Slough and includes all the marshes tributary to Hastings Slough including those south of Waterfront Road. Marshes from Pt Edith to the Avon Wharf are property of Department of Fish and Game (700+ acres), but the marshs around Hastings Slough and much of the tributary marshland (2000+ acres) is military property and entry is prohibited without prior clearance. This marshes have a large tidal exchange volume, particularly Hastings Slough marshes. The DFG marshes drain directly to the bay via 10 tidal sloughs. Hastings Slough is very sinuous and has many tributary channels including Mt. Diablo Creek. Ttroughout the marsh there is an extensive network of mosquito abatement channels which connect the freshwater and brackish marshes between. Most of the marsh is pickleweed, but there are large stands of tules and standing ponds. Portions of the property south of Waterfront Rd and just east of the Avon refinery are refinery property.

SEASONAL and SPECIAL RESOURCE CONCERN

The marshes are an "A"-priority all year. The area is important to migratory birds in the spring and fall. Endangered species are present year-round.

RESOURCES OF PRIMARY CONCERN

Emergent and tidal channel marshes are of highest concern because of immediate vulnerability to spills and opportunity to spread oil extensively though the marsh because of large tidal prism. Some of the internal marshes are connected by flood control structures and can be closed to exclude oil conveyance to interior marsh. Marsh types include emergent, high saltgrass, pickleweed, tule, brackish ponds, and pockets of freshwater marsh.

The endangered California clapper rail, threatened California black rail, saltmarsh common yellowthroat, and Suisun song sparrow are found here.

The marshes are inhabited by the endangered salt marsh harvest mouse.

Several rare plants occur in this site. Mason's lilaeopsis is found in the splash zone along the marsh front. The marshes also contain the rare plant species soft bird's beak, and Delta tule pea occurs on the Seal Islands.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
B	Peter Baye, Ph.D. Coastal Plant Ecologist		(415) 310-5109
B	Brenda Grewell Restoration Ecologist	US Dept. of Agriculture	(530) 752-6260
B	Mike Josselyn	NOAA, National Marine Fisheries Service	(415) 454-8868
B	Jerry Karr	Audubon Society, Solano County Chapter	(707) 643-7089
B	Jan Knight	US Fish and Wildlife Service	(916) 978-4866
B	Niall F. McCarten, Ph.D.	Jones & Stokes Associates, Inc.	(916) 737-3000
BLO	Staff Office	Suisun Resource Conservation District	

ADDITIONAL SITE SUMMARY COMMENTS:

2-605 -A Site Strategy - Hastings Slough & Point Edith Marshes 2-605 -A

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Contra Costa	18656 Suisun Bay	(b)	(b)

Last Page Update : 10/1/2005

CONCERNS and ADVICE to RESPONDERS:

The prime concerns are oil penetrating the marsh up tidal sloughs on tidal currents, particularly Hastings Slough, and oil saturating marsh vegetation on exposed marsh fronts and margins. Exclusion is first priority: to Hastings Slough and small channels. Next priority is to deflect oil away from these inaccessible marshy shores. During response be aware that there are very small rare plants and mammals at the shoreline. So, minimize foot traffic. Avoid trampling vegetation and avoid trampling oil into muds.

HAZARDS and RESTRICTIONS:

Some of the waterfront has very shallow mudflats. There are submerged obstructions in Hastings Slough for about 50 yds south of bridge overcrossing.

SITE STRATEGIES

Flood currents in tidal channels are too great to exclude oil once it has entered the channels. Exclusions must be set to keep oil from being pulled into the mouths of channels using chevron exclusions anchored well away (both to each side and in front) from channel openings. Waters are very shallow throughout except at Point Edith and within tidal channels.

Strategy 2-605.1 Objective: Exclude oil from Hastings Slough and tidal channels to prevent oil from being carried into marsh on flood tides. Revised 011305.

Exclude oil from entering all tidal sloughs using chevron booming configurations, including center anchors, and anchor boom ends well outside channel mouths to avoid entrainment and short circuiting around boom ends.
a) Hastings Slough: 1100' 8X8+ deployed in a modified chevron beginning well to the west (200'+) of the mouth. Back with sorbent boom. 3/22+/danforths.
b) The 2 sloughs just east of and one at Pt Edith: (400' 9X9+ and 1/22+ & 2/12+ danforths total.) Back with sorbent boom.
c) The ten tidal openings west of Pt Edith: 100' 4X4+ for each opening except #7 (from west) requires 200' (1100' total). Back each with sorbent.

Strategy 2-605.2 Objective: Deflect oil away from shoreline for sites 2-605 and 2-607 on flood tide.

Deploy 2400' deflection boom from just west of Pt Edith past channel marker R2 and into channel toward chanel marker G3.

Strategy 2-605.3 Objective: Back-up of Exclusion booming of .1 strategy for wave conditions: if waves or chop is likely to wash oil over boom.

a) Hastings Slough: deploy a second layer of boom (800' 4X4+) close behind to catch and exclude over wash. 3/12+/danforths.
b) The 2 sloughs just east of and one at Pt Edith: (400' 4X4+ and 2/12+ danforths total.) Back with sorbent boom.
c) The ten tidal openings west of Pt Edith: 100' 4X4+ for each opening except #7 (from west) requires 200' (1100' total). Back each with sorbent.

Strategy 2-605.4 Objective: Marsh front protective booming: If there is threat of heavy oiling and saturation of the marsh front, and when such deployment will not preclude defending other sites with Strategic Objectives 5 and 6 (seek concurrence of the trustee stratigist).

Deploy protective boom along the marsh front from the Tosco Wharf to the US Navy piers and linking with existing boom deployments as convenient: an additional 7,000 ft of harbor boom and ten additional anchors will be required in combination with boom already deployed in strategies .1 and .2. (A similar strategy for the deployment of exclusion boom at this site is illustrated in Potential Oil-Spill Protection Strategies for San Francisco Bay, CA (Hayes and Montello, 1994).)

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No	Special Equipment and kinds	staff deploy	Staff tend
2-605.1	1500	1100		2300	38	5/22+ & 11/12+ danforth, 22 stakes	2	6				bboat: shallow, strandable. Stakes	18	
2-605.2	2400				6	5/22+/danforths + 20'chain	3	0					9	
2-605.3	0	2300	1000	0	5	12+/danforths	0	0	0		0			
2-605.4	7000				10	10/22+/danforths	4	2				bboats: very shallow, groundable.	14	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

By boat, the site is east of the Benicia Bridge from the Avon Refinery wharf to the Navey Piers. By vehicle exit Hwy I-680 at Marina Vista (first exit south of Benicia Bridge - Waterfront Rd) and proceed west to Avon Refinery gate; request access and proceed east: Marina Vista (Waterfront) Road is blocked at the Hastings Slough Bridge by a Weapons Station locked gate. Important: Permission to enter eastern portion of the area must be obtained from the U.S. Naval Weapons Station Concord. By arrangement with Weapons Station Security only, access from Highway 4 to CNWS exit north on Port Chicago Highway to Base Gate to request entry: Contact USCG Watch 415-399-3546 or 3547. Site extends from the Tosco Avon terminal wharf west to Hastings Slough and includes all the marshes tributary to Hastings Slough including those south of

Waterfront Road. Marshes from Pt Edith to the Avon Wharf are property of Department of Fish and Game (700+ acres), but the marshs around Hastings Slough and much of the tributary marshland (2000+ acres) is military property and entry is prohibited without prior clearance.

LAND ACCESS: All types to Waterfront Road. Otherwise foot only.

WATER LOGISTICS: Very shallow water. Exposed mud at low tide.
Limitations: depth, obstruction

Launching, Loading, Docking and Services Available: very poor launch at CNWS tug wharf. Commercial Launching at Martinez, Benicia, and McAvoy's in Bay Point, all have complete services. Tosco launch is at Pacheco Slough.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:
Martinez and McAvoy-Harris's are two primary staging areas depending on zone of spill impacts. Both have wide variety of services and access, potential for security control.

COMMUNICATIONS PROBLEMS: none known

ADDITIONAL OPERATIONAL COMMENTS:

2-630 -B/C Site Summary- Suisun Shoal 2-630 -B/C

County:	Solano	Thomas Guide Location	Latitude N (b)	Longitude W (b)
USGS Quad:	Benicia/Vine Hill	NOAA Chart: SUISUN BAY 18657/18652		

Last Page Update : 9/4/1997

SITE DESCRIPTION:

This site is the shallow mud bar which begins a half mile east of the Benicia Bridge and continues to Roe Island. The shoal is an extensive mud-sand bar about a mile wide at its widest and over three miles long. Generally the sediments are firm and will support pedestrian activity. During high tides it is a navigational obstruction to all but shallow draft vessels, but during low tides extensive portions are exposed. Intertidal life here is variable depending on local salinity conditions. Waterfowl and shorebirds frequent this shoal to feed and loaf.

SEASONAL and SPECIAL RESOURCE CONCERN

This mudflat has B-level sensitivity when birds are using it for resting and foraging. Otherwise protection is C-level.

RESOURCES OF PRIMARY CONCERN

This is a firm sediment mud-sand bar which is habitat for eurihaline species of invertebrates. It is feeding habitat for fish and when exposed, is resting and feeding for waterbirds and shorebirds.

Waterfowl and shorebirds here are daily transients because it is covered with water for part of each day.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
TB	Laurie Briden	CA Dept of Fish & Game, Bay/Delta	(209) 955-7800
T	Brenda Grewell Restoration Ecologist	US Dept. of Agriculture	(530) 752-6260
	Kent Nelson	CA Dept. of Water Resources	(916) 227-7581

ADDITIONAL SITE SUMMARY COMMENTS:

2-630 -B/C Site Strategy - Suisun Shoal

County and Thomas Guide Location
Solano

NOAA CHART
SUISUN BAY 18657/18652

Latitude N (b) **Longitude W** (b)

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

Primary concern is oiling birds which rest and feed on this bar during low tide. Execution of the strategy is at the recommendation of the Wildlife Operations Branch Chief only.

HAZARDS and RESTRICTIONS:

The mudflat is very shallow and should be approached with caution, particularly on a falling tide.

SITE STRATEGIES

Strategy 2-630.1 Objective: Haze birds off exposed bar: Only at direction of Wildlife Branch Chief

This strategy may be executed at the direction of the Wildlife Branch Chief only. Stake and anchor 4 sonic devices along the bar. Attend regularly. Access at other than high tide may requirevery shallow draft vessel or airboat.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no type and gear	Boom boat	Skiffs punts	Skimmers No Type	Special Equipment No and kinds	staff deploy	Staff tend
2-630.1	0						1		4 hazinf devicies on flosting platforms	2	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

There is no land access. Water access is one mile east from Benicia or Martinez marinas. This site is the shallow mud bar which begins a half mile east of the Benicia Bridge and continues to Roe Island.

LAND ACCESS: after arrival by boat, you can walk on bar.

WATER LOGISTICS: EXTREME SHALLOW DRAFT AT LOWER TIDES
Limitations: depth, obstruction

Launching, Loading, Docking and Services Available: Benicia and Martinez Marinas (1 mi. W).

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Deploy from Martinez Marina, Benicia Marina or Benicia wharf.

COMMUNICATIONS PROBLEMS: none known

ADDITIONAL OPERATIONAL COMMENTS:

INTERNATIONAL BIRDRESCUE
EVERY BIRD MATTERS™

Retainer Agreement
International Bird Rescue

This RETAINER AGREEMENT dated this 30 day of June, 2011 hereinafter referred to as International Bird Rescue, a 501-C 3 corporation with principal offices currently at 444 W. Ocean Blvd., Long Beach, CA 90802, USA, hereinafter referred to as "Bird Rescue" and acting as an independent contractor.

WHEREAS, IBRRC has significant knowledge and expertise relative to oiled wildlife rescue and rehabilitation and emergency response arising as a result of oil spills; and,

WHEREAS, Plains Pipeline, L.P. desires to secure assured response by Bird Rescue to oil spills in the United States, as defined in the Oil Pollution Act of 1990, and Canada, and,

NOW, THEREFORE, in consideration of the mutual benefits to be derived from this Agreement, the Client and Bird Rescue agree as follows:

Effective Date: This Agreement is effective as of the first date above written and shall remain in effective unless cancelled by either party 30 days prior to the anniversary date of January 1.

SERVICES

International Bird Rescue Response Services: During the term of this Retainer Agreement Bird Rescue will be available to perform oiled wildlife rescue, rehabilitation and documentation services on an assured response basis, using criteria agreed to by both parties. Bird Rescue initial assessment personnel will be dispatched within 8 hours after notification or as agreed upon by both parties, and will perform those services for Client or Client's designated representative in connection with Client's operations.

Upon activation and following consultation with Client, Bird Rescue will commence activation and deployment of a trained response team whose duties include the following in accordance with all elements of Bird Rescue's oiled wildlife care protocols that include:

- Initial wildlife impact assessment with trustee agencies & Client
- Facility design/operation as needed
- Overall management of rehabilitation program
- Veterinary medical evaluation, monitoring, treatment
- Management of field collection of wildlife as needed
- Wildlife evaluation, triage, re-hydration, stabilization, washing, drying, waterproofing and other aspects of the rehabilitation process.
- Volunteer/work force recruitment, training, management
- Pre-release medical/physical evaluation
- Wildlife dietary planning, preparation, support
- Public affairs & media contact
- Documentation, cost tracking, misc.

INTERNATIONAL BIRDRESCUE
EVERY BIRD MATTERS™

Client Response Services: It is recognized that the Client has specific resources, which can maximize the efficiency of a field rehabilitation effort. The Client will supply the following:

- Rehabilitation facility acquisition/modification
- Wildlife rescue boats, motor vehicles and equipment as needed and agreed to by both parties
- Funding for all reasonable travel, food, lodging expenses.
- Protective clothing, materials, etc. if needed.
- Volunteer meals

Non-Response Bird Rescue Services: During the term of this Retainer Agreement Client shall be entitled to a person for one day of Bird Rescue staff services, including training sessions for Client's personnel in techniques for rehabilitation of wildlife, participation in Client's oil spill training exercises, etc. Bird Rescue will provide to Client such other services as Client may request in accordance with Bird Rescue's published fee schedule.

Literature: Bird Rescue will provide to Client, at no cost, a library copy of Bird Rescue literature and training video-tapes as published.

BILLING:

Retainer: Client agrees to pay to Bird Rescue annually as a retainer for the services to be performed herein the sum of $1,100.00 annually. This retainer shall apply to any subsidiary or affiliate for which Client holds a 50% or greater interest, and such subsidiary or affiliate shall be entitled to the benefits earned by Client as a result of retaining Bird Rescue. A list of subsidiaries and affiliates covered by this agreement shall be attached herein, by the Client.

Response Expenses: When Bird Rescue is activated for response to an oil spill Client will pay directly those charges associated with fabrication of field rehabilitation facilities and charges for supplies associated with rehabilitation activities including wildlife capture, animal food, medical equipment, washing supplies, etc. During response to an oil spill, Bird Rescue shall invoice Client every forteen (14) days for personnel fees, Activation Fee, 15% Administrative fee and expenses with said invoices to be paid within twenty (20) days of receipt of invoice. All such expenses shall be supported by receipts or other evidence showing the amount of each expense. A current fee schedule must be signed by client or responsible designated agent within forty-eight (48) hours of activation of Bird Rescue response personnel. In the event of a dispute, Client shall pay all undisputed sums and shall exert all reasonable efforts to resolve the dispute with the parties.

Service Expenses (training, consultation, etc.)**:** When Client requests services not covered by this retainer, Client agrees to pay for such services, in accordance with previously agreed to Bird Rescue fees and daily rates. Out-of-pocket expenses incurred in provision of services will be invoiced at cost by Bird Rescue to Client, with payment due within 30 days of receipt of invoice.

Audit: Bird Rescue will keep and maintain records related to services rendered for a period of three years. Such records will be made available to the Client for auditing purposes upon reasonable notice.

INTERNATIONAL BIRDRESCUE
EVERY BIRD MATTERS™

Independent Contractor: Bird Rescue will perform all services herein as an independent contractor. Nothing herein will be deemed to create an employee-employer or agent-principal relationship between Bird Rescue and the Client.

Authority: Nothing herein will be deemed to authorize Bird Rescue to act as Client's agent or legal representative. Bird Rescue hereby acknowledges that it is not authorized to act as Clients agent or legal representative or to otherwise act in the name of or on behalf of Client.

Body of Knowledge: Client agrees that scientific data derived during response may be used by Bird Rescue in preparation of articles, training, books or other educational materials concerning improvement of wildlife rehabilitation protocols. Bird Rescue shall treat any information relating to Client's operations as confidential and will not disclose it to any other party.

Indemnification: Client agrees to indemnify and hold Bird Rescue, its employees, consultants and agents harmless from and against all loss, damage, expense, injury to or death of persons and loss or damage to property, including property of Client, in any manner arising out of the Services provided hereunder, and agrees to pay all damages, costs, and expenses, including attorney's fees, arising in connection therewith.

Bird Rescue waives any claimed right to bring any action against Client for loss of life, injury or property damage, which may occur as a result of work operations conducted under this agreement.

However, the indemnity obligation shall not extend to claims and liabilities for injury or death to persons or damage to property resulting solely from Client's or Bird Rescue's negligence or willful misconduct.

Assignment: This Agreement will be deemed to require the performance of professional services by Bird Rescue. Neither Bird Rescue nor the Client may delegate or assign duties under this agreement without approval of the other.

Governing Law: Any disputes arising out of this agreement will be put to arbitration in California, in accordance with the laws of the State of California, before one arbitrator, to be appointed by the senior judge of the U.S. District Court for the State of California, at his discretion.

IN WITNESS WHEREOF, the parties hereto have caused this Agreement to be duly executed in their respective names as of the day and year first below written.

PLAINS PIPELINE, L.P.
By Plains Marketing GP Inc.
Its General Partner

By _____

Title Senior Vice President

Date 6/30/11

International Bird Rescue

By _____

Title Executive Director

Date 7/8/11

Revised 5/2011

(b) (7)(F)

[redacted]

TITLE OF REFERENCE DRAWING	DRAWING NO.

OPERATIONS NAME	OPERATIONS DATE	ENGINEERING NAME	ENGINEERING DATE	DRAFTING NAME	DRAFTING DATE	REV. NO.	REVISION	DATE
		JPN	05/10	JM	05/10	4	UPDATED PER COMMENTS	05/17/10
		JPN	07/09	JM	07/09	3	UPDATED PER COMMENTS	07/13/09
		JPN	02/08	JM	02/08	2	UPDATED PER COMMENTS	02/12/08
		JPN	01/08	JM	01/08	1	UPDATED TANK NUMBERS	01/28/08
		GLH	06/06	JM	06/06	0	ISSUED FOR INFORMATION	06/12/06

PACIFIC ATLANTIC TERMINALS LLC

EXHIBIT C
SITE MAP
MARTINEZ TERMINAL

DRAWN JM	CHECKED JM	DRFT. APPV.
DATE 06/12/06	SCALE AS NOTED	ENGR. APPV.

MA-6-D-C-0201

(b) (7)(F)

PLAINS MARKETING, L.P.

Contract No. 368681v6-04916

MAJOR SERVICE CONTRACT

PLAINS MARKETING, L. P.
333 Clay, Suite 1600
Houston, Texas 77002

THIS CONTRACT (hereinafter "Contract") is entered into as of the **1st** day of **January**, **2012** by and between **Plains Marketing, L.P.**, a Texas limited partnership, **and Its Affiliates**, with a physical street address of 333 Clay, Suite 1600, Houston, Texas 77002 and a mailing address of P. O. Box 4648, Houston, Texas 77210-4648 (hereinafter "COMPANY") and **NRC Environmental Services Inc** with a mailing address of **3777 Long Beach Blvd, Suite 100, Long Beach, California 90808** (hereinafter "CONTRACTOR"). For purposes of this Contract, the term "COMPANY" includes Plains All American Pipeline, L.P., and Its Affiliates, including but not limited to Plains Marketing, L.P., Plains Pipeline, L.P., Plains Midstream Canada ULC , Plains LPG Services, L.P., Pacific Pipeline System LLC, Rocky Mountain Pipeline System LLC, Plains Products Terminals LLC, CDM Max, LLC, and Plains Pipeline – North Dakota LLC as well as any other limited liability company or limited partnership in which Plains All American Pipeline, L.P. owns or controls fifty percent or more of the equity.

WITNESSETH:

THAT for and in consideration of the covenants, contract, terms, provisions and conditions hereinafter set forth, the parties do hereby mutually agree, each with the other, as follows:

ARTICLE 1 – SCOPE OF WORK

1.1 This Contract does not obligate COMPANY to order services from CONTRACTOR nor does it obligate CONTRACTOR to provide services to COMPANY, but shall control and govern all services ordered by COMPANY and accepted by CONTRACTOR hereunder, and shall define the rights and obligations of COMPANY and CONTRACTOR with regard to the matters covered hereby.

1.2 COMPANY may, from time-to-time, request CONTRACTOR to perform services (including any supervision, labor, equipment, materials and any other items necessary to perform the work requested; hereinafter referred to as "Work") hereunder by issuing a Work Order to CONTRACTOR (the "Work Order") or, in the case of emergency response services, by telephone during any 24-hour period at 1-800-33 SPILL (800-337-7455).
The Work shall not commence prior to execution of the Work Order by both COMPANY and CONTRACTOR; however, this Contract shall apply to any Work performed by CONTRACTOR on behalf of COMPANY regardless of whether or not a Work Order is issued unless otherwise agreed by the parties in writing. The scope of emergency response services shall be determined by the parties at the time CONTRACTOR accepts COMPANY's verbal request for services based upon the information provided by COMPANY at the time of the request.

1.3 CONTRACTOR shall carry out the Work under this Contract and shall furnish experienced personnel, supervision, small tools, transportation, licenses, insurance, permits, services and all other things necessary or required in and for the proper and timely performance of the Work. Further, CONTRACTOR shall furnish all materials and equipment as specified in the Work Order. CONTRACTOR's equipment, including, but not limited to, small tools and consumables, is the sole responsibility of the CONTRACTOR. COMPANY is not responsible for their cost, maintenance, wear, tear, or destruction except as provided in the Rate Sheet.

1.4 Regarding CONTRACTOR's performance of the Work, time is of the essence. CONTRACTOR shall use its best efforts to complete the Work in accordance with the Contract within the time

limit(s) detailed in the Work Order and shall promptly notify COMPANY upon completion of each major item or portion of the Work. For emergency response services, it is understood that CONTRACTOR does not hereby guarantee any response time by agreeing to perform the requested services. COMPANY acknowledges that CONTRACTOR may determine in its sole discretion which requests for emergency response services to respond to in the event CONTRACTOR at any time receives more requests than it can respond to with its available personnel and equipment. COMPANY further acknowledges that this Contract does not obligation CONTRACTOR to remove personnel or equipment from response services initiated prior to COMPANY's request for services.

1.5 Upon request by COMPANY, CONTRACTOR shall furnish a project schedule prior to commencement of the Work.

ARTICLE 2 -TERM

2.1 This Contract shall have a Primary Term effective **January 1, 2012** to **September 30, 2014** and shall continue into its Secondary Term from month-to-month thereafter until terminated by either party hereto upon not less than thirty (30) days' advance written notice to the other party. Work shall be started and shall be completed on the dates specified in the applicable Work Order. The term of this Contract shall be extended until completion of any outstanding Work Order.

ARTICLE 3 - INSPECTION AND APPROVAL

3.1 All fabricated material may be inspected (at COMPANY's discretion) at CONTRACTOR's facility before shipment. CONTRACTOR shall notify COMPANY's representative at least five (5) working days before the inspection is required.

3.2 All Work performed by CONTRACTOR hereunder shall be subject to inspection, testing and approval by COMPANY. COMPANY may, at its discretion, employ the services of specialist inspection and testing agencies for this purpose. Unless otherwise specified in the Work Order, all drawings will be approved by COMPANY, in writing, prior to commencement of any Work based on the drawings.

3.3 Any inspection or approval of the Work given under this Contract by COMPANY shall not relieve CONTRACTOR of its responsibility for compliance with this Contract, nor from its responsibility for the quality of the Work, nor from any warranty, guarantee or liability under law, either expressed or implied, in this Contract.

3.4 When the Work has been completed in accordance with this Contract, CONTRACTOR shall so notify COMPANY in writing. COMPANY shall then inspect the Work and if it is found not to be in compliance with this Contract, COMPANY shall so notify CONTRACTOR in writing specifying the details of such non-compliance. At CONTRACTOR's expense, CONTRACTOR shall promptly correct all Work noted to be in noncompliance and notify COMPANY once corrections have been made. COMPANY shall then reinspect the Work to determine Contract compliance. If COMPANY rejects the Work or any part thereof which is reinspected, then the procedure set forth above shall be repeated until Work not in compliance is corrected and the Work is accepted by COMPANY.

ARTICLE 4 - COMPENSATION

4.1 Work to be furnished during the term of this Contract shall be furnished at the rates and in accordance with the terms and conditions specified on the current rate sheet (the "Rate Sheet") attached to this contract as Exhibit D unless otherwise provided in the applicable Work Order.

4.2 Unless otherwise agreed in a Work Order, COMPANY shall pay the rate categories for labor and personnel provided by CONTRACTOR in accordance with the rates corresponding to the work hours per the terms and conditions of the Rate Sheet.

4.3 CONTRACTOR must give thirty (30) days advance written notice of proposed rate changes to the Rate Sheet. No rate change or cost change will be effective until accepted by COMPANY in writing. Such change will not apply to any Work in progress at time of notice without COMPANY's written consent.

ARTICLE 5 - PAYMENT

5.1 For lump sum Work extending beyond thirty (30) days, CONTRACTOR shall have the right to request that COMPANY make partial payments; provided, however, that COMPANY shall have the right to withhold up to and including ten percent (10%) of the amount of any invoice submitted to COMPANY by CONTRACTOR for labor, supervision and materials furnished by CONTRACTOR up to the time of completion and acceptance of the Work by COMPANY. Payment of said retainage shall be due upon COMPANY's acceptance of all Work. For retainage, if any, CONTRACTOR shall invoice COMPANY for the same following COMPANY's acceptance of the Work and COMPANY shall pay the same within thirty (30) days from receipt of said invoice.

5.2 Unless specifically waived in writing by COMPANY, each invoice must, in addition to total charges, show separately on its face the labor charges or equipment charges, as applicable, material charges, and any applicable freight charges and sales and use taxes. For reimbursable Work, COMPANY's representative must sign time sheets, equipment logs, material tickets, or similar supporting documentation. This substantiation or any other evidence COMPANY may require shall be attached to the invoice. In addition, on reimbursable Work, any applicable markups such as fringe benefits, unemployment taxes, workers' compensation insurance, payroll taxes, overhead and profit, etc. must be itemized. Equipment rental must be invoiced separately, on a monthly basis. The invoice must list each piece of equipment separately, with the description taken verbatim from the Rate Sheet submitted with the Contract. A Monthly Equipment Time Log, signed by COMPANY's representative, must be attached to the invoice. Material and/or Third Party Equipment Rentals for equipment not specified on the Rate Sheet shall include third party invoices as support.

5.3 Subject to paragraph 5.2 above, COMPANY shall pay CONTRACTOR's invoice within thirty (30) days of receipt of such invoice by COMPANY's Accounts Payable Department. For purposes of determining the date of receipt of an invoice by COMPANY, or receipt of a payment by CONTRACTOR, delivery is effective upon receipt by the party to whom the invoice or payment is sent by a system that the COMPANY or CONTRACTOR has designated for the purpose of receiving invoices or payments; provided that, an invoice or payment is deemed to have been received by the intended recipient at the address set forth above using personal delivery, expedited courier, messenger service, telecopy, ordinary mail, and electronic mail, but if received after the recipient's normal business hours shall be deemed to have been received on the next business day.

5.4 COMPANY may withhold payment for a disputed invoice or part thereof, without interest, until such dispute is resolved. COMPANY shall provide CONTRACTOR with written justification of any disputed items within thirty (30) days from receipt of such invoice, referencing the applicable contract or Rate Sheet provision or other support for such dispute. The parties agree to use good faith to work to resolve such dispute within the next thirty (30) days. If CONTRACTOR pursues legal action to collect disputed amounts, and prevails, CONTRACTOR shall be entitled to prejudgment and post judgment interest as allowed by law plus reasonable attorney's fees incurred by CONTRACTOR to collect such amounts.

5.5 Sums due CONTRACTOR shall be adjusted by deducting any amounts paid by COMPANY to prevent or remove liens, claims, debts and encumbrances which are the responsibility of CONTRACTOR, or its subcontractors, or to satisfy other obligations of CONTRACTOR or its subcontractors hereunder that CONTRACTOR has failed to perform following ten (10) day's written notice of such failure.

5.6 No payment made under this Contract shall constitute a waiver by COMPANY of the performance by CONTRACTOR of any of CONTRACTOR's obligations hereunder and any payment withheld shall be without prejudice to any other rights and remedies available to COMPANY.

ARTICLE 6 - CHANGES IN THE WORK

6.1 All changes ifor planned Work shall be approved by means of a written Change Order to the Work Order.

6.2 COMPANY shall have authority to make minor changes in the Work not involving extra cost. No extra Work or claim for additional compensation or time to complete the Work shall be made without a written Change Order, signed on behalf of COMPANY and delivered to CONTRACTOR. Where CONTRACTOR considers that any change or variation in the Work would be beneficial, CONTRACTOR shall advise COMPANY of its proposal, and COMPANY shall decide whether to proceed with such change or variation.

6.3 Extra "Work" or claims invoiced as extra "Work" or extra claims, which have not been issued as a written Change Order to the Work Order will not be authorized for payment. CONTRACTOR shall not perform any extra Work without a properly executed Change Order signed by the COMPANY'S authorized representative.

6.4 COMPANY acknowledges that emergency response services may be governed and regulated by certain state, federal and local laws and the regulations and other requirements of various government agencies with jurisdiction over emergency events and other environmental matters. To the extent any of these governmental requirements increase the scope of emergency response services to be rendered and the expenses associated with such services, COMPANY shall pay CONTRACTOR for all Services and expenses in accordance with Article 4.

ARTICLE 7 - WARRANTY

7.1 CONTRACTOR warrants that it is experienced in the Work to be undertaken on behalf of COMPANY, possesses the skills and resources to complete the Work and has the authority to fulfill its obligations under this Contract. The Work shall be performed in a good and workmanlike manner by qualified, careful and efficient workers in accordance with the Contract, in strict conformity with the best standard practices normally observed by contractors performing similar services and in a manner protective of its employees, the public and the environment.

7.2 CONTRACTOR will warrant the foregoing warranties in paragraph 7.1 above for a period of one (1) year from the date the Work is completed and accepted by COMPANY for planned work and prior to demobilization of CONTRACTOR for emergency response services, In the event any Work fails to meet any of the foregoing warranties within the period specified above, without waiving any other rights or remedies COMPANY may have at law, CONTRACTOR agrees forthwith to correct, repair or replace the Work and any damage to other work or material at CONTRACTOR's expense without cost to COMPANY.

7.3 Labor, equipment and materials furnished by CONTRACTOR pursuant to paragraph 7.2 to correct defects shall be warranted by CONTRACTOR in accordance with the warranties set forth in paragraphs 7.1 and 7.2 for a period of twelve (12) months from the date of completion of the correction.

7.4 In the event CONTRACTOR was notified of any failure of CONTRACTOR's foregoing warranties and failed to correct promptly and adequately such Work, COMPANY shall have the right to correct or to have such Work corrected and COMPANY shall be entitled to deduct the cost of such corrective Work from any monies due or becoming due to CONTRACTOR under this Contract or otherwise. In the event that no monies are due or shall become due to CONTRACTOR under this Contract then CONTRACTOR shall promptly pay COMPANY the costs incurred in correcting such Work.

7.5 COMPANY may be contracting for this Work and the benefits derived therefrom as agent for its affiliate. All of CONTRACTOR's warranties or guarantees under this Contract, and any warranties or guarantees made or given by manufacturers, suppliers, subcontractors or others acting in the interest of the parties to this Contract, shall inure to the benefit of affiliate, as well as to COMPANY. Manufacturer's or distributor's warranties or guarantees for goods or equipment should be issued directly to COMPANY as purchaser. If not issued to COMPANY, then CONTRACTOR hereby assigns to COMPANY (if assignable), or shall enforce for the benefit of the COMPANY (if not assignable) any warranty or guarantee provided by manufacturers or

sellers of goods or equipment which are sold to, or installed by CONTRACTOR in the Work or incorporated into, the Work. Such assignment shall not release or novate the manufacturer's or distributor's warranty obligations to CONTRACTOR nor shall COMPANY be entitled to a double recovery.

7.6 If there is a defect in, or failure of, the goods or equipment furnished or installed in connection with the Work, Contractor's warranty hereunder is hereby supplemented with the applicable manufacturer's or distributor's warranty.

7.7 COMPANY recognizes that emergency response Services provided by CONTRACTOR under this Contract are provided on an emergency basis, that the purpose of each response is to minimize to the extent practicable the environmental damage and health and safety risks resulting from spills or releases of oil, hazardous or other substances; and that the substance involved may not be eliminated from the Site by the emergency response. CONTRACTOR DOES NOT WARRANT, BY THE TERMS OF THIS CONTRACT OR BY UNDERTAKING RESPONSE SERVICES PURSUANT TO THIS CONTRACT, THAT SUCH RESPONSE SERVICES WILL RENDER THE SITE SAFE FOR ANY FORM OF HUMAN ACTIVITY OR IN COMPLIANCE WITH ANY STATE, LOCAL OR FEDERAL LAW.

ARTICLE 8 - INDEMNITY

8.1 CONTRACTOR AGREES, TO THE EXTENT OF ITS NEGLIGENT ACTS OR OMISSIONS OR DISREGARD FOR ITS DUTIES UNDER THIS CONTRACT OR LAW, TO RELEASE, PROTECT, INDEMNIFY, HOLD HARMLESS, AND DEFEND COMPANY, ITS SUBSIDIARIES AND AFFILIATED COMPANIES, AND ITS AND THEIR RESPECTIVE AFFILIATES, OFFICERS, DIRECTORS, EMPLOYEES, AGENTS, SERVANTS, CONTRACTORS (EXCLUDING CONTRACTOR), SUBCONTRACTORS, AND INVITEES (COLLECTIVELY THE "COMPANY GROUP"), FROM AND AGAINST ANY AND ALL DEMANDS, CLAIMS, LOSSES, COSTS, SUITS, OR CAUSES OF ACTION (INCLUDING, BUT NOT LIMITED TO, ANY JUDGMENTS, LOSSES, LIABILITIES, FINES, EXPENSES, INTEREST, LEGAL FEES, COSTS OF SUIT, AND DAMAGES, WHETHER IN LAW OR EQUITY AND WHETHER IN CONTRACT TORT OR OTHERWISE) HEREINAFTER "CLAIMS" FOR OR RELATING TO:

(I) PERSONAL OR BODILY INJURY, INCLUDING DEATH AT ANY TIME RESULTING THEREFROM,

(II) PROPERTY LOSS OR DAMAGE TO ANY PROPERTY INCLUDING LOSS OF USE THEREOF AND DOWNTIME,

(III) TO THE EXTENT SUCH INJURY, DEATH OR PROPERTY LOSS OR DAMAGE ARISES OUT OF, RESULTS FROM, OR RELATES TO, EITHER DIRECTLY OR INDIRECTLY, THE WORK OR OTHER SERVICES PERFORMED OR PROVIDED BY CONTRACTOR PURSUANT TO THIS CONTRACT AND IS CAUSED BY THE NEGLIGENCE, GROSS NEGLIGENCE OR WILLFUL MISCONDUCT OF CONTRACTOR, THE UNSEAWORTHINESS OF ANY VESSEL OR ANY OTHER THEORY OF LEGAL LIABILITY. IN THE EVENT CONTRACTOR FAILS TO DEFEND AND PROTECT COMPANY GROUP PURSUANT TO THIS CONTRACT, THEN COMPANY GROUP SHALL BE ENTITLED TO DEFEND AND PROTECT ITS INTERESTS AND CONTRACTOR SHALL BE LIABLE FOR ALL REASONABLE ATTORNEY'S FEES, COSTS, JUDGMENTS AND SETTLEMENTS, INCLUDING REASONABLE ATTORNEY'S FEES INCURRED IN ENFORCING THIS CONTRACT,

(IV) VIOLATION OF OR FAILURE TO COMPLY WITH ANY APPLICABLE LAW, ORDINANCE, REGULATION, RULE OR ORDER,

(V) A BREACH BY CONTRACTOR, ITS EMPLOYEES, AGENTS, SERVANTS, SUBCONTRACTORS, OR VENDORS, OF ANY TERM, PROVISION OR WARRANTY CONTAINED HEREIN, WHICH OCCUR, EITHER DIRECTLY OR INDIRECTLY, IN CONNECTION WITH PERFORMANCE OF THE WORK CONTEMPLATED HEREUNDER OR BY REASON OF CONTRACTOR AND ITS EMPLOYEES, WORKMEN, AGENTS, SERVANTS, SUBCONTRACTORS AND VENDORS BEING PRESENT ON COMPANY'S PREMISES, AND

(VI) INFRINGEMENT OF PATENT OR MISAPPROPRIATION OF TRADE SECRET OR PROPRIETARY RIGHTS OF ANY THIRD PARTY BY ANY DEVICE, PROCESS OR MATERIAL NOT SPECIFIED BY COMPANY.

8.2 CONTRACTOR'S AGREEMENT TO PROTECT, INDEMNIFY, HOLD HARMLESS AND DEFEND AS SET FORTH IN PARAGRAPH 8.1 ABOVE SHALL NOT BE NEGATED OR REDUCED BY VIRTUE OF CONTRACTOR'S INSURANCE CARRIER'S DENIAL OF INSURANCE COVERAGE OF THE OCCURRENCE OR EVENT WHICH IS THE SUBJECT MATTER OF THE CLAIMS AND/OR REFUSAL TO DEFEND CONTRACTOR OR COMPANY. IN ADDITION, CONTRACTOR WILL PAY ALL COSTS AND EXPENSES, INCLUDING ATTORNEY FEES AND ALL OTHER EXPENSES OF LITIGATION INCURRED BY COMPANY TO ENFORCE THE FOREGOING AGREEMENT TO PROTECT, INDEMNIFY, HOLD HARMLESS AND DEFEND COMPANY TO THE EXTENT THAT COMPANY PREVAILS IN SUCH ENFORCEMENT ACTION.

8.3 CONTRACTOR SHALL, TO THE EXTENT OF ITS NEGLIGENT ACTS OR OMISSIONS OR DISREGARD FOR ITS DUTIES UNDER THIS CONTRACT OR LAW, ASSUME RESPONSIBILITY FOR THE CONTROL AND REMOVAL OF, AND SHALL RELEASE, PROTECT, DEFEND, INDEMNIFY, AND HOLD COMPANY GROUP HARMLESS FROM AND AGAINST ANY AND ALL LOSS OR DAMAGE OR CLAIMS ARISING FROM POLLUTION, THREAT OF POLLUTION, OR CONTAMINATION: (I) WHICH ORIGINATES OR EMANATES FROM SPILLS OF FUELS, LUBRICANTS, MOTOR OILS, PIPE DOPE, PAINT, SOLVENTS, BALLAST, BILGE AND GARBAGE, DEBRIS OR ANY OTHER SUBSTANCES, WHOLLY IN ITS POSSESSION AND CONTROL OR ORIGINATING FROM CONTRACTOR GROUP'S VESSEL, EQUIPMENT, MATERIALS OR TRANSPORT, THE UNSEAWORTHINESS OF ANY VESSEL, OR ANY OTHER THEORY OF LEGAL LIABILITY; OR (II) WHICH OTHERWISE RESULTS FROM THE NEGLIGENT PERFORMANCE OF THE WORK HEREUNDER BY CONTRACTOR. NOTWITHSTANDING THE FOREGOING, THE ASSUMPTIONS OF LIABILITY BY CONTRACTOR UNDER THIS PARAGRAPH 8.3 APPLY ONLY TO THE COST OF, AND LIABILITY FOR, CONTROL AND REMOVAL OF SUCH POLLUTION AND CONTAMINATION AND SHALL, IN NO EVENT, ALTER, LESSEN OR AFFECT THE LIABILITIES OR RESPONSIBILITIES OF CONTRACTOR SPECIFIED ELSEWHERE IN THIS CONTRACT. CONTRACTOR AGREES TO ASSUME RESPONSIBILITY FOR AND TO INDEMNIFY AND HOLD COMPANY GROUP HARMLESS FROM AND AGAINST ANY FINES, PENALTIES, COSTS OR EXPENSES RESULTING FROM POLLUTION OR CONTAMINATION CAUSED BY THE NEGLIGENCE OR OTHER FAULT OF CONTRACTOR

8.4 IN ADDITION TO THE FOREGOING, CONTRACTOR SHALL INDEMNIFY, HOLD HARMLESS, AND DEFEND COMPANY GROUP AGAINST A CLAIM FOR BODILY INJURY OR DEATH OF AN EMPLOYEE OF THE CONTRACTOR, ITS AGENT OR ITS SUBCONTRACTOR OF ANY TIER REGARDLESS OF WHETHER DUE OR ALLEGEDLY DUE TO THE NEGLIGENCE (WHETHER JOINT OR CONCURRENT), FAULT, BREACH OF DUTY, OR STRICT LIABILITY OF COMPANY GROUP.

8.5 THE INDEMNITY OBLIGATIONS IN THIS CONTRACT SHALL SURVIVE TERMINATION OF THIS CONTRACT.

8.6 COMPANY SHALL INDEMNIFY, DEFEND AND HOLD HARMLESS CONTRACTOR, ITS PARENT AND AFFILIATED COMPANIES, THEIR DIRECTORS, OFFICERS, EMPLOYEES, AGENTS AND SUBCONTRACTORS AGAINST ANY AND ALL CLAIMS ARISING OUT OF OR AS A RESULT OF (I) THE PRESENCE OF CONTRACTOR OR ITS SUBCONTRACTORS ON THE SITE IF THE SITE IS NOT OWNED BY COMPANY; AND/OR; (II) THE DISCHARGE,

ESCAPE OR RELEASE OF WASTE FROM COMPANY'S PROPERTY OR THE PROPERTY OF OTHERS, EXCEPT TO THE LIMITED EXTENT CAUSED BY THE ACTIVE NEGLIGENCE, GROSS NEGLIGENCE OR WILLFUL MISCONDUCT OF CONTRACTOR IN THE PERFORMANCE OF THE SERVICES, PROVIDED THAT THIS EXCEPTION SHALL NOT APPLY TO THE EXTENT CONTRACTOR IS IMMUNE OR CONTRACTOR'S LIABILITY IS LIMITED UNDER FEDERAL OR STATE LAWS.

8.7 EXCEPT FOR AND WITHOUT REGARD TO DAMAGES THAT MAY BE AWARDED TO A THIRD PARTY AGAINST A PARTY, ITS PARENT AND AFFILIATED COMPANIES, THEIR DIRECTORS, OFFICERS, EMPLOYEES, AGENTS AND SUBCONTRACTORS TO THIS CONTRACT, IN NO EVENT SHALL EITHER PARTY BE LIABLE FOR PROSPECTIVE PROFITS OR SPECIAL, INCIDENTAL, PUNITIVE, EXEMPLARY, SPECULATIVE OR CONSEQUENTIAL DAMAGES (INCLUDING, WITHOUT LIMITATION, LOSS OF VALUE, LOSS OR DEFERRAL OF PRODUCTION, LOSS OF FINANCIAL ADVANTAGE, LOST PROFITS OR BUSINESS INTERRUPTIONS), HOWEVER SAME MAY BE CAUSED, BUT SHALL BE LIMITED, TO ACTUAL DAMAGES ONLY REGARDLESS OF THE CAUSE, INCLUDING NEGLIGENCE, GROSS NEGLIGENCE, WILLFUL MISCONDUCT OR STRICT LIABILITY.

8.8 NOTWITHSTANDING ANY OTHER PROVISION CONTAINED IN THIS CONTRACT, CONTRACTOR'S OBLIGATION TO INDEMNIFY COMPANY SHALL NOT EXTEND TO ANY CLAIMS THAT CONTRACTOR WOULD OTHERWISE BE PROTECTED AGAINST, EXEMPT FROM OR LIABILITY LIMITED UNDER ANY FEDERAL OR STATE LAWS PROTECTING RESPONSE CONTRACTORS FROM CERTAIN LIABILITY IN CONNECTION WITH THEIR RESPONSE EFFORTS, EVEN IF SUCH CLAIMS ARISE FROM NEGLIGENT ACTS OR OMISSIONS OF CONTRACTOR. IT IS AGREED THAT CONTRACTOR'S LIABILITY UNDER THIS ARTICLE WILL NOT IN ANY CASE EXCEED CONTRACTOR'S LIABILITY UNDER SUCH LAWS.

ARTICLE 9 - INSURANCE

9.1 Without limiting in any way the scope of any obligations or liabilities assumed hereunder by CONTRACTOR, CONTRACTOR shall procure or cause to be procured and maintained at its expense, for the duration of this Contract, and with insurance companies acceptable to COMPANY, the insurance policies described below. CONTRACTOR acknowledges that the endorsements and the type of Insurance coverage and the limits thereof, are minimum limits which shall not be reduced without the prior written consent of COMPANY, which consent is solely in the discretion of the COMPANY. The policy limits can be met with a combination or primary and excess liability policies:

9.1.1 Workers' Compensation and Employer's Liability Insurance, covering the employees of CONTRACTOR for all compensation and other benefits required of CONTRACTOR by the Worker's Compensation or other statutory insurance laws and requirements in the state having jurisdiction over such employees, and over the location where the Work is being performed, including Alternate Employer. Employer's Liability Insurance with limits of not less than One Million Dollars ($1,000,000) per accident or occurrence.

9.1.2 Commercial General Liability Insurance, to cover liability for bodily injury and property damage with a combined single limit of not less than One Million Dollars ($1,000,000) per occurrence, including:

A. Contractual Liability to cover liability assumed under this Contract;

B. Products Hazard Coverage for any and all products provided or furnished by or on behalf of CONTRACTOR during the course of service rendered by CONTRACTOR hereunder;

C. Completed Operations Hazard Coverage for any claim relating to defects or deficiencies in goods, products, and materials or services used or rendered by CONTRACTOR in connection with its operations;

D. Broad Form Property Damage Liability insurance;

E. Coverage for explosion, collapse, and underground hazards for work performed by CONTRACTOR involving excavation, drilling or subsurface activity;
F. Independent Contractor's Contingent coverage;
G. Personal Injury Liability;
H. Premises Liability;
I. In Rem Endorsement;
J. Territorial extension to cover all work areas;
K. Watercraft exclusion deleted in both Contractual Liability Insurance and Contractual Liability Endorsement; and
L. Contractor's Pollution Liability, including, without limitation, cleanup on a sudden and accidental basis (which coverage may be provided by a separate Contractor's Pollution Liability policy).

9.1.3 Business Automobile Liability Insurance, if owned, hired or non-owned automotive equipment is used in the performance of this Contract, to cover liability for bodily injury and property damage with a combined single limit of not less than One Million Dollars ($1,000,000) per occurrence.

9.1.4 Aircraft Liability, if applicable, to cover bodily injury and property damage liability with a combined single limit of not less than Five Million Dollars ($5,000,000) per occurrence.

9.1.5 Marine Liability, if applicable, involving Work to be performed on or over water including docks, wharves, etc., Worker's Compensation and Employer's Liability coverage shall also include Maritime Employer's Liability including Transportation, Wages, Maintenance and Cure, Merchant Marine Act of 1920 (the "Jones Act"), U. S. Longshore and Harbor Workers' Act, and Outer Continental Shelf Land Act with limits of not less than One Million Dollars ($1,000,000) per occurrence.

For Work involving vessels and other watercraft, Worker's Compensation and Employer's Liability coverage shall also include Maritime Employer's Liability including Transportation, Wages, Maintenance and Cure, Merchant Marine Act of 1920 (the "Jones Act"), U. S. Longshore and Harbor Workers' Act, and Outer Continental Shelf Land Act with limits of not less than One Million Dollars ($1,000,000) per occurrence. Marine liability insurance for owned or chartered watercraft shall include liability for bodily injury and property damage with a combined single limit of not less than Ten Million Dollars ($10,000,000) per occurrence. Insurance shall be endorsed to specifically include full crew coverage (unless provided under Worker's Compensation); liability for seepage, pollution, containment and cleanup; collision liability; and, contractual liability.

9.1.6 Professional Liability Insurance, if applicable, CONTRACTOR agrees to and shall maintain in full force and effect, at all times a policy or policies of insurance containing a minimum Five Million Dollars ($5,000,000) coverage per occurrence for errors and omissions for professional liability.

9.1.7 Excess Liability Insurance, this policy shall be written on a "following form" basis and shall provide coverage in excess of the coverage required to be provided by CONTRACTOR for employer's liability, commercial general liability insurance, business automobile liability insurance, contractor's pollution liability, and professional liability. The aggregate limit shall apply separately to each annual policy period.

Minimum limits

Five Million Dollars ($5,000,000) combined single limit each occurrence;
Five Million Dollars ($5,000,000) aggregate limit.

Minimum limits for Work involving: construction or repair of a tank(s) or vessels or pipelines; an open trench six feet deep or deeper; drilling or boring; hot work; tank or vessel cleaning; confined space entry:

Ten Million Dollars ($10,000,000) combined single limit each occurrence;
Ten Million Dollars ($10,000,000) aggregate limit.

9.1.8 Special Provisions Concerning Policies Placed by CONTRACTOR, all policies (except Worker's Compensation and Employer's Liability) shall include COMPANY GROUP as additional insureds under blanket endorsements to the extent of CONTRACTOR's negligent acts or omissions or disregard for its duties under this Contract or law, including paragraph 8.4. Such insurance coverages shall specifically provide that they apply separately to each insured against which claim is made or suit is brought, except with respect to the limits of the insurer's liability. CONTRACTOR hereby waives, and shall cause its insurers to waive under blanket endorsements, all rights of subrogation against COMPANY GROUP when permitted by law. The insurance coverages required by CONTRACTOR hereunder shall be primary over any coverages maintained by COMPANY GROUP. All of CONTRACTOR's policies must include thirty (30) days written notice of cancellation to COMPANY GROUP.

The policy limits specified above are minimum requirements and not limits of liability and shall not be construed in any way as COMPANY's acceptance of responsibility for financial liabilities in excess of such limits. CONTRACTOR shall pay all deductibles and self-insured retentions, including defense costs, applicable to the insurance.

Prior to commencement of any Work, CONTRACTOR shall furnish COMPANY with Certificates of Insurance, which document that all coverages and endorsements required by this Contract have been obtained. CONTRACTOR shall obtain renewal certificates as and when necessary and copies thereof shall be forwarded to COMPANY as soon as same are available and in any event prior to the expiration of the policy so renewed. These certificates shall provide that the insurer shall give thirty (30) days written notice to COMPANY prior to cancellation of any policy. In no event shall COMPANY's acceptance of an insurance certificate that does not comply with this paragraph constitute a waiver of any requirement of this Article.

9.1.9 Subcontractors. CONTRACTOR shall require all its subcontractors to provide statutory Workers' Compensation insurance coverage. To the extent not provided for by the subcontractors and not covered by CONTRACTOR's insurance, deficiencies shall be the sole responsibility of CONTRACTOR.

9.1.10 THIS PARAGRAPH 9.1.10 APPLIES ONLY TO WORK PERFORMED IN THE STATE OF LOUISIANA. FOR PURPOSES OF THE LOUISIANA WORKER'S COMPENSATION LAW, La. R.S. 23:1021 *et seq.*, COMPANY AND CONTRACTOR AGREE THAT THE WORK PERFORMED BY CONTRACTOR AND ITS EMPLOYEES PURSUANT TO THIS CONTRACT ARE AN INTEGRAL PART OF AND ARE ESSENTIAL TO THE ABILITY OF COMPANY TO GENERATE COMPANY'S GOODS, PRODUCTS AND SERVICES, AND THAT CONTRACTOR'S WORK AND SERVICES SHALL BE CONSIDERED PART OF COMPANY'S TRADE, BUSINESS, AND OCCUPATION, FOR PURPOSES OF La. R.S. 23:1061(A)(1). FURTHERMORE, COMPANY AND CONTRACTOR AGREE THAT COMPANY IS THE PRINCIPAL OR STATUTORY EMPLOYER OF CONTRACTOR'S EMPLOYEES FOR PURPOSES OF La. R.S. 23:1061(A) ONLY. IRRESPECTIVE OF COMPANY'S STATUS EITHER AS THE STATUTORY EMPLOYER OR AS THE SPECIAL EMPLOYER (AS DEFINED IN La. R.S. 23:1031(C)) OF CONTRACTOR'S EMPLOYEES, AND REGARDLESS OF ANY OTHER RELATIONSHIP OR ALLEGED RELATIONSHIP BETWEEN COMPANY AND CONTRACTOR'S EMPLOYEES, CONTRACTOR SHALL BE AND REMAIN AT ALL TIMES PRIMARILY RESPONSIBLE FOR THE PAYMENT OF LOUISIANA WORKER'S COMPENSATION BENEFITS TO ITS EMPLOYEES, AND NEITHER

CONTRACTOR NOR ITS UNDERWRITERS SHALL BE ENTITLED TO SEEK CONTRIBUTION FOR ANY SUCH PAYMENTS FROM COMPANY.

ARTICLE 10 – SAFETY

10.1 CONTRACTOR shall perform all Work in such manner as to cause a minimum of interference with COMPANY's operations and shall conduct its work in accordance with the then currently acceptable industry safety standards to maintain adequate protection of persons and property during CONTRACTOR's performance hereunder. CONTRACTOR will perform its duties in a safe manner and will have in effect and will enforce a set of safety and loss prevention standards which comply with all laws, and CONTRACTOR MINIMUM SAFETY REQUIREMENTS, as may be amended or modified from time-to-time, attached hereto as Exhibit B and incorporated herein. Prior to commencement of each Work, CONTRACTOR shall inspect the premises and facilities on which said work is to be performed in order to be apprised of any and all apparent risk incident thereto. Upon completion of the work, CONTRACTOR shall leave the premises clean and free of all waste materials and rubbish. CONTRACTOR agrees to limit smoking and the use of heat and/or fire implements, including welding and torch cutting tools, to such locations and occasions as are specifically authorized in writing by COMPANY.

10.2 COMPANY is a subscriber to ISNetworld. ISNetworld is responsible for monitoring contract compliance including health and safety information and current insurance certificates. CONTRACTOR shall be a subscriber to ISNetworld. If CONTRACTOR is not currently a subscriber to ISNetworld, CONTRACTOR shall become a member by contacting ISNetworld at 3001 Knox Street, Suite 200, Dallas, Texas 75205 (phone No. 214-303-4900 Web site www.isnetworld.com). CONTRACTOR subscription fees to ISNetworld are CONTRACTORS responsibility.

10.3 With respect to emergency response Services, COMPANY understands and agrees that (i) actions carried out in an emergency response may be inherently dangerous and difficult, (ii) rules and requirements that may be appropriate and applicable under normal circumstances may not be appropriate or applicable in a particular emergency situation, as recognized by the considerable authority of governmental or regulatory agencies to direct private actions in a response, and (iii) there may be unresolved jurisdictional and applicability issues associated with emergency response that may make it difficult to determine the applicability of a particular requirement. Therefore, the provisions of Article 10.1 will not be interpreted in a manner that would hold CONTRACTOR to a standard that would be unreasonable under the actual conditions of particular spill event. All CONTRACTOR actions carried out consistently with the directions of the federal or state on scene coordinator or with approval of applicable safety officials will be deemed to be in compliance with this Article.

ARTICLE 11 – CONTROLLED SUBSTANCE ABUSE POLICY

11.1 The COMPANY maintains a drug and alcohol free workplace. CONTRACTOR acknowledges that it has been advised and agrees to advise all its employees, subcontractors, agents and business invitees of any subcontractor, agent, or business invitee, of the following safety regulations or policies concerning controlled substances (alcohol, misuse of prescription drugs and illegal drugs):

(a) It is the policy of COMPANY that the use, possession, sale, transfer, purchase, or the presence in one's system of a controlled substance on COMPANY property is prohibited;

(b) CONTRACTOR is to have in place a drug and alcohol free workplace policy;

(c) Entry onto COMPANY property constitutes consent to an inspection of the person (including, but not limited to, the taking of a urine sample) and personal effects, as well as any vehicle(s) when entering or leaving COMPANY property, and;

(d) Any person who is found in violation of the policy or who refuses to permit an inspection may be removed and barred from COMPANY's property, at the sole discretion of COMPANY.

ARTICLE 12 – ACCIDENT REPORTS

12.1 All accidents must be reported. In the event an accident involving the property, equipment, or personnel of CONTRACTOR, COMPANY, or any third party occurs on COMPANY's property, or which arises out of, results from or is in any way connected with CONTRACTOR's work or presence upon COMPANY's property or other activities pursuant to this Contract, CONTRACTOR shall immediately report such accident to COMPANY's designated representative set forth in Article 27 hereof. In addition, a written report of such accident must be prepared by CONTRACTOR and delivered to COMPANY's representative within 24 hours after CONTRACTOR becomes aware of each such accident. This report should contain factual information only and should not contain opinion, speculation, or supposition as to fault, liability, or prevention. CONTRACTOR shall also provide COMPANY with a copy of each and every report of each such accident, including statements or other investigative material or documents which CONTRACTOR completes, or is required to submit, or does submit, to any entity other than COMPANY, including without limitation, any governmental agency or body, CONTRACTOR's insurers, or others.

ARTICLE 13 - LIENS

13.1 Where required by COMPANY, progress payments and the final payment shall be substantiated by notarized lien affidavits and lien waivers evidencing that all suppliers, subcontractors and laborers have been paid in full for Work performed and materials furnished, up to and including the date(s) of such affidavits. COMPANY shall not be obligated to make any payment for Work performed until requested affidavits and lien waivers are received.

13.2 CONTRACTOR shall keep the Work free and clear of all liens. CONTRACTOR shall promptly and satisfactorily settle all claims, including lien claims of its subcontractors, for labor performed and supplies or materials furnished in connection with such Work. In the event CONTRACTOR fails or refuses to promptly and satisfactorily settle all such claims, COMPANY shall, after so notifying CONTRACTOR in writing, have the right to settle such claims on behalf of and for the account of CONTRACTOR, and deduct the amount from the contract price. Alternatively, COMPANY shall have the right to hold all sums due or to become due CONTRACTOR, without interest, until satisfactory evidence is furnished to it that all such claims and liens have been settled and released.

ARTICLE 14 - TERMINATION

14.1 COMPANY shall have the right to terminate this Contract or the Work in whole or in part, without cause, at any time by notice in writing to CONTRACTOR. Upon receipt of any such notice, CONTRACTOR shall cease all Work as provided in said notice and this Contract or the Work shall terminate effective as of the date such notice is received by CONTRACTOR. COMPANY shall assume all obligations and shall be entitled to all privileges of CONTRACTOR in connection with any Work Order(s) issued prior to the termination of this Contract, including any contract, which CONTRACTOR has entered into for the supply of services, equipment, or materials. In the event COMPANY terminates this Contract during CONTRACTOR's performance of Work under a Work Order, the total settlement price through the date of cancellation shall be valued at rates and prices consistent with the amounts applicable to the Work or, if on a cost reimbursable basis, consistent with the time and material rates under this Contract. In no event shall CONTRACTOR be entitled to anticipated profits or any damages because of such termination. CONTRACTOR will not be permitted to terminate this Contract while any Work under outstanding Work Order(s) is not complete.

14.2 In the event of a breach or default by either party to this Contract, both parties may assert any setoffs, claims, counterclaims, and credits that it is entitled to under law or in equity regardless of which party failed to perform first, breached first, or defaulted first. This clause does not relieve a defaulting party or breaching party from its obligation to perform. All rights and remedies afforded by law or in equity with respect to material breaches or defaults are expressly reserved by each party notwithstanding this provision.

ARTICLE 15 - SUSPENSION

15.1 COMPANY shall have the right to suspend all or any part of the Work at any time and for any reason not defined in Article 23 as "force majeure" by giving written notice of suspension to CONTRACTOR. Upon receipt of such notice, CONTRACTOR shall immediately take such measures as are, in the opinion of COMPANY's Representative, necessary or appropriate in order to effect such suspension and to safeguard and store the Work or part thereof during the period of suspension. In the event of suspension, COMPANY shall pay CONTRACTOR all reasonable and verifiable additional costs incurred in effecting suspension and in safeguarding and storing the Work or part thereof.

15.2 Upon termination of any such suspension, CONTRACTOR agrees to re-commence the Work under the terms and conditions of the Contract.

ARTICLE 16 - AUDIT RIGHTS AND CONTRACTOR ACCOUNTING PRINCIPLES

16.1 CONTRACTOR agrees to retain all records and accounts related to charges or CONTRACTOR invoices for a period of at least three (3) years from the completion date of any Work performed pursuant to this Contract. For purposes herein, "records and accounts" shall include books, documents, accounting procedures and practices, in the form of computer data, or in any other form.

16.2 CONTRACTOR shall permit COMPANY access to, either in the field or at the home office, for review and audit, at all reasonable times, all records and accounts relating to costs and expenses invoiced to COMPANY under this Contract, including, but not limited to, DOT and OSHA records and reports, supporting documentation, and all reimbursable costs and expenses for the Work.

16.3 CONTRACTOR shall respond in writing to COMPANY within thirty (30) days of submission by COMPANY of its audit findings. CONTRACTOR shall work diligently with COMPANY to resolve any differences with respect to the audit. Any adjustments or payments which must be made as a result of any such audit, inspection or examination of CONTRACTOR's invoices and/or records shall be made available within thirty (30) days of resolution of any adjustments to be made.

16.4 At its sole option, COMPANY may audit the CONTRACTOR'S records and accounts related to this Contract to verify and determine the propriety of charges. At the COMPANY'S option, the audit may be performed by the COMPANY'S internal auditors and/or independent auditors selected by the COMPANY.

16.5 CONTRACTOR shall provide COMPANY access to records and accounts within thirty business (30) days after receipt of written request by COMPANY. CONTRACTOR shall comply with any requests resulting from an inspection, review, or audit by COMPANY in a reasonable and timely manner.

16.6 CONTRACTOR shall abide by and maintain accounting practices for all actual or prospective costs incurred in connection with the Work in a manner that complies with generally accepted accounting principles ("GAAP") as defined by the standards for accounting set forth by the American Institute of Certified Public Accountants ("AICPA"). These accounting practices shall include, but are not limited to methods of distinguishing direct costs from indirect costs and the basis used for allocating indirect costs. Upon request by COMPANY at any time, CONTRACTOR shall disclose in detail such accounting practices that CONTRACTOR contends comply with the requirement of this paragraph 16.6.

16.7 CONTRACTOR shall not submit any invoices or requests for payment or reimbursement to COMPANY that have not been recorded in the CONTRACTOR's records and accounts using accounting practices that comply with paragraph 16.6.

16.8 CONTRACTOR shall follow consistently and without variation the accounting practices described in paragraph 16.6 that are in place at the time of execution of this Contract. A change to such accounting practices may be proposed, however, by either COMPANY or CONTRACTOR. Any such proposed changes must be agreed to in writing and signed by both CONTRACTOR and COMPANY. After the terms and conditions under which the change is to be made have been agreed to, the change must be applied prospectively to this Contract.

16.9 Notwithstanding any other provision in this Article, COMPANY's audit rights shall not extend to the makeup of fixed or unit prices or time and material rates of CONTRACTOR.

ARTICLE 17 - COMPANY RIGHT TO WITHHOLD OR DENY PAYMENT TO CONTRACTOR

17.1 If at any time or times, upon audit or otherwise, COMPANY shall determine that any amount paid by COMPANY or invoiced to COMPANY pursuant to this Contract is not or did not constitute an allowable charge under this Contract, COMPANY shall, at its sole discretion, elect one or more of the following options listed below:

(a) disallow the improper charge and withhold or deny payment as more particularly described in paragraph 17.2;

(b) offset the amount of such overpayment against any future payments or retainage due CONTRACTOR hereunder; or

(c) submit to CONTRACTOR an invoice in the amount of such overpayment which shall promptly be paid by CONTRACTOR.

17.2 COMPANY has the right to withhold or deny payment to CONTRACTOR, when COMPANY has described in writing to CONTRACTOR that:

(a) CONTRACTOR has not performed a service or failed to provide the goods identified in the invoice;

(b) CONTRACTOR has neglected, failed, or refused to furnish information or to cooperate with the inspection, review or audit of its Work and/or records and accounts;

(c) CONTRACTOR was overpaid by COMPANY as determined by inspection, review, and/or audit of its Work, and/or records and accounts; or

17.3 COMPANY may also, at its discretion, withhold monies due to CONTRACTOR or seek payment from CONTRACTOR on account of:

(a) adverse claims or liens filed or reasonable evidence indicating the probable filing of adverse claims or liens;

(b) failure of CONTRACTOR to make payment to a subcontractor or for equipment, materials or labor when due; or

(c) failure of CONTRACTOR to take appropriate action to correct discrepancies or deficiencies noted by COMPANY during review and inspection of the services or Work performed by CONTRACTOR.

17.4 If COMPANY determines that cause exists to withhold or deny payment to CONTRACTOR, COMPANY shall provide written notice to CONTRACTOR that COMPANY is withholding or denying payment to CONTRACTOR. Such notice shall specify the basis for COMPANY withholding payment and the amount to be withheld or denied.

ARTICLE 18 - CONFIDENTIALITY

18.1 All information obtained by the CONTRACTOR in the performance of this Contract not in the public domain shall be considered confidential by CONTRACTOR. CONTRACTOR agrees to prevent information and data which it or its employees, agents or subcontractors obtained, directly or indirectly, concerning the Work, the Work site, or any of COMPANY's property, plans or operations, from being disclosed to others without the prior written consent of COMPANY. CONTRACTOR will use the information solely for performance of the Work and for no other purpose. CONTRACTOR will not make or consent to publicity releases or announcements concerning this Contract or CONTRACTOR's participation in the Work. CONTRACTOR shall not take photographs of the Work site or any of COMPANY's property without first obtaining COMPANY's written consent. CONTRACTOR shall require each of its subcontractors and agents to agree to the same limitations and obligations provided for in this paragraph. The provisions of this paragraph shall remain binding obligations on CONTRACTOR until the earlier of the date which is five (5) years after the expiration or termination of this Contract or the date the

confidential information has become part of the public domain by means other than disclosures or releases prohibited by this Contract.

18.2 Upon completion of the Work under this Contract, CONTRACTOR will (i) return all originals and copies of the confidential information to COMPANY, (ii) destroy any documents, reports, or drawings developed by CONTRACTOR and embracing confidential information of COMPANY, and (iii) remove from computer memory all of said confidential information therein residing.

ARTICLE 19 - PROPRIETARY RIGHTS

19.1 To the extent that the "work made for hire" rule under the Copyright Act of 1976 applies, CONTRACTOR acknowledges and agrees that the product of all Work by CONTRACTOR for COMPANY is a work made for hire and, as such, all rights in the Work belong to and are assigned to COMPANY. In addition, if the "work made for hire" rule under the Copyright Act of 1976 does not apply, CONTRACTOR agrees and hereby acknowledges that all rights in such Work are assigned and belong to COMPANY, and CONTRACTOR agrees to execute all documents requested by COMPANY to effect such assignment. CONTRACTOR specifically acknowledges and agrees that all right, title and interest in and to the product of all Work, including copyright of computer software and related work, is assigned to COMPANY.

19.2 All drawings, flow diagrams, sketches, specifications, computer programs and printouts, computer data or other records, regardless of form (hereinafter collectively referred to as "Records"), prepared by CONTRACTOR under the provisions of this Contract, shall be the property of COMPANY and may be used by COMPANY for any purpose. As part of the fulfillment of this Contract, CONTRACTOR shall deliver to COMPANY physical possession of all Records upon completion of the Work, or in the event the Work is terminated for any reason, then immediately upon such termination of the Work.

ARTICLE 20 - COMPLIANCE WITH LAWS, ENVIRONMENTAL LAWS AND REGULATIONS

20.1 CONTRACTOR will fully comply with all applicable laws and regulations pertaining to working conditions including, but not limited to, workers' compensation, social security, federal, state and local income tax withholding, unemployment insurance, the Occupational Safety and Health Act, the Immigration Reform and Control Act of 1986, the Americans with Disabilities Act, and all applicable federal, state and local laws including without limitation those laws affecting employment, business opportunities, and the environment. CONTRACTOR is responsible for the timely payment of any and all employment-related taxes with respect to Work performed by CONTRACTOR. In the event that CONTRACTOR's employees or its subcontractors' employees are deemed to be COMPANY employees by any government authority, CONTRACTOR shall reimburse COMPANY for any corresponding taxes or fees paid by the COMPANY.

20.2 CONTRACTOR acknowledges receipt of, has read and understands, and shall abide by COMPANY POLICIES APPLICABLE TO CONTRACTORS, a copy of which is attached hereto as Exhibit A and incorporated herein. COMPANY may amend Exhibit A from time-to-time at its sole discretion.

20.3 CONTRACTOR also acknowledges receipt of, and shall abide by COMPANY's Contractor Safety Rules and Procedures Manual, if applicable, while performing any Work hereunder.

20.4 CONTRACTOR expressly guarantees that for all tools, materials and equipment to be furnished and used, and for all work and labor to be performed under the terms of this Contract and in every activity connected therewith, CONTRACTOR shall comply fully with all applicable Federal, State and local laws, ordinances, rules and regulations, and shall furnish COMPANY evidence of such compliance as COMPANY may require at any time. If the services rendered under this Contract are licensed by the State in which the work is to be performed, CONTRACTOR must obtain and maintain the State license and must submit a copy to COMPANY prior to the performance of work covered by this Contract.

20.5 Subject to the provisions of Section 20.7 with respect to hazardous waste that pre-existed CONTRACTOR's presence at the Site, CONTRACTOR agrees that all products furnished or work performed shall be in compliance with all applicable Federal, State and local laws and regulations respecting the environment, including, but not limited to, the Clean Air Act, the Toxic Substance

Control Act, the Safe Drinking Water Act, the Comprehensive Environmental Response, Compensation and the Liability Act, the Superfund Amendments and Reauthorization Act, the Environmental Planning and Community Right-To-Know Act, the Oil Pollution Act of 1990, the Clean Air Act Amendments of 1990, the Migratory Bird Treaty Act, the Endangered Species Act, and the Resource Conservation and Recovery Act. The handling of any solid or hazardous waste subject to the Resource Conservation and Recovery Act shall be in compliance with EPA Regulations at Parts 260 through 265, and Parts 122 through 125 of Title 40, Code of Federal Regulations, and any other applicable regulation under the Resource Conservation and Recovery Act, CONTRACTOR agrees at all times in performance of the work hereunder, to abide by all the Federal, State, and local laws listed above as said laws or regulations may be amended from time-to-time subsequent to the effective date of this Major Service Contract and all other laws, orders, rules and regulations, prescribed by any governmental body having jurisdiction.

20.6 CONTRACTOR agrees that, to the extent the work performed pursuant to this Contract relates to the Consent Decree ("CD") dated September 20, 2010, between COMPANY and the United States Environmental Protection Agency, compliance with the relevant provisions of the CD is required and is of the essence of this Contract.

20.6.1 CONTRACTOR acknowledges receipt of the relevant portions of the CD, which are attached hereto as Exhibit C.

20.6.2 In the event of a material breach of CONTRACTOR's obligations under this Contract which result in a violation of the CD, COMPANY shall be entitled to recover from CONTRACTOR, in addition to any other relief provided by this Contract and by law, a sum of money, not to exceed two (2) times the total fees paid to CONTRACTOR pursuant to any relevant Work Order(s), or in the absence of any relevant Work Order(s), the relevant project pursuant to the Contract, to reimburse the COMPANY for any penalty paid by COMPANY on account of CONTRACTOR's actions or omissions which result in violation(s) of the CD, including court costs and reasonable attorney's fees incurred in connection with the enforcement of this provision. For the avoidance of doubt, this provision is not intended to create any right to recover attorney's fees or costs for any reason other than the enforcement of this provision regarding penalties assessed in connection with CONTRACTOR's non-compliance with the CD.

20.7 In the performance of this Contract, CONTRACTOR my handle hazardous waste, oil, or other regulated substances that pre-existed CONTRACTOR's presence at the Site ("Waste"). COMPANY agrees that COMPANY has exclusive title to all Waste the subject of this Contract and is responsible for any real or personal property contaminated with or otherwise affected by such Waste. Nothing contained within this Contract nor the performance of any Services by CONTRACTOR shall be construed or interpreted as requiring CONTRACTOR to assume the status or liability as an owner, operator, manager or person in charge of all or any portion of the Site, as arranger for the treatment, transportation or disposal of any Waste, or as owner or generator of any Waste under the Resource Conservation and Recovery Act, 42 USCA, Section 6901. et seq., as amended, (hereinafter "RCRA"), Comprehensive Environmental Response Compensation and Liability Act, 42 USCA, Section 9601. et seq., as amended (hereinafter "CERCLA"), or within any other federal or state statute governing the treatment, storage and disposal of Waste (herein collectively referred to as "Regulations"). CONTRACTOR has not taken and will not take title, control of or otherwise own any Waste under this Contract. COMPANY shall retain the primary responsibility for compliance with the provisions of such Regulations governing the treatment, storage and disposal of Waste. CONTRACTOR will transport or cause to be transported any Waste under this Contract to a disposal or treatment facility selected by COMPANY. Any such transportation for disposal undertaken under this Contract shall be undertaken or arranged solely as COMPANY's agent and under COMPANY's direction. COMPANY shall provide CONTRACTOR with COMPANY's EPA identification number and any other identification or authorization required by law and assigned to COMPANY.

ARTICLE 21 - INDEPENDENT CONTRACTOR

21.1 Except as identified in Section 20.7 above, CONTRACTOR is an independent contractor with the right to supervise, manage, control, and direct the manner, techniques, procedures, and methods for performing the Work. COMPANY is interested only in the results to be obtained; provided, however, the COMPANY shall be entitled to review and inspect the Work.

21.2 COMPANY shall have the right to request removal from services hereunder any employee(s) of CONTRACTOR who in COMPANY's sole opinion, has engaged in improper conduct, is not performing in a satisfactory manner or is not qualified to perform assigned work. CONTRACTOR shall promptly comply with such request.

ARTICLE 22 - CONTRACTOR DUTIES

22.1 CONTRACTOR shall inspect, prior to commencement of the Work, the premises and facilities for dangers or conditions which may result in personal injury, death or property damage and provide adequate warning to its employees, contractors, and invitees and the necessary precautions.

22.2 CONTRACTOR shall supervise and direct the Work safely, efficiently, and with its best skill and attention.

22.3 CONTRACTOR shall assure that the finished Work complies accurately with the Contract Documents.

22.4 CONTRACTOR will be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. CONTRACTOR will take all necessary precautions for the safety of, and will provide the necessary protection to prevent damage, injury, or loss to:

(a) all employees on the Work and other persons who may be affected by the Work;

(b) all the Work and all materials or equipment to be incorporated in the Work, whether in storage on or off the site; and

(c) other property at the site or adjacent to the site, including trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

ARTICLE 23 - FORCE MAJEURE

23.1 The term "*force majeure*", as used herein, shall mean an unforeseen event or occurrence beyond the reasonable control and without the fault or negligence of the affected party including, but not limited to, earthquakes, inclement weather, fire, explosions, malicious mischief, insurrection, riot, strikes, lockouts, boycotts, picketing, labor disputes or disturbances (excluding strikes, lockouts, boycotts, pickets, labor disputes or disturbances or other industrial disputes or action involving the CONTRACTOR or CONTRACTOR's employees or its subcontractors or vendors or any of their employees), acts of the public enemy, war (declared or undeclared), compliance with any order or directive of any governmental agencies or authorities or representatives of any government acting under claim or color of authority, loss of transportation facilities ordinarily available to and used by a party in the performance of the obligations imposed by this Contract; where such event, occurrence or compliance would render the affected party's performance illegal or physically impossible.

23.2 Neither CONTRACTOR nor COMPANY shall be under any obligation or subject to any liability for failure to carry out respectively the terms and provisions of this Contract during the time and to the extent that such failure is due solely to *force majeure*. The party affected by *force majeure* must give notice stating the time of occurrence and full particulars of the *force majeure* in writing to the other party as soon as possible after the occurrence of the *force majeure*. The obligation of the party giving notice of *force majeure* shall be suspended during the continuance of the *force majeure* event. Nothing in this Article shall be construed to relieve either party of its obligation to pay monies due under the Contract.

ARTICLE 24 - SUBCONTRACTING AND ASSIGNMENTS

24.1 CONTRACTOR may subcontract any part of the Work with prior written approval of COMPANY, but CONTRACTOR shall not be relieved of or released from, any of its obligations or responsibilities under this Contract. For purposes of this Contract, Work performed by subcontractors shall be deemed to be Work performed by CONTRACTOR. If requested, CONTRACTOR shall provide COMPANY with an executed copy of each subcontract and purchase order issued by CONTRACTOR for the performance of the Work. CONTRACTOR shall ensure that the terms and conditions of any such subcontract or purchase order shall comply with and correspond to the terms and conditions of this Contract. Changes in subcontractors, nature of Work sublet, or scope of Work sublet shall also be subject to the prior written approval of COMPANY. Any treatment, storage and disposal facility contracted by CONTRACTOR for the disposal of COMPANY's Waste shall not be considered a subcontractor subject to this Article.

24.2 Neither this Contract nor any rights thereunder shall be assignable by CONTRACTOR without the prior written consent of the COMPANY and any such assignment without COMPANY's prior written consent will be void as to COMPANY.

24.3 Each subcontract for a portion of the Work or purchase order with respect to the Work which is assigned by CONTRACTOR to the COMPANY shall provide that such assignment is effective only upon (a) termination of the Contract by the COMPANY, and (b) the assumption of the subcontract or purchase order by COMPANY in writing. Each subcontract of the Work or purchase order with respect to the Work shall provide that, upon termination of the Contract by COMPANY, the COMPANY may, in its sole discretion, assume the rights and obligations of the CONTRACTOR under the subcontract or purchase order arising on or after the effective date of the COMPANY's written assumption of the subcontract or purchase order. CONTRACTOR shall include the following, or a substantially similar provision, in all subcontracts for the Work or purchase order with respect to the Work:

> "Upon the termination or suspension, for any reason, of the prime contract between Plains Marketing, L.P. or its Affiliates and Contractor, Plains Marketing, L.P. or its Affiliates may assume this purchase order or this subcontract between Contractor and subcontractor, effective from and after the date of assumption. Any assumption of this purchase order or this subcontract by Plains Marketing, L.P. or its Affiliates shall be in a writing executed by Plains Marketing, L.P. or its Affiliates."

24.4 "Contract Documents" shall mean this Contract, the Exhibits to this Contract, documents listed in, and incorporated by reference in this Contract, and Modifications issued after execution of this Contract. A "Modification" is (1) a written amendment to this Contract signed by both Parties, (2) a Construction Change Order or (3) a written order for a minor change in the Work issued by or on behalf of the COMPANY. Unless specifically enumerated in the Contract, the Contract Documents do not include Contractor's Bid Documents.

CONTRACTOR shall obtain a written contract from each of its subcontractors for planned Work, and endeavor to obtain a written contract from subcontractors performing emergency response services, which contract shall provide that:

1. the subcontractor, to the extent of the work performed by the subcontractor, is bound to the CONTRACTOR by the terms of the Contract Documents;
2. the subcontractor shall be responsible to the CONTRACTOR for all the obligations and responsibilities that the CONTRACTOR is responsible for to Plains Marketing, L.P. or its affiliates pursuant to the Contract Documents and the law;
3. the rights of Plains Marketing, L.P. or its affiliates under the Contract Documents with respect to the Work to be performed by the subcontractor are preserved and protected so that subcontracting thereof will not prejudice such rights;
4. Plains Marketing, L.P. or its affiliates shall have the same rights, remedies, redress and causes of action against the subcontractor which the CONTRACTOR has against the subcontractor pursuant to the Contract Documents and the law;

5. Plains Marketing, L.P. or its affiliates shall have the same rights, remedies, redress and causes of action against the subcontractor which Plains Marketing, L.P. or its Affiliates has against the CONTRACTOR pursuant to the Contract Documents and the law;
6. the subcontractor shall have the same rights, remedies, redress and causes of action against the Plains Marketing, L.P. or its affiliates which the CONTRACTOR has against Plains Marketing, L.P. or its affiliates pursuant to the Contract Documents and the law;
7. the subcontractor shall require each of its sub-subcontractors to enter into similar agreements; and
8. in case of any inconsistencies between the Contract Documents and the terms of the subcontract, the terms of the Contract Documents shall govern.

ARTICLE 25 – GOVERNING LAW

25.1 The validity, interpretation and performance of this Contract shall be governed and construed in accordance with the laws of the state where the COMPANY's site is located as referenced in the applicable Work Order without reference to the choice of law doctrine of such state.

ARTICLE 26 – PERMITS

26.1 Prior to commencing any activities contemplated under this Major Service Contract, CONTRACTOR warrants that it shall obtain and maintain all permits, bonds, and licenses that CONTRACTOR is required by law to obtain in connection with performance of work covered herein and CONTRACTOR shall, upon request, provide copies of said permits, bonds and licenses to COMPANY.

ARTICLE 27 – NOTICES

27.1 All statements, insurance certificates and other routine correspondence shall be sent to COMPANY by registered or certified mail, postage prepaid, return receipt requested, or delivered in person or by commercial courier or sent by facsimile to:

If to COMPANY:
Plains Marketing, L. P.
333 Clay Street, Suite 1600
Houston, Texas 77002
Attn: Contracts and Insurance
Facsimile: 713-289-7422

If to CONTRACTOR:
NRC Environmental Services Inc.
3777 Long Beach Blvd, First Floor
Long Beach, CA 90806
Attn: General Manager
Facsimile: 562-432-1826

27.2 No legal notice required or permitted hereunder concerning a claim or breach arising hereunder or notice of termination shall be valid unless given in writing and shall be deemed to have been validly given only if delivered in person or sent by registered or certified mail, postage prepaid, return receipt requested, facsimile or commercial courier to:

If to COMPANY:
Plains Marketing, L.P.
333 Clay Street, Suite 1600
Houston, Texas 77002
Attn: Lawrence J. Dreyfuss, Vice President
Facsimile: 713-646-4216

If to CONTRACTOR:
NRC Environmental Services Inc.
1605 Ferry PointAlameda, CA 94501
Attn: Todd Roloff, Vice President
Facsimile: 510-749-4150

ARTICLE 28 – ENTIRETY OF CONTRACT

28.1 This Contract, any Work Order issued hereunder and attachments to this Contract or any Work Order represent the entire understanding and agreement between the parties hereto and supersedes any and all prior contracts, whether written or oral, that may exist between the parties regarding the Work. It is agreed, however, that performance by CONTRACTOR of emergency

services as an ICN under that Agreement for Provision of Response Services between Plains Pipeline, LP and National Response Corporation shall be governed by the terms of that Agreement. No terms, conditions, prior course of dealings, course of performance, usage or trade, understandings, purchase orders, or contract purporting to modify, vary, supplement or explain any provision of this Contract shall be effective unless in writing and signed by representatives of both parties authorized to amend this Contract.

28.2 This Contract may be amended or modified only by written amendment signed by both parties. Any attempt by either party, through a Work Order, purchase order, invoice, or other document, to vary in any degree any of the terms of this Contract shall be deemed immaterial and shall be void, unless this provision is expressly waived in an amendment executed as specified hereinabove.

28.3 Drafts of this Contract and correspondence prior to the execution of this Contract shall not be used by either party as evidence of the intent of the parties or otherwise be admissible in evidence in interpreting this Contract.

ARTICLE 29 – SEVERABILITY

29.1 The provisions of this Contract are severable, and if any clause or provisions hereof shall be held invalid or unenforceable in whole or in part in any jurisdiction, then such invalidity or unenforceability shall affect only such clause or provision, or part thereof, in such jurisdiction and shall not in any manner affect such clause or provision in any other jurisdiction, or any other clause or provision in this Contract in any jurisdiction. Any such clause or provision held invalid or unenforceable, in whole or in part, to the extent permitted by law, shall be restricted in applicability or reformed to the minimum extent required for such clause or provision to be enforceable.

ARTICLE 30 – BINDING EFFECT

30.1 All rights conferred by this Contract shall be binding upon, inure to the benefit of, and be enforceable by or against the respective successors and permitted assigns of the parties hereto.

30.2 It is expressly understood that the provisions of this Contract do not impart enforceable rights in anyone who is not a party or a successor or permitted assign of a party hereto. No third party (including an employee or a contractor of a party) is intended to have or shall have any rights under this Contract.

ARTICLE 31 – EXHIBITS AND WORK ORDERS

31.1 Each Exhibit to this Contract and any Work Orders issued pursuant hereto are incorporated herein and made a part hereof for all purposes.

ARTICLE 32 – WAIVER

32.1 Any waiver by either party of any provision or condition of this Contract shall not be construed or deemed to be a waiver of any other provision or condition of this Contract, nor a waiver of a subsequent breach of the same provision or condition, unless such waiver is expressed in writing and signed by the parties. COMPANY's consent to delay in the performance by CONTRACTOR of any obligation shall not be applicable to any other obligation. Delay in the enforcement of any remedy in the event of a breach of any term or condition, or in the exercise by either party of any right, shall not be construed as a waiver of such remedy or right.

ARTICLE 33 – ETHICAL BUSINESS PRACTICES

33.1 No director, officer, employee or agent of CONTRACTOR shall give or receive any commission, fee, rebate, or gift, except those articles of nominal value given as sales promotion or holiday remembrances, or the value of reasonable entertainment consistent with local social and business custom, or enter into any business arrangement with any director, employee or agent of

COMPANY without prior written notification thereof to COMPANY. CONTRACTOR shall promptly notify COMPANY of any violation of this paragraph and any consideration received as a result of such violation shall be paid or credited to COMPANY.

33.2 CONTRACTOR shall disclose in writing and shall assist COMPANY in identifying any financial transactions between any employee of COMPANY, including family members, and CONTRACTOR, its officers, directors, shareholders/owners and employees.

ARTICLE 34 – SURVIVAL

34.1 Except as otherwise provided herein warranties, covenants and obligations at Articles 7, 8, 13 and 14 shall survive termination or cancellation of this Contract, regardless of the reason for such termination or cancellation, and shall continue in full force and effect.

IN WITNESS WHEREOF, the parties hereto by their duly authorized representatives have executed this Contract as of the day and year first above written.

NRC ENVIRONMENTAL SERVICES INC.

By: _____

Name: Todd Roloff

Title: Sr. Vice President

Date: MAY 10, 2012

Taxpayer ID #: 91-1572532

PLAINS MARKETING, L. P.
By Plains Marketing GP Inc.,
Its General Partner

By: _____

Name: James L. Ferrell

Title: Vice President - Supply Chain Management

Date: 6/11/12

EXHIBIT A
COMPANY POLICIES APPLICABLE TO CONTRACTORS

I. CONTRACTOR agrees to comply as follows:

a. (No Smoking Policy). To require its employees, subcontractors, agents and representatives to adhere to COMPANY's No Smoking Policy. The Policy generally prohibits smoking in COMPANY's buildings and on COMPANY's property except as otherwise designated.

b. (Anti-Harassment Policy). To require its employees, subcontractors, agents and representatives to adhere to COMPANY's Anti-Harassment Policy while on the premises or engaged in COMPANY business. The Policy prohibits all forms of harassment, including sexual harassment, which create an intimidating, hostile or offensive working environment.

c. (Weapons Policy). To require its employees, subcontractors, agents and representatives to adhere to COMPANY's Weapons Policy. The Policy strictly prohibits the use, possession or concealing of any weapons, whether licensed or not and including all firearms and explosives, while on COMPANY's premises.

d. (Search Policy). COMPANY reserves the right to conduct personal searches at any time. COMPANY intends to use personal searches when it believes the Policy may have been violated and/or for the purpose of deterrence and assurance that there is compliance with this Policy.

e. (Safety and Security Policy). To establish, administer, and enforce safety rules and procedures and shall require its employees, subcontractors, agents and representatives to adhere to COMPANY's Safety and Security Policies.

f. (Drug and Alcohol Policy).

i. To notify its employees, subcontractors, agents and representatives of COMPANY's Drug and Alcohol Policy which prohibits CONTRACTOR's employees, subcontractors, agents, and representatives from:

1. using, possessing, distributing, purchasing or selling drugs or alcohol while on COMPANY premises or while engaged in COMPANY business, including travel to and from a particular work area or areas;
2. reporting to and/or performing work for the COMPANY with unauthorized drugs or alcohol in excess of the Policy limit (.04% B.A.C.) in their body; or
3. refusing to submit to routine searches of their person, their personal property, and COMPANY or CONTRACTOR assigned property, while entering on or leaving COMPANY premises.

ii. CONTRACTOR agrees to remove and replace, for the purposes of fulfilling its obligations to the COMPANY under this Contract, any of its employees, subcontractors, agents and representatives found to be in violation of its own anti-drug plan and/or COMPANY's Drug and Alcohol Policy, or those that the COMPANY believes to be in violation of the Drug and Alcohol Policy whose compliance with the Policy cannot be certified to by CONTRACTOR based upon laboratory testing acceptable to the COMPANY.

iii. The following paragraphs addressing contractor drug testing policies and procedures are not applicable to contractors providing non-safety sensitive activities and/or services. Contractors providing non-safety activities and/or services (including but not limited to labor, equipment and materials) under the terms and conditions of this Contract are not required to have their own drug testing policies and procedures in place. However, while performing said services for COMPANY, contractor and its employees, agents and representatives are required to comply with the COMPANY's applicable Drug and Alcohol policies, as outlined herein. COMPANY shall be solely responsible for determining whether or not any particular contract services or activities are considered safety sensitive with respect to whether or not a specific contractor must have its own drug and alcohol misuse and prevention program in place.

iv. If applicable, CONTRACTOR certifies that all of its employees, subcontractors, agents and representatives who may perform work covered by this Contract are subject to Laboratory Testing Provisions which are substantially equal to COMPANY's Policy in all respects (COMPANY's Laboratory Testing Provisions are described in paragraphs 1 through 4 listed below). CONTRACTOR agrees to permit COMPANY, or its authorized representative, access to CONTRACTOR's property and records, without prior notification, for the purposes of examining/auditing CONTRACTOR's policies, practices and procedures pertaining to this requirement. Any deficiencies, as determined by COMPANY, can result in CONTRACTOR being removed from the work and/or being required to implement specified modifications prior to proceeding with work.

v. The facilities performing the test (laboratory analysis) shall be properly licensed and fully accredited.

vi. COMPANY conducts drug and alcohol testing under the following circumstances:

1. Pre-employment Testing - All applicants for employment are required to submit to Laboratory Testing following their acceptance of a contingent job offer and prior to beginning work (drug screen only).
2. Reasonable Suspicion Testing - Undertaken when responsible officials have reasonable suspicion to believe an employee is in violation of COMPANY's Policy. For example, Laboratory Testing may be conducted in connection with a search if contraband is found in common areas and ownership cannot be determined; if an employee's performance, involvement in an accident, actions or appearance leads local management to believe there may be a violation of the Policy; or if an employee is charged with or being investigated in connection with a drug-related or alcohol-related criminal offense. The foregoing examples are not meant to be exclusive; other circumstances may arise which would constitute reasonable suspicion to request Laboratory Testing.
3. Random Testing - All employees performing work in safety sensitive positions at all COMPANY locations are subject to random drug and alcohol testing as outlined below, with the exception of employees who are covered by a D.O.T. random testing program.
   a. COMPANY defines a safety sensitive position as one in which requires that the employee perform the duties which are related to the safe operation or security of a facility or a piece of equipment and which, if not performed properly, could result in a serious safety risk or environmental hazard to employees, a facility, or the general public. All employees who have the direct responsibility of supervising employees who perform such duties are considered as occupying a safety-sensitive position.
   b. Random Testing will be conducted at an annualized rate of 25% for those who work on pipelines and associated equipment and at 50% for those who fall under FMCSA regulations.
4. Return to Work Testing - Employees who are permitted to return to work following a positive laboratory test or other Policy violation and/or rehabilitation are subject to Laboratory Testing as determined by Health Services, and as outlined in a Return to Work Agreement.
5. Aviation Department Testing - Employees in COMPANY's Aviation Department are subject to periodic unannounced testing at least once per year.
6. Government Required Testing - Employees will be required to submit to Laboratory Testing as required by the U.S. Department of Transportation or by other federal, state or local governmental agencies.

g. Definitions Contained in COMPANY's Policy

i. Company: "COMPANY" shall mean **Plains Marketing, L. P.** and any of **its affiliates** which are listed herein.

ii. Unauthorized Drugs: For the purpose of this Policy, the term "Unauthorized Drugs" shall mean any substance, other than an Authorized Substance, which is, or has the effect on the human body of being, a narcotic, depressant, stimulant, hallucinogen, or cannabinoid, their precursors, derivatives, or analogues, and includes, but is not limited to, those substances scheduled as controlled substances pursuant to the Federal Controlled Substances Act, inhalants, "designed drugs", and "look-a-likes".

iii. Authorized Substances: Substances having a physiological, psychological, or biochemical effect which are lawfully prescribed or which are available without a prescription, which are lawfully obtained by an employee and which an employee possesses and uses in the appropriate manner, in the dosages and for the purposes for which the substances were prescribed or manufactured, are considered "Authorized Substances" for the purposes of this Policy. In the case of alcohol, such is excluded from this definition to the extent its possession of consumption places an employee in violation of the "Alcohol Policy".

iv. Company Premises: "Company Premises" includes, but is not limited to, **Plains Marketing, L. P. and Its Affiliates** owned, rented, used, or leased property, including lodging furnished or paid for by the COMPANY; COMPANY work site locations, offices, and/or parking lots; or COMPANY owned, leased, or rented vehicles, aircraft, vessels, or equipment.

v. Alcohol: "Alcohol" includes, but not limited to, distilled spirits, liquor, beer, wine, malt liquor or any other intoxicants used for beverage purposes.

vi. Under the Influence of Alcohol: "Under the Influence" shall mean that an individual is affected by Alcohol in any detectable manner. Evidence of being under the influence may be established by a professional or lay person's opinion, a physiological test/analysis, or a biochemical test/analysis. An "Under the Influence" determination is not limited to nor must it consist of evidence of impairment of physical or mental ability or misconduct. An employee whose blood alcohol content is found to be equivalent to or greater than the governmentally recognized level for being under the influence shall be presumed to be Under the Influence of Alcohol.

vii. Blood Alcohol Content: Additionally, an employee whose blood alcohol level content is determined during work hours to be equivalent to or greater than .04 percent Blood Alcohol Content will be in violation of this Policy.

viii. Contraband: "Contraband" for purposes of this Policy shall mean drug paraphernalia.

ix. Laboratory Testing: "Laboratory Testing" includes, but is not limited to, a physiological test/analysis or a biochemical test/analysis, including urinalysis, breath analysis, and blood analysis.

x. Personal Search: "Personal Search" includes a search of employees' personal property located on COMPANY Premises, including but not limited to, their personal effects, lockers, baggage, desks, lunch boxes, containers, purses, billfolds, parcels; private vehicles if on COMPANY Premises and living quarters, if furnished or paid for by the COMPANY; any COMPANY property assigned to employees; and a limited search of the person.

xi. Policy Violations: COMPANY considers any of its employees who have a positive drug test result; have a blood alcohol content .04% or higher during working hours; possess prohibited materials, fail to cooperate with COMPANY requests for testing and/or searches; or who otherwise violate any provision of its Policy are subject to severe disciplinary action up to and including discharge for the first violation.

h. Resource Listing

i.	American Council for Drug Education	800-488-drug
ii.	Compliance Services	318-457-2443
iii.	DISA Contractors Consortium	800-752-6432
iv.	Drug Regulations Compliance, Inc.	318-868-7569

v.	Institute for a Drug Free Workplace	202-842-7400
vi.	National Clearinghouse for Alcohol & Drug Information Workplace Helpline	800-843-4971
vii.	National Institute on Drug Abuse	301-443-6245
viii.	Pipeline Testing Consortium, Inc. DOT 49CFR, Parts 192, 195 & 199	316-669-8800

EXHIBIT B

CONTRACTOR MINIMUM SAFETY REQUIREMENTS

NOTE: The following information is intended to set forth the minimum safety requirements expected by Company from its Contractors (including their subcontractors) in the performance of their obligations hereunder. Each Contractor shall be responsible for ensuring that its subcontractors comply with all of the following requirements. It is at all times the responsibility of each Contractor to implement and enforce any additional safety practices that may be necessary for the safe performance of operations by Contractor personnel and its sub-contractors. Additional job or site specific requirements may be specified by Company Management in its sole discretion as necessary to assure the safety of all persons involved with such operations.

A. PRE-JOB MEETING

Complete understanding of the safety and health requirements of the job are critical to the overall success of the project. After awarding of bids, Contractor(s) may be required to attend a pre-job meeting to discuss Contractor and subcontractor safety requirements and job site safety/hazard information. Contractor shall, at each work location, assign one of its employees, agents or subcontractor's as the "Person in Charge" for the purposes herein identified and stipulated.

B. REPORTING TO WORK:

All Contractor personnel shall report to the appropriate Company representative upon arrival at a work location. Contractor Management shall assure that Contractor personnel are given safety orientations for familiarization with potential job site hazards and emergency procedures specific to the current work location.

C. ACCIDENT. INJURY AND ILLNESS REPORTING PROCEDURES:

All work-related accidents, injuries and illnesses shall be reported immediately, or as soon as is safely possible, to the appropriate Company representative. It is the responsibility of the Contractor's designated person-in-charge to ensure that all accidents on the property or leases of Company involving death, personal injury or illness, fire and/or explosions, property damage, hazardous material spills and vehicles are reported both to Company and to all applicable Federal, State and local governmental bodies and agencies having jurisdiction thereof. Contractor shall provide to the Company, upon request, a list of any recordable injuries (as defined by 29 CFR 1904) that occurred on Company property.

D. CONTRACTOR RESPONSIBILITIES:

1. Contractor shall designate a person-in-charge for administration of these requirements. For contracts involving twenty-five (25) or more contract workers on work location, Contractor shall designate or provide a full-time Site Safety Representative to enforce Company and Contractor's safety requirements.

2. Contractor is to assure that all Contractor personnel are qualified and trained to perform contracted services.

3. Contractor is to provide its personnel with proper and well-maintained equipment, tools and personal protective equipment necessary for the particular job being performed, unless otherwise specified by Contract language.

4. Contractor is to adhere to all applicable Federal, State and local regulations pertaining to a particular operation for which its services are contracted.

5. Contractor is responsible for ensuring that all operations are conducted in a safe manner, and for promptly correcting and reporting to Company and Contractor's employees and subcontractors all known or suspected hazards or unsafe conditions.

6. Contractor is to instruct its personnel to report any known or suspected hazards or unsafe conditions to his/her immediate supervisor.

7. Contractor shall immediately notify the appropriate Company representative if known or suspected hazards or unsafe conditions involve Contractor or Company equipment/personnel.

8. Contractor shall provide to the Company, upon request, a copy of the Contractor's written Injury and Illness Prevention Plan (IIPP) or other written safety program and policy, if required, under Federal, State, or local regulatory agency.

9. Contractor is to assure the work area is maintained in a clean and orderly fashion.

E. PERSONAL PROTECTIVE EQUIPMENT:

This section lists general personal protective equipment requirements for Contractors and Subcontractors working at Company field or plant locations. Company Operations Management may require additional job-specific or site-specific personal protective equipment as necessary to assure the safety of all persons involved with such operations. Always refer to the Company's Personal Protective Equipment Plan for additional requirements at specific field or plant locations.

1. HEAD PROTECTION

It is the policy of the Company that, as a condition of employment, all contractors and visitors while on Company property shall wear hard hats except when in vehicles, in office buildings, or on the parking lots. All visitors shall be provided with a hard hat for temporary use while in the field.

All hard hats must meet ANSI Z89.1-1986 Class B or ANSI Z89.1-1997 Class E requirements for personal Protection – Protective Headwear for Industrial Workers. Metal hard hats are prohibited. The inside of the hard hat should have a label that indicates the following:

Manufacturer's Name	or	Manufacturer's Name
ANSI Z89-1986		ANSI Z89.1-1997
Class B		Class E

2. FOOT PROTECTION

It is the policy of the Company that, as a condition of employment, all contract and temporary employees working in designated work areas and/or job assignments are required to wear ANSI Z41-1991 Personal Protection – Protective Footwear ® approved safety (steel toe) shoes to help prevent foot injuries, ankle injuries, slips, and falls.

All ANSI Z41 approved safety footwear is acceptable. A low heel is recommended for any worker required to climb ladders. Soles are to be slip, chemical, and oil resistant. A puncture resistant foot bed is recommended. Electrical workers should use safety footwear approved for electrical use. Since leather boots and shoes can absorb chemicals and other irritant substances,

rubber boots should be worn when handling chemicals and other materials, which require protection from absorption.

3. EYE/FACE PROTECTION

It is the policy of the Company that as a condition of employment, all contract and temporary employees working in designated work and/or job assignments are required to wear ANSI Z87.1-1989, American National Standard Practice for Occupational and Educational Eye and Face Protection, approved safety glasses (with side shields), goggles, and/or face shields to help prevent eye and face injuries including those resulting from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or light radiation. All ANSI Z-87 approved eye protection will have AZ-87 stamped on the frames and AZ-87 or the manufacturer's code stamped on the lens. Face shields are never to be worn alone. When the activity requires the use of a face shield, approved safety glasses or goggles will be worn also.

4. HEARING PROTECTION

It is the policy of the Company that as a condition of employment, all contract and temporary employees working in posted work areas or any area where the noise level exceeds 90 dBA are required to wear appropriate hearing protection.

Hearing protection should be worn in areas that are not posted if either of the following applies:

a) There is a potential for temporary elevated noise level such as when high-pressure gases are released.
b) If it is necessary to raise one's voice in order to talk to others at a distance of three (3) feet or less.

5. PROTECTIVE CLOTHING

It is the policy of the Company that as a condition of employment, all contract and temporary employees working in designated work areas and/or job assignments are required to wear clothing suited to the work, weather and environment in which they work. Cotton or wool clothing is preferable due to its natural resistance to fire and static electricity. The hazards present in the office are not the same as those found in the field. Office personnel should utilize good judgment when selecting work apparel.

Shirts shall be worn on the job. They shall be buttoned up the front and at the cuffs. Shirttails shall be tucked into the trousers. Shirtsleeves may be short or rolled up. Tank tops, short tops and sleeveless shirts are not permitted. Full-length pants are required. Shorts or cut-off jeans are not permitted. Loose, ragged, or defective clothing or shoes shall not be worn.

When working around moving or rotating machinery, DO NOT wear any of the following:

- Neckties
- Neck chains
- Gauntlet gloves or gloves that fasten around the wrist
- Loose or ragged clothes
- Handkerchiefs or rags tied in such a way that prevents their movement by one quick, easy pull.

Wearing jewelry such as earrings, rings, wristwatches, or neck chains on the job is discouraged and in some cases, not permitted because they can contribute to accidents or injuries.

Special protective clothing should be used where potential job hazards include:

- Exposure to hazardous chemicals
- Cuts from materials handled
- Other hazards that may be produced by special operations such as short-term exposure to heat or cold

Examples of activities in pipeline operation and maintenance activities that may require special protective clothing include:

- Welding operations
- Electrical work
- Hazardous material handling

(Note: When handling chemicals, follow the protective equipment requirements specified in the MSDS. Contact the Safety Department if you need assistance selecting protective equipment.)

6. HAND PROTECTION

It is the policy of the Company that as a condition of employment, all contract and temporary employees working in designated work areas and/or job assignments are required to wear gloves to help prevent hand injuries including cuts, burns, and chemical exposure, for example.

Rings shall be removed while at work in the field. Rings and wristwatches shall always be removed when working around energized electrical equipment and circuits or around moving or rotating equipment. Do not wear gauntlets or gloves that fasten around the wrist when working around moving or rotating equipment. Caution should be exercised when using other styles of gloves that might cause the hand to be pulled into a dangerous area.

Employees in the following designated work areas are required to wear protective gloves:

- Electricians
- Line Men
- Welders
- Welders' helpers
- Pipe fitters
- Pipe wrappers
- Chemical handling
- Those working around steam or hot equipment

7. FALL PROTECTION

It is the policy of the Company that as a condition of employment, all contract and temporary employees exposed to unprotected work heights over six (6) feet shall use appropriate fall protection. Climbing and fall protection is provided in the workplace to minimize the risk of falls. Protection may be accomplished through the design of the facility and/or provision of personal safety gear. Fall protection equipment may include:

- Full body safety harnesses with appropriate lanyard(s)
- Safety climbs

- Personnel lifts
- Safety nets

8. RESPIRATORY PROTECTION EQUIPMENT

It is the policy of the Company that as a condition of employment, all contract and temporary employees exposed to atmospheres that are oxygen deficient (less than 19.5% O_2), contains asphyxiates (e.g., N_2 or CO_2), contains harmful concentrations of toxic contaminants (e.g., H_2S, NH_3, C_{12}, SO_2 or CO) or contain particulate contaminants (e.g., dust, fumes, chemical mist, smoke, etc.) shall use the appropriate respiratory protective equipment. Respiratory protective equipment and use will meet NIOSH and ANSI Z88.1 requirements.

Contractor Supervisors shall provide approved respiratory protective equipment for all exposed company employees. The correct type of respiratory shall be specified for each job. Contractor Supervisors shall ensure employees are properly trained in the use of the respiratory protective equipment. Contractors required to use respiratory protective equipment will have a written Respiratory Protection Policy in compliance with 29 CFR 1910.134.

Only an air-supplied respirator with an egress bottle shall be used in atmospheres immediately dangerous to life and health – 1DLH (containing harmful concentrations of toxic contaminants such as H_2S, NH_3, C_{12}, SO_2 or CO) or are oxygen deficient (areas that contain less than 19.5% oxygen). Air purifying respirators are not allowed for this kind of environment.

Inspections of all respiratory protective equipment shall be completed before each use including a check of the tightness of connections and the condition of the face piece, valves, connecting tubes and headbands. Cylinders are to be refilled with breathing air certified as Grade AD, or better. Never use pure oxygen in an industrial respirator. Rubber or other elastic parts shall be inspected for pliability and signs of deterioration.

9. PERSONAL FLOTATION DEVICES

Contractor's personnel working or traveling over water shall have access to an U.S.A Coast Guard-approved personal floatation device (PFD).

A personal flotation device (PFD) must be available when riding in a boat. The PFD must be worn when riding anywhere other than inside the cab of the boat. When riding or working in a small open boat, a PFD must be worn at all times.

When working within a platform guardrail, a PFD need not be worn. If the work is being done outside of the guardrail, or if there is no guardrail, each employee must be wearing a personal flotation device.

10. OTHER PERSONAL PROTECTIVE EQUIPMENT

In addition to the protective equipment described above, special situations may require the use of additional personal protective equipment. Each Contractor shall be solely responsible for recognizing when such equipment is required and shall be responsible to provide such equipment. Company Operations Management, at its sole discretion, may also specify additional personal protective equipment requirements.

F. CONTRACTOR PERSONNEL SAFE WORK PRACTICES

This section lists basic safe work practice requirements for Company field or plant locations. Company Operations Management at its sole discretion may require additional

job-specific safe work practices as necessary to assure the safety of all persons involved with such operations.

1. SAFETY MEETINGS

Contractors and subcontractors are encouraged to conduct daily tailgate safety meetings to discuss the day's work assignments and proper safety precautions. Contractor personnel may attend Company on-the-job safety meetings when held at Company locations, at the discretion of the appropriate Company representative. Prior to beginning an unfamiliar, hazardous or major project, Contractor personnel will conduct a safety meeting to discuss safe procedures and work practices.

2. SMOKING

Smoking is absolutely prohibited at all facilities except in designated smoking areas.

3. SIGNS

Contractor personnel shall be familiar with and comply with signs posted throughout Company facilities.

4. LOCK-OUT/TAG-OUT

All Contractors are required to be familiar with and comply with Company site-specific lock-out/tag-out procedures while working on powered equipment, when performing confined space entry operations, breaking open lines or closed systems, or other operations where the control of potential hazardous energy releases is necessary for personnel safety. Said procedures shall be made available by Company representative as necessary and required.

5. CONFINED SPACE ENTRY

All Contractors performing work involving Confined Space Entry as defined by pertinent OSHA regulations shall be familiar and comply with Company site-specific confined space entry permit procedures. Confined space entry permits shall be issued by Company personnel ONLY, unless otherwise specified by Company Operations Management. All contract personnel involved in Confined Space Entry shall, if requested, demonstrate that they have completed a Confined Space Entry training program meeting 29 CFR 1910.145, or applicable State regulation, prior to performing any Confined Space Entry operations.

6. HOT WORK/OTHER HAZARDOUS WORK

All Contractors conducting Hot Work (including without limitation welding, cutting, grinding) or other Hazardous Work as defined by Company Operations Management are required to be familiar with and comply with Company site-specific Hot Work / Hazardous Work Permit Procedures. ONLY Company personnel shall issue Hot Work / Hazardous Work permits unless otherwise specified by Company Operations Management.

7. HAZARD COMMUNICATION

a. Contractor shall be familiar with and comply with Company site-specific Hazard Communication Program requirements and procedures.

b. Company will provide to Contractor, upon request, an appropriate Material Safety Data Sheet (MSDS) for hazardous chemicals or

materials maintained on a specific site or sites by Company. Such hazardous materials or chemicals will be properly stored and marked in accordance with OSHA Hazard Communications Regulations (29 CRF 1910.1200).

c. Contractor shall provide to Company, upon request, an appropriate MSDS for any hazardous material or chemical, which Contractor brings on site. Such hazardous materials or chemicals will be properly stored and marked in accordance with OSHA Hazard Communication Regulations (29 CRF 1910.1200).

d. Contractor shall provide to Company, upon request, a copy of the contractor's written Hazardous-Communication Program, in compliance with 29 CFR 1910.1200 and/or local state OSHA regulations.

8. PROCESS SAFETY MANAGEMENT

All contractors performing work on or near a Company facility governed by the Process Safety Management regulations (29 CFR 1910.119) will document that they have completed Process Safety Management training prior to performing any work at that facility. Company Operations Management will provide guidelines to the Contractor for this training, if necessary.

9. DEPARTMENT OF TRANSPORTATION

All contractors performing work on or near a Company facility governed by the Department of Transportation regulations (49 CFR Parts 190-199 and/or 49 CFR Part 382) shall have in effect a Drug and Alcohol Prevention Plan which, at a minimum, meets the requirements of those regulations. In addition, if the Contractor provides services that are governed by these regulations, the Contractor must have in effect a current Drug and Alcohol Prevention Plan that meets the requirements of those regulations. Contractor shall provide to the Company, upon request, a copy of the Contractor's written Drug and Alcohol Prevention Plan for review. Contractors providing services governed by these regulations must provide proof of training for Qualified Individuals under their Drug and Alcohol Prevention Plan.

10. HAZWOPER

All Contractors performing work regulated by OSHA HAZWOPER regulations (29 CFR 1910.120) or D.O.T. Hazardous Material regulations (49 CFR Parts 171-181) shall demonstrate that its assigned personnel have completed a training program at or above the level required for the work performed.

11. TRAINING

Contractors are solely responsible for ensuring that their employees are trained in accordance with applicable Federal. State, or local safety and health regulations, and that such training is documented. Such documentation may be subject to review by Company at any time prior to, during, or after the completion of the work throughout the term of this Master Service Contract.

EXHIBIT C

CONSENT DECREE

Contract No. 368681v6 - 04916

FOR THE SOUTHERN DISTRICT OF TEXAS

UNITED STATES OF AMERICA Plaintiff, v. PLAINS ALL AMERICAN PIPELINE, L.P.; PLAINS PIPELINE, L.P.; PLAINS MARKETING GP INC.; and PLAINS MARKETING, L.P., Defendants.	)	Civil Action No.

CONSENT DECREE

Plaintiff, United States of America, on behalf of the United States Environmental Protection Agency ("EPA"), has filed a Complaint in this action concurrently with the lodging of this Consent Decree, alleging that the Defendants, Plains All American Pipeline, L.P.; Plains Pipeline, L.P.; Plains Marketing GP Inc.; and Plains Marketing, L.P. (hereinafter collectively referred to as "Plains"), are liable for civil penalties and injunctive relief to the United States pursuant to the Clean Water Act ("CWA" or the "Act"), 33 U.S.C. § 1251 et seq., as amended.

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Plains neither admits nor denies any liability to the United States arising out of the transactions or occurrences alleged in the Complaint.

The Parties recognize, and the Court by entering this Consent Decree finds, that this Consent Decree has been negotiated by the Parties in good faith and will avoid litigation between the Parties and that this Consent Decree is fair, reasonable, and in the public interest.

NOW, THEREFORE, before the taking of any testimony, without the adjudication or admission of any issue of fact or law except as provided in Section I of this Consent Decree (Jurisdiction and Venue), and with the consent of the Parties, **IT IS HEREBY ADJUDGED, ORDERED, AND DECREED** as follows:

I. JURISDICTION AND VENUE

1. This Court has jurisdiction over the subject matter of this action, pursuant to 28 U.S.C. §§ 1331, 1345, and 1355, and Section(s) 309(b), 309(d), 311(b), and 311(n) of the CWA,

33 U.S.C. §§ 1319(b), 1319(d), 1321(b), and 1321(n). This Court has personal jurisdiction over the Parties to this Consent Decree. Venue is appropriate in this District pursuant to 33 U.S.C. § 1319(b) and 28 U.S.C. §§ 1391(b) and (c), and § 1395(a), because Plains resides, is located, and otherwise may be found in this judicial district, and Plains conducts business in this judicial district. For purposes of this Consent Decree, or any action to enforce this Consent Decree, Plains consents to this Court's jurisdiction and to venue in this judicial district.

2. For purposes of this Consent Decree only, Plains agrees that the Complaint states claims upon which relief may be granted pursuant to CWA Section(s) 309 and 311, 33 U.S.C. §§ 1319 and 1321.

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II. APPLICABILITY

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7. Plains shall provide a copy of this Consent Decree to all officers and supervisory employees whose duties include compliance with any provision of this Consent Decree. Plains shall provide a copy of Sections V, VI, X, and any other relevant portion of this Consent Decree to any other employee or agent whose duties include compliance with any provision of this Consent Decree, as well as to any contractor retained to perform work required under this Consent Decree. Plains shall condition any such contract upon performance of the work in conformity with the terms of this Consent Decree.

8. In any action to enforce this Consent Decree, Plains shall not raise as a defense the failure by any of its officers, directors, employees, agents, or contractors to take any actions necessary to comply with the provisions of this Consent Decree.

III. DEFINITIONS

9. Terms used in this Consent Decree that are defined in the CWA or in regulations promulgated pursuant to the CWA shall have the same meanings assigned to them in the CWA or such regulations, unless otherwise provided in this Consent Decree. Whenever the terms set forth below are used in this Consent Decree, the following definitions shall apply:

A. "Category I Pipeline(s)" shall mean Pipelines that are regulated pursuant to the Safety Regulations and are not Category II, Category III, or Category IV Pipelines;

B. "Category II Pipeline(s)" shall mean Pipelines that are regulated pursuant to the Safety Regulations and are either Category II-A (Gathering) Pipelines or Category II-B (Low-Stress) Pipelines;

i. "Category II-A (Gathering) Pipeline(s)" shall mean any section of Category II Pipeline that meets all of the following criteria:

a. Has a nominal diameter from 6 5/8 inches (168 mm) to 8 5/8 inches (219.1 mm);

b. Is located in or within one-quarter mile (.4 km) of any Unusually Sensitive Area; and

c. Operates at a maximum pressure established under 49 C.F.R. § 195.406 corresponding to:

1. A stress level greater than 20-percent of the specified minimum yield strength of the Pipeline; or

2. If the stress level is unknown or the Pipeline is not constructed with steel pipe, a pressure of more than 125 psi (861 kPa) gage.

ii. "Category II-B (Low-Stress) Pipeline(s)" shall mean any section of Category II Pipeline that meets all of the following criteria:

a. Has a nominal diameter of 8 5/8 inches (219.1 mm) or more;

b. Is located in or within one-half mile (.8 km) of any Unusually Sensitive Area; and

c. Operates at a maximum pressure established under 49 C.F.R. § 195.406 corresponding to:

1. A stress level equal to or less than 20-percent of the specified minimum yield strength of the Pipeline; or

2. If the stress level is unknown or the Pipeline is not constructed with steel pipe, a pressure equal to or less than 125 psi (861 kPa) gage.

C. "Category III Pipeline(s)" shall mean Pipelines that are not regulated pursuant to the Safety Regulations and are either Category III-A (Gathering) Pipelines or Category III-B (Low-Stress) Pipelines;

i. "Category III-A (Gathering) Pipeline(s)" shall mean any section of Category III Pipeline that meets all of the following criteria:

a. Has a nominal diameter from 6 5/8 inches (168 mm) to 8 5/8 inches (219.1 mm);

b. Is located in or within one-quarter mile (.4 km) of any High Consequence Area; and

c. Operates at a maximum pressure established under 49 C.F.R. § 195.406 corresponding to:

1. A stress level greater than 20-percent of the specified minimum yield strength of the Pipeline; or

2. If the stress level is unknown or the Pipeline is not constructed with steel pipe, a pressure of more than 125 psi (861 kPa) gage.

ii. "Category III-B (Low-Stress) Pipeline(s)" shall mean any section of Category III Pipeline that meets all of the following criteria:

a. Has a nominal diameter of 8 5/8 inches (219.1 mm) or more;

b. Is located in or within one-half mile (.8 km) of any High Consequence Area; and.

c. Operates at a maximum pressure established under 49 C.F.R. § 195.406 corresponding to:

1. A stress level equal to or less than 20-percent of the specified minimum yield strength of the Pipeline; or

2. If the stress level is unknown or the Pipeline is not constructed with steel pipe, a pressure equal to or less than 125 psi (861 kPa) gage.

D. "Category IV Pipeline(s)" shall mean all Pipeline other than Category I Pipeline(s), Category II Pipeline(s), or Category III Pipeline(s);

E. "Centerline Verification" shall mean the process of validating the accuracy of the Pipeline centerline in the Geographic Information System ("GIS")

spatial database to its true global location so as to comply with the National Pipeline Mapping System ("NPMS") quality rating of "G" (good) or better;

F. "Complaint" shall mean the complaint filed by the United States in this action;

G. "Consent Decree" shall mean this Consent Decree and all appendices attached hereto;

H. "Day" shall mean a calendar day unless expressly stated to be a business day. In computing any period of time under this Consent Decree, where the last day would fall on a Saturday, Sunday, or federal holiday, the period shall run until the close of business of the next business day;

I. "Defendants" shall mean Plains All American Pipeline, L.P.; Plains Pipeline, L.P.; Plains Marketing GP Inc.; and Plains Marketing, L.P. (collectively referred to herein as "Plains");

J. "EPA" shall mean the United States Environmental Protection Agency and any of its successor departments or agencies;

K. "Effective Date" shall have the definition provided in Section XIV of this Consent Decree;

L. "High Consequence Area(s)" or "HCA(s)" shall have the same meaning as described in 49 C.F.R § 195.450;

M. "Listed Discharges" shall mean the discharges of crude oil from Plains' Pipelines and Replacement and/or Substitute Breakout Tanks into the environment that are listed in Appendix A to this Consent Decree;

N. "Paragraph" shall mean a portion of this Consent Decree identified by an Arabic numeral;

O. "Parties" shall mean the United States and Defendants;

P. "PHMSA" shall mean the Pipeline and Hazardous Materials Safety Administration, currently an agency of the United States Department of Transportation, and any of its successor departments or agencies;

Q. "Pipeline" shall mean any pipe operated by Plains in the United States used for crude oil service, other than intra-facility flowlines, intra-facility

gathering lines, or Pipeline permanently removed from service (emptied of crude oil and purged); provided that, if any Pipeline removed from service is subsequently put back into crude oil service, the Pipeline shall be subject to all applicable requirements of this Consent Decree;

R. "Plaintiff" shall mean the United States;

S. "Replacement and/or Substitute Breakout Tank(s)" shall mean any aboveground crude oil tank owned and/or operated by Plains that is used as a replacement and/or substitute (regardless of whether it is a permanent, temporary, or stand-by replacement or substitute) for an existing breakout tank used to relieve surges in Pipelines, including but not limited to relief tanks.

T. "Safety Regulations" shall mean the PHMSA regulations promulgated at 49 C.F.R. Part 195, as in effect on the Effective Date;

U. "Section" shall mean a portion of this Consent Decree identified by a roman numeral;

V. "Segment" shall mean a discrete section of a Pipeline that is bounded and defined by instrumentation, such as meters, or by physical features, such as valves;

W. "Slack-Line Operations" shall mean Pipeline operating conditions during which a given Segment of Pipeline is not entirely filled with oil or is partly void;

X. "United States" shall mean the United States of America, acting on behalf of EPA; and

Y. "Unusually Sensitive Area(s)" or "USA(s)" shall have the same meaning as described in 49 C.F.R § 195.6.

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V. COMPLIANCE REQUIREMENTS

14. Until termination of this Consent Decree, Plains shall implement or continue to implement the measures contained in this Section with the objective of preventing future unauthorized discharges of crude oil from Plains' Pipelines and Replacement and/or Substitute Breakout Tanks.

15. **Enhanced Integrity Management and Corrosion Control**.

A. IMP Requirements for Category I, Category II-B, and Category III-B Pipelines. Plains shall assess, operate, and maintain all Category I, Category II-B, and Category III-B Pipelines in accordance with the requirements of Plains' IMP, subject to the requirements of sub-paragraph 15.G.

B. RSP Screening of Category II-A, Category III-A, and Category IV Pipelines. Plains shall assess, operate, and maintain all Category II-A, Category III-A, and Category IV Pipelines in accordance with the requirements of Plains' RSP, subject to the requirements of sub-paragraph 15.G. Plains shall develop and implement action plans detailing risk mitigation actions to address the risks or other anomalies found during the RSP in accordance with the risk category schedule set forth in Section 7 of Plains' RSP (or the corresponding section(s) of any updated versions of Plains' RSP).

C. Integrity Management of Category II and Category III Pipelines.

i. Category II-A and Category III-A (Gathering) Pipelines. For all Category II-A and Category III-A Pipelines as of the Effective Date of this Consent Decree, Plains shall operate and maintain such Pipelines in conformity with the safety requirements for rural gathering pipelines established in 49 C.F.R. 195.11(b); provided, however, that with respect to the specific provisions listed below, Plains shall also meet the following accelerated schedules:

a. By no later than the Effective Date, Plains shall identify all Segments of Pipeline meeting the definition of either a Category II-A or Category III-A Pipeline; and

b. By no later than the Effective Date, Plains shall develop and implement a continuing public education program as described in 49 C.F.R. § 195.440; and

c. By no later than July 3, 2010, Plains shall develop and implement a corrosion control program as described in 49 C.F.R. Part 195, subpart H.

ii. Category II-B and Category III-B (Low-Stress) Pipelines. In addition to the requirements of sub-paragraph 15 .A, for all Category II-B and

Category III-B Pipelines as of the Effective Date of this Consent Decree, Plains shall:

a. By no later than the Effective Date, identify all Segments of Pipeline meeting the definition of either a Category II-B or Category III-B Pipeline; and

b. By no later than July 3, 2013, Plains shall complete baseline assessments of all Category II-B and III-B Pipelines in conformity with 49 C.F.R. § 195.452(c). By no later than January 3, 2011, Plains shall complete at least 50-percent of these baseline assessments (based on the total mileage of Category II-B and III-B Pipeline to be assessed), beginning with the highest risk pipe; and

c. By no later than July 3, 2010, Plains shall develop and implement a corrosion control program as described in 49 C.F.R. Part 195, subpart H.

D. New Pipeline Acquisitions.

i. Initial Screening. Plains shall complete initial screening of all Category II-A, Category III-A, and Category IV Pipeline(s) purchased or otherwise acquired by Plains after July 1, 2009, in accordance with Plains' RSP, pursuant to the following schedule:

a. Provided that digital maps with Centerline Verification of the Pipeline(s) purchased or otherwise acquired are available to Plains, Plains shall complete initial screening of no less than 1,000 miles of Pipeline per twelve-month period from the date of each purchase or acquisition until all such newly purchased or acquired Pipeline is screened; or

b. If digital maps with Centerline Verification are not available for any portion of the Pipeline(s) purchased or otherwise acquired, Plains shall complete initial screening of all Pipeline(s) with digital maps and Centerline Verification at a rate of no less than 1,000 miles of Pipeline per twelve-month period from the date of each purchase or acquisition until all such newly purchased or acquired Pipeline is screened. After completing initial screening of all such Pipeline(s) with digital mapping and Centerline Verification, Plains shall complete GIS digital mapping, Centerline Verification, and initial screening of no less than 500 miles of Pipeline without digital mapping and Centerline Verification per twelve-month period from the date initial screening of the Pipeline(s) with digital mapping and Centerline Verification is complete until all such purchased or acquired Pipeline(s) is digitally mapped, Centerline-Verified and screened.

c. For purposes of determining the rate and deadline for completing initial screening under this sub-paragraph 15. D., the availability of digital maps with Centerline Verification shall be determined individually for each separate purchase or acquisition of Pipeline. If Plains makes additional purchases or acquisitions of Pipeline

before completing initial screening of an earlier purchase or acquisition covered by this sub-paragraph 1 5.D., Plains shall complete initial screening of all Pipelines purchased or otherwise acquired at an overall rate of no less than 1,000 miles of Pipeline per twelve-month period until only one set of Pipeline(s) purchased or acquired remains to be initially screened, in which case Plains shall complete initial screening of the remaining set of Pipeline(s) in accordance with sub-paragraph 15.D.i.a or 15.D.i.b., as applicable.

ii. Integrity Management of Newly Purchased or Acquired Category II and Category III Pipelines. Plains shall determine the proper Category for newly purchased or acquired Pipeline(s) at the time of purchase or acquisition, and based on mapping available at that time. For any Category II or Category III Pipelines purchased or otherwise acquired after the Effective Date of this Consent Decree, Plains shall also comply with the requirements of sub-paragraph 15.C. by the specified deadlines if the deadline for a particular requirement will not pass within six months from the date of purchase or acquisition. If a deadline specified in sub¬paragraph 15.C. has already passed or will pass within six months from the date of purchase or acquisition, Plains shall comply with the requirements of sub-paragraph 15.C., as well as sub-paragraph 15.A for Category II-B and III-B Pipeline(s), within six months from the date of purchase or acquisition. If subsequent centerline verification requires that a newly purchased or acquired Pipeline be designated under a different Category, Plains shall have six months from the date of such re-categorization to comply with the requirements of this Paragraph.

E. Geographic Information Systems ("GIS") Mapping. By no later than July 1, 2010, Plains shall complete initial digital GIS mapping and Centerline Verification of all Pipelines operated by Plains as of May 1, 2010. For any Pipeline(s) purchased or acquired by Plains after May 1, 2010, Plains shall complete initial digital GIS mapping and Centerline Verification of all such Pipelines in accordance with the schedules and requirements provided in sub-paragraph 15 .D.i.b.

F. Anode Beds, Internal Corrosion Control, and Close Interval Surveys. Plains shall spend no less than a total of $6,000,000 during the two-year period including calendar years 2010 and 2011 on the following activities to mitigate threats posed by corrosion of Plains' Pipeline(s): (i) replacement or installation of no fewer than 120 anode beds and/or rectifiers; (ii) installation of equipment to inject corrosion inhibitor and biocides for internal corrosion control, and (iii) performance of close interval surveys on no fewer than 2400 miles of Pipeline.

G. Subsequent Revisions to Plains' IMP or RSP.

i. From the Effective Date until the termination of this Consent Decree, Plains shall not implement any material changes to Plains' IMP or RSP

that are less protective of navigable waters and/or adjoining shorelines, as those terms are defined in 33 U.S.C. § 1362 and any implementing regulations, without prior written approval from EPA. For the purpose of this Consent Decree, "material changes" shall mean any change that:

a. removes the designation of any Segment of Pipeline that, as of the Effective Date, Plains has designated as one that "could affect a HCA," or removes this designation from any Segment of Pipeline that Plains is required to so designate pursuant to the requirements of this Consent Decree, except with respect to a Pipeline or Segment of Pipeline that is permanently removed from service after the Effective Date by emptying it of all crude oil and purging it; or

b. reduces the stringency of the Pipeline risk assessment, evaluation, and repair procedures, methods, and criteria established in Plains' IMP and/or RSP such as:

1. baseline assessment or risk screening procedures and methods;

2. requirements for implementing and/or re-assessing RSP Action Plans, as well as the underlying Pipeline preventative and mitigative measures; or

3. extends the required timeframes for performing any of the actions described in this sub-paragraph 15.i.b.

ii. Within 90 Days after receiving notice from EPA that Plains has made a material change to its IMP or RSP in a manner that EPA has determined to be less protective of navigable waters, or within such other time as agreed to by EPA, Plains shall implement its former IMP or RSP, or shall implement modifications that EPA determines are equivalent to the former provisions of Plains' IMP or RSP.

16. **Enhanced Pipeline Leak Detection**.

A. Weekly Aerial Patrols. Plains shall conduct weekly aerial patrols (weather permitting) of all Category I Pipeline(s), Category, II-A Pipeline(s), Category II-B Pipeline(s), and Category III-B Pipeline(s), including any such Pipeline purchased or otherwise acquired after the Effective Date of this Consent Decree to identify indications of a leak or spill of oil. Plains shall also conduct weekly aerial patrols (weather permitting) of all Pipeline Segments in the systems from which the discharges listed in Appendix A occurred. At its option, Plains may conduct the weekly patrols (weather permitting) on foot or by motorized vehicle, provided that, in such instances, Plains shall visually inspect surface conditions over the entire Pipeline right-of-way that would otherwise be flown in order to identify indications of a leak or spill of oil.

B. Implementation of API 1130 Compliant CPM Leak Detection. Plains will comply with the performance standards for Computational Pipeline Monitoring ("CPM") Leak Detection described in API 1130 on the Segments of Pipeline identified in "Appendix B," for so long as those Segments of Pipeline are in service. By no later than December 31, 2011, Plains shall install CPM equipment on an additional 30 Segments of Pipeline and operate such Segments of Pipeline and CPM equipment in accordance with API1130.

C. Enhancement of API 1130 Compliant CPM Leak Detection and Minimization of Slack-Line Operations.

i. Investigation. By no later than December 31, 2011, Plains shall complete and document an investigation of the Pipeline Segments listed on Appendix B (and any Segments added to CPM pursuant to sub-paragraph 1 6.B) that is designed to identify potential enhancements to Plains' leak detection capabilities and measures to minimize Slack-Line Operations and/or mitigate the effects of Slack-Line Operations on the CPM leak detection systems on those Pipeline Segments. This investigation shall incorporate, but is not limited to, an evaluation of the following elements:

a. Reviewing both the migration of the CPM Pipeline Segments listed on Appendix B to, and the implementation of the additional 30 new CPM Pipeline Segments referenced in sub-paragraph 1 6.B in, the Telvent OASySTM DNA Pipeline Monitoring (PLM) CPM application used in Plains' Midland, TX Operational Control Center;

b. Examining Slack-Line Operations on all Pipeline Segments subject to this sub-paragraph 16.C, including an analysis of whether reduction or elimination of Slack-Line Operation is practicable, and the effect of such reduction or elimination on leak detection capability. The examination of Slack-Line Operations shall include, but is not limited to, an evaluation of:

1. Slack-Line Operations during "shut-in" and flowing Pipeline operating conditions, including by reviewing recent and relevant over/short measurements;

2. The amount of slack volume during "shut-in" and flowing Pipeline operating conditions;

3. The amount of time required to refill the Pipeline(s) during "start-up" operations;

4. The ability of the CPM systems to adhere to API 1130 considering the effect of Plains' Slack-Line Operations and over/short

measurement capabilities on CPM leak detection capabilities; and

5. Measures to minimize Slack-Line Operations and/or mitigate the effects of Slack-Line Operations on the CPM leak detection systems. Such measures may include, but are not limited to, consideration and implementation of one or more of the following for each Segment of Pipeline:

    A. No action required, provided that current CPM leak detection system tolerances are adequate to detect leaks and/or spills given the Pipeline's Slack-Line Operations or Slack-Line Operations are not present;
    B. Revision of operating procedures for the applicable Segment of Pipeline, including the "start-up" and "shut-in" procedures;
    C. Installation of valves or pressure control devices to provide additional back-pressure, taking into consideration the limitations of the Segment of Pipeline and connecting facilities to safely contain such pressure; and
    D. Adjusting the CPM alarm limits to account for the expected refilling of the slack volumes so that leaks or spills are detected, but false indicators are avoided.

c. Historical SCADA data or other available data to identify and examine uncertainties and/or variability in measured Pipeline flow rates, operating pressures, temperatures, tank levels, and/or Pipeline operations in order to: (i) determine Plains' CPM leak detection capability and (ii) determine achievable Pipeline Segment alarm limits that do not result in excessive nuisance alarms.

ii. Action Plans. Based on the findings of the investigation described above, Plains shall develop action plans as the investigation progresses. Such action plans shall include one or more of the measures identified in sub-paragraph 16.C.i.b.5. and any other actions that Plains may also take to improve the leak detection system and/or minimize Slack-Line Operations. Plains shall complete the development of all action plans by no later than March 31, 2012. Plains shall complete implementation of all enhancements to the CPM leak-detection capabilities and/or Slack- Line Operations identified in the action plans prior to Plains submitting a request for termination of this Consent Decree.

17. **Requirements for Replacement and/or Substitute Breakout Tanks**.

A. By no later than the Effective Date of the Consent Decree, Plains' Replacement and/or Substitute Breakout Tanks must meet the following requirements:

i. Requirement for "Sufficient Capacity": All Replacement and/or Substitute Breakout Tanks must meet the design capacity requirements specifically needed to receive and safely contain oil from surges, pressure relief events, operational upsets, or other abnormal events in the associated pipeline system, as well as any applicable design capacity requirements necessary to comply with good engineering practice.

ii. Requirement for "Secondary Containment":

a. "Secondary Containment" for Replacement and/or Substitute Breakout Tanks shall mean secondary containment and/or other diversionary structures sufficient to contain the entire capacity of the Replacement and/or Substitute Breakout Tank and sufficient freeboard to contain precipitation. In all cases, the entire system for Secondary Containment, including walls and floor, must be sufficiently impervious so as to contain oil, and must be constructed so that any discharge from the primary containment system will not escape the system for Secondary Containment before cleanup occurs; and

b. All Replacement and/or Substitute Breakout Tanks must be properly located within Secondary Containment areas until the tank is permanently closed. The Secondary Containment requirement shall apply regardless of whether the Replacement and/or Substitute Breakout Tank is being used for supplemental storage capacity during an abnormal event and existing Secondary Containment is not available. In such circumstances, Secondary Containment must be constructed and the Replacement and/or Substitute Breakout Tank must be properly located within such Secondary Containment areas until the Replacement and/or Substitute Breakout Tank is permanently closed.

18. **Personnel and Training**.

A. Plains will preserve and staff the following employee positions until at least July 31, 2011:

i. PHMSA/IMP Records Coordinator and five records specialists;

a. Pipeline Integrity Coordinator for Non-PHMSA Regulated Pipelines;

ii. Pipeline Integrity Coordinator for Internal Inspection;

iii. Senior Measurement and Quality Control Manager;

iv. Pipeline Control Center Training Supervisor;

v. Control Center Shift and Console Supervisors;

vi. One Call Administrator; and

vii. Two Leak Detection Engineers.

B. If an employee filling any of the positions listed above in sub-paragraph 18.A is not able to perform his/her duties for an extended period of time, is terminated, or leaves his/her employment with Plains, Plains shall designate an alternate employee as soon as possible who is capable of performing all duties, responsibilities, and authorities required by the position until the original employee is able to resume his/her position or a new full-time replacement is employed by Plains.

C. Plains shall train all employees assigned to operate and maintain Category III-A and Category IV Pipelines in conformity with the Operator Qualification requirements of 49 C.F.R. 195, subpart G. Plains shall also conduct mandatory pre-screening testing for all new pipeline controller applicants using a computer simulator- based console operator assessment.

19. Plains shall train field personnel performing Pipeline maintenance on proper Pipeline cleaning techniques and procedures.

20. Permits. Where any compliance obligation under this Section requires Plains to obtain a federal, state, or local permit or approval, Plains shall submit timely and complete applications and take all other actions necessary to obtain all such permits or approvals. Plains may seek relief under the provisions of Section VIII of this Consent Decree (Force Majeure) for any delay in the performance of any such obligation resulting from a failure to obtain, or a delay in obtaining, any permit or approval required to fulfill such obligation, if Plains has submitted timely and complete applications and has taken all other actions necessary to obtain such permit or approval.

VI. REPORTING REQUIREMENTS

21. Plains shall submit the following reports to the persons designated in Section XIII of this Consent Decree (Notices):

A. By no later than six months after the Effective Date, and every sixth months thereafter until this Consent Decree terminates pursuant to Section XVII of this

Consent Decree (Termination), Plains shall submit a semi-annual report to EPA that shall discuss, for the preceding six months: (i) the status of the compliance measures required under Section V of this Consent Decree; (ii) a detailed listing of the specific items for which expenditures required under sub-paragraph 15.F. were made; (iii) Plains' progress regarding the completion of any required milestones under this Consent Decree, including, but not limited to summaries of the RSP Action Plans required pursuant to sub-paragraph 15.B. and a description of actions taken pursuant to the RSP Action Plans during the preceding six months; (iv) summaries of each action plan developed pursuant to sub-paragraph 16.C.ii. and a description of actions taken to implement the action plans during the preceding six months; (v) any problems encountered or anticipated in complying with this Consent Decree, as well as implemented or proposed solutions; (vi) the status of any necessary permit applications; (vii) a listing and description of any material changes Plains has made to its IMP or RSP (including a copy of any amendments thereto); and (viii) the total miles of Pipeline purchased, acquired, or sold during the preceding six months, if any.

B. The reports required under this Section shall also include a description of any non-compliance with the requirements of this Consent Decree and an explanation of the violation's likely cause and of the remedial steps taken, or to be taken, to prevent or minimize such violation. If the cause of a violation cannot be fully explained at the time the report is due, Plains shall so state in the report. Plains shall investigate the cause of the violation and shall then submit an amendment to the report, including a full explanation of the cause of the violation, within 30 Days of the Day Plains becomes aware of the cause of the violation. Nothing in this Paragraph or the following Paragraph relieves Plains of its obligation to provide the notice required by Section VIII of this Consent Decree (Force Majeure).

22. Each report submitted by Plains under this Section shall be signed by an official of the submitting party and shall include the following certification:

> I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on any personal knowledge I may have and my

inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

23. The reporting requirements of this Consent Decree do not relieve Plains of any reporting obligations required by the CWA or implementing regulations, or by any other federal, state, or local law, regulation, permit, or other requirement.

24. Any information provided pursuant to this Consent Decree may be used by the United States in any proceeding to enforce the provisions of this Consent Decree and as otherwise permitted by law.

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X. INFORMATION COLLECTION AND RETENTION

44. The United States and its representatives, including attorneys, contractors, and consultants, shall have the right of entry with respect to Plains' Pipeline and/or Replacement and/or Substitute Breakout Tanks or any other facility covered by this Consent Decree, at all reasonable times, upon presentation of credentials, to:

1. monitor the progress of activities required under this Consent Decree;
2. verify any data or information submitted to the United States in accordance with the terms of this Consent Decree;
3. obtain samples and, upon request, splits of any samples taken by Plains or its representatives, contractors, or consultants;
4. obtain evidence, including documents, photographs, and other data; and
5. assess Plains' compliance with this Consent Decree.

45. Upon request, Plains shall provide EPA or its authorized representatives splits of any samples taken by Plains. Upon request, EPA shall provide Plains splits of any samples taken by EPA.

46. Notwithstanding the provisions of Section XVII of this Consent Decree (Termination), until five years after the termination of this Consent Decree, Plains shall retain, and shall instruct its contractors and agents to preserve, all documents, records, or other information

(including documents, records, or other information in electronic form) in its or its contractors' or agents' possession or control, or that come into its or its contractors' or agents' possession or control, and that are generated in connection with or as part of Plains' performance of its obligations under this Consent Decree. This information-retention requirement shall apply regardless of any contrary corporate or institutional policies or procedures. At any time during this information-retention period, upon request by the United States, Plains shall provide copies of any documents, records, or other information required to be maintained under this Paragraph, subject to the assertion of privilege as described in Paragraph 47.

47. At the conclusion of the information-retention period provided in the preceding Paragraph, Plains shall notify the United States at least 90 Days prior to the destruction of any documents, records, or other information subject to the requirements of the preceding Paragraph and, upon request by the United States, Plains shall deliver any such documents, records, or other information to EPA within 30 days of the United States' request. Plains may assert that certain documents, records, or other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If Plains asserts such a privilege, it shall provide the following: (1) the title of the document, record, or information; (2) the date of the document, record, or information; (3) the name and title (if the title is available) of each author of the document, record, or information; (4) the name and title (if the title is available) of each addressee and recipient; (5) a description of the subject of the document, record, or information; and (6) the privilege asserted by Plains. However, any underlying documents, records, or other information from which Plains has compiled the semi-annual reports required under Section VI of this Consent Decree (Reporting Requirements) or any other submission required by this Consent Decree shall not be withheld on grounds of privilege.

48. Plains may also assert that information required to be provided under this Section is protected as Confidential Business Information ("CBI") under 40 C.F.R. Part 2. As to any information that Plains seeks to protect as CBI, Plains shall follow the procedures set forth in 40 C.F.R. Part 2.

49. This Consent Decree in no way limits or affects any right of entry and inspection, or any right to obtain information, held by the United States pursuant to applicable federal laws,

regulations, or permits, nor does it limit or affect any duty or obligation of Plains to maintain documents, records, or other information imposed by applicable federal or state laws, regulations, or permits.

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XVII. TERMINATION

66. By no earlier than July 31, 2013, and after Plains has completed performance of its obligations required by this Consent Decree, including Section IV (Civil Penalty), Section V (Compliance Requirements), Section VI (Reporting Requirements), and the payment of any accrued stipulated penalties, Plains may submit to the United States a written Request for Termination, stating that Plains has satisfied those requirements, together with all necessary supporting documentation.

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Contract No. 368681v6 - 04916

EXHIBIT D

RATE SHEET

February, 2012
PREP Credit Report

Dear Client:

Please find attached the - ***NRC 2011 Annual Preparedness for Response Exercise Program (PREP) Equipment Deployment Summary Report*** (Attachment A) for review and retention with an accompanying Letter of Attestation (Attachment B). This report documents OSRO equipment deployment exercise information in compliance with the National Preparedness for Response Exercise Program (PREP) Guidelines for reportable and evaluated on-water equipment deployments during exercises, training and actual spill responses. It provides information necessary for your OSRO equipment deployment credit for the 2011 calendar year.

This report documents deployment of the various types of skimming systems and boom that NRC owns or controls for classification purposes. It includes equipment aboard our Oil Spill Response Vessels (OSRVs) and at Independent Contractor Network (ICN) facilities dispersed throughout the various Captain of the Ports (COTP) areas. The information categories include:

ICN/OSRV - Each response facility and OSRV that comprise the NRC's response network. We also indicate the USCG OSRO classification ID next to their names.

LOCATION - The geographical location (city/state) of the ICN facility or vessel home port.

COTP-MSO REGION - The COTP-MSO or EPA Region in which the response equipment and facility personnel are based.

SKIMMING EQUIPMENT - Each type of skimmer in the NRC owned or controlled equipment inventory. A numeric figure in the columns for each type of skimmer indicates the number of times that personnel at a particular facility or OSRV have activated and deployed this type of skimming system in the water.

BOOM EQUIPMENT - The type and amount of boom deployed by personnel assigned to a particular facility and vessel.

Each ICN Participant facility and OSRV, of which there are over one hundred and thirty, has an active file that feeds data to the Summary Report. In 2011, the following environmental service companies joined or left the ICN, or experienced a company name change as noted (updated accordingly):

Company Name	Status
Bosarge Diving	**Joined**
Mackinac Environmental Technology	**Joined**
Pacific Commercial Services	**Joined**
PAL Environmental Services	**Joined**
Teksolv, Inc.	**Joined**
Sea Tow Palm Beach	**Joined**
Shaw Group	**Deleted**
Global Petroleum	**Deleted**
Premier Electronics	**Deleted**
Renner	**Deleted**
RMR, Inc.	**Deleted**
Zaccor	**Deleted**
Industrial Cleanup, Inc.	**Deleted**
Bellon Environmental	**Now d/b/a SET Environmental, Inc.**
Symcore	**Now d/b/a Intracoastal**
Northstar Marine	**Now d/b/a Northstar Marine Environmental Services**
Coteau Environmental	**Now d/b/a Prairie Consulting Group**
Southeast Response & Remediation	**Now d/b/a SR&R Environmental**

ICN facility equipment deployment records are held at each facility and at NRC Headquarters in Great River, NY. OSRV equipment deployment records are maintained on board the vessels and both at NRC Headquarters and in the NRC Houston Marine Department office. These internal historical records identify each equipment deployment occurrence by:

- NRC Control No.
- Date of deployment
- Event description - actual spill incident, equipment training or exercise
- Type of environment - sheltered , protected or unsheltered
- Type of skimming system deployed
- Type and quantity of boom deployed

If you have any questions regarding this report, contact Charles Comerford at 631-224-9141. Please ensure individuals responsible for the PREP program in your organization receive this report. If you would like additional copies they are located on our Web site, which is www.nrcc.com under the client access portion. Widest dissemination of this document is encouraged.

Sincerely,

Steven A. Candito
President
National Response Corporation

NATIONAL RESPONSE CORPORATION

Regional Breakdown

Northeast Region
General Manager: John Hielscher
3500 Sunrise Highway - Suite T-103, Great River, NY 11739
(631)224-9141 Ext 142
States Covered:
Indiana, Michigan, Ohio, New York, Pennsylvania, Maryland, Delaware, New Jersey, Connecticut, Vermont, Massachusetts, Rhode Island, New Hampshire, Maine, West Virginia, Virginia

South Region
General Manager: Ray McCoy
818 Town & Country Blvd. - Suite 200, Houston, TX 77024
(281)606-4848
States Covered:
Texas, Louisiana, Arkansas, Oklahoma, Kansas, Nebraska, Colorado, New Mexico, Mississippi, Alabama

Southeast Region
General Manager: Jason DeSantis
104 River Lane, Ormond Beach, FL 32176
(386)441-7719
States Covered:
Kentucky, Tennessee, North Carolina, South Carolina, Georgia, Florida, Missouri, Illinois, Iowa, Minnesota, Wisconsin

West Coast Regional Breakdown (NRCES)
Pacific Northwest Region
PNW General Manager: Jim Riedel
1630 10th Ave., South – Suite 150, Seattle, WA 98108
(206)607-3000
States Covered: Washington, Oregon, Idaho, Montana, Wyoming, Hawaii, North Dakota, South Dakota

West Region
VP/General Manager: Todd Roloff
1805 Ferry Point Road, Alameda, CA 94501
(510)749-1390
States Covered: California, Nevada, Utah, Arizona

NATIONAL RESPONSE CORPORATION

Regional Breakdown

Caribbean Region
General Manager: David Aviles
P.O. Box 9022750, San Juan, PR 00902
(787)789-2000
Islands Covered: Puerto Rico, St. Thomas, St. Croix, St. Lucia, Aruba

Virgin Islands
Regional Manager: Joe Schilling
8A Williams Fredriksted, St. Croix, West Virgin Islands 00840
Islands Covered: St. Croix (Hovensa)

Aruba
Regional Manager: James Haeghaert
Bungalow 251, First Ave., Seroe Colorado, San Nicholas, Aruba
Island Covered: Aruba

NATIONAL RESPONSE CORPORATION

2011 ANNUAL EQUIPMENT DEPLOYMENT SUMMARY

NRC Northeast Region

COTP Zone or EPA Region	Contractor Name and OSRO #	Deployment Location	NRC Equipment Storage Site	Boom 6" - 18"	Boom 19" - 42"	Skimmer Drum	Skimmer Floating Suction	Skimmer Oleophilic Belt	Skimmer Oleophilic Disc / Brush	Skimmer Oleophilic Rope Mop
COTP Northern New England	NRC - 0016	Searsport, ME	Bangor, ME	1,000'		1			1	
COTP Northern New England	NRC - 0016	Fore River So. Portland, ME	NRC Reliant So. Portland, ME		1,000'		1	1		
COTP Pittsburgh	NRC - 0016	Allegheny River Pittsburgh, PA	Pittsburgh, PA				1			
COTP New York	NRC - 0016	Lower NY Harbor, Gravesend Bay, NY	NRC Guardian Staten Island, NY		1,000'			1		
COTP Hampton Roads	NRC - 0016	Chesapeake River, VA	Norfolk, VA	2,000'		1			1	
COTP Northern New England	NRC - 0016	Penobscot River, Bucksport, ME	Bangor, ME	1,000'					1	
COTP Buffalo	NRC - 0016	Lake Ontario, Oswego Harbor, NY	Oswego, NY	1,000'		1				
COTP New York	MEG - 0020	Newburgh, NY	N/A	1,200'		1				
COTP Delaware Bay	MEG - 0020	Maurice River, NJ	N/A	6,000'			1			
COTP Northern New England	MEG - 0020	Lake Champlain, NY	N/A	1,100'					1	
COTP Baltimore	MEG - 0020	Baltimore, MD	N/A	1,000'					1	
COTP New York	MEG - 0020	West Haverstraw, NY	N/A	1,800'					1	

NATIONAL RESPONSE CORPORATION

2011 ANNUAL EQUIPMENT DEPLOYMENT SUMMARY

NRC Southeast Region

COTP Zone or EPA Region	Contractor Name and OSRO #	Deployment Location	NRC Equipment Storage Site	Boom 6" - 18"	Boom 19" - 42"	Skimmer Drum	Skimmer Floating Suction	Skimmer Oleophilic Belt	Skimmer Oleophilic Disc / Brush	Skimmer Oleophilic Rope Mop
COTP Miami	NRC - 0016	Miami Harbor, Miami, FL	NRC Liberty Miami, FL		2,000'	1			1	
COTP Key West	NRC - 0016	Key West Harbor, Key West, FL	Key West, FL	2,000'			2			
COTP Upper Mississippi	NRC - 0016	Merrimac River, St. Louis, MO	Fenton, MO	4,000'			1		1	
COTP Ohio Valley	NRC - 0016	Paducah, KY	Paducah, KY Duluth, MN	3,100'					1	
COTP Ohio Valley	USES - 0038	Nashville, TN	N/A	1,000'						
COTP Lower Missippi	USES - 0038	Little Rock, AR	N/A	1,000'		1				
COTP Ohio Valley	USES - 0038	Nashville, TN	N/A	1,000'						
COTP Jacksonville	CBI - 0048	Port Canaveral, FL	N/A	1,000'						
COTP Miami	CBI - 0048	Port Everglades, FL	N/A	1,000'		1			1	
COTP Tampa	DES - 0037	Port of Tampa, FL	N/A	1,600'						
COTP Tampa	DES - 0037	Tampa Bay, FL	N/A	2,200'						

NATIONAL RESPONSE CORPORATION

2011 ANNUAL EQUIPMENT DEPLOYMENT SUMMARY

NRC Southern Region

COTP Zone or EPA Region	Contractor Name and OSRO #	Deployment Location	NRC Equipment Storage Site	Boom 6" - 18"	Boom 19" - 42"	Skimmer Drum	Skimmer Floating Suction	Skimmer Oleophilic Belt	Skimmer Oleophilic Disc / Brush	Skimmer Oleophilic Rope Mop
COTP Corpus Christi	NRC - 0016	Corpus Christi, TX	Corpus Christi, TX						1	2
COTP Corpus Christi	NRC - 0016	Corpus Christi, TX	Corpus Christi, TX							2
COTP Corpus Christi	NRC - 0016	Corpus Christi, TX	NRC Valiant, Corpus Christi, TX		1,600					
COTP Houston / Galveston	NRC - 0016	Gulf of Mexico Galveston, TX	NRC Admiral, Galveston, TX		1,900'					
COTP Houston / Galveston	NRC - 0016	Galveston Harbor Galveston, TX	NRC Admiral, Galveston, TX					1		
COTP Houston / Galveston	NRC - 0016	Galveston Harbor Galveston, TX	NRC Admiral, Galveston, TX					1		
COTP Houston / Galveston	NRC - 0016	Galveston Harbor Galveston, TX	NRC Admiral, Galveston, TX					1		
COTP Morgan City	NRC - 0016	Morgan City, LA	NRC Energy, Morgan City, LA				1	1	2	2
COTP Morgan City	NRC - 0016	Morgan City, LA	NRC Energy, Morgan City, LA		2,000'		1			
COTP Lower Mississippi	NRC - 0016	Harbor Bayou La Batre, MS	NRC Defender, Bayou La Batre, MS		1,000'					
COTP Lower Mississippi	NRC - 0016	Harbor Bayou La Batre, MS	NRC Defender, Bayou La Batre, MS				1	1		
COTP Mobile	USES - 0038	Birmingham, AL	N/A	1,100'		1				
COTP Mobile	USES - 0038	Mobile, AL	N/A	2,000'		2				
COTP New Orleans	USES - 0038	Venice, LA	N/A	2,000'		1				
COTP Lower Missippi	USES - 0038	Little Rock, AR	N/A	1,000'		1				
COTP Lower Missippi	ACME - 0010	Little Wewoka Creek	N/A	1,100'		4				
COTP Corpus Christi	MES - 0072	Ingelside, TX	N/A	1,000'						

NATIONAL RESPONSE CORPORATION

2011 ANNUAL EQUIPMENT DEPLOYMENT SUMMARY

NRC Western Region

COTP Zone or EPA Region	Contractor Name and OSRO #	Deployment Location	NRC Equipment Storage Site	Boom 6" - 18"	Boom 19" - 42"	Skimmer Drum	Skimmer Floating Suction	Skimmer Oleophilic Belt	Skimmer Oleophilic Disc / Brush	Skimmer Oleophilic Rope Mop
COTP San Diego	NRC - 0016	San Diego Harbor, San Diego, CA	San Diego, CA	2,000'			1			
COTP San Diego	NRC - 0016	San Diego Harbor, San Diego, CA	San Diego, CA				1			
COTP Los Angeles	NRC - 0016	Port of Los Angeles, Los Angeles, CA	Los Angeles, CA		1,200'					
COTP Los Angeles	NRC - 0016	Port of Long Beach, Long Beach, CA	Long Beach, CA						2	
COTP Los Angeles	NRC - 0016	Port of Los Angeles, Los Angeles, CA	Los Angeles, CA		1,500'	1	1	1	1	
COTP Los Angeles	NRC - 0016	Port of Los Angeles, Los Angeles, CA	Los Angeles, CA		3,000'					
COTP Los Angeles	NRC - 0016	Port of Los Angeles, Los Angeles, CA	Los Angeles, CA		1,200'					
COTP San Francisco	NRC - 0016	Humboldt Bay, CA	San Francisco, CA		1,100'					
COTP San Francisco	NRC - 0016	Humboldt Bay, CA	San Francisco, CA		3,500'					
COTP San Francisco	NRC - 0016	Humboldt Bay, CA	San Francisco, CA		1,000'					
COTP San Francisco	NRC - 0016	Crissy Field, San Francisco, CA	Alameda, CA		2,700'			1		
COTP San Francisco	NRC - 0016	Pier 92, San Fransisco Bay, CA	Alameda, CA		1,000'		1			
COTP San Francisco	NRC - 0016	San Francisco Bay, CA	Alameda & Richmond		8,900'			1		
COTP San Francisco	NRC - 0016	Richmond Dock, Richmond, CA	Alameda, CA		3,700'	1				

NATIONAL RESPONSE CORPORATION

2011 ANNUAL EQUIPMENT DEPLOYMENT SUMMARY

NRC Northwest Region

COTP Zone or EPA Region	Contractor Name and OSRO #	Deployment Location	NRC Equipment Storage Site	Boom 6" - 18"	Boom 19" - 42"	Skimmer Drum	Skimmer Floating Suction	Skimmer Oleophilic Belt	Skimmer Oleophilic Disc / Brush	Skimmer Oleophilic Rope Mop
COTP Puget Sound	NRC - 0016	Ferndale, WA	NRC Columbia, Ferndale, WA						2	
COTP Puget Sound	NRC - 0016	Columbia River, WA	Neah Bay, WA		4,000'			2	1	
COTP Puget Sound	NRC - 0016	Forks, WA	Neah Bay, WA				1		1	
COTP Portland	NRC - 0016	Grays Harbor, WA	Ferndale, WA						1	
COTP Puget Sound	NRC - 0016	Neah Bay Straits	NRC Cape Flattery Neah Bay, WA						1	
COTP Puget Sound	NRC - 0016	Seattle, WA	Seattle, WA		1,000'			2		
COTP Puget Sound	NRC - 0016	Ferndale, WA	NRC Columbia, Ferndale, WA	1,200'						
COTP Puget Sound	NRC - 0016	Ferndale, WA	NRC Columbia, Ferndale, WA		1,000'					
COTP Puget Sound	NRC - 0016	Ferndale, WA	NRC Columbia, Ferndale, WA		1,000'					
COTP Puget Sound	NRC - 0016	Ferndale, WA	NRC Columbia, Ferndale, WA		1,300'					

NATIONAL RESPONSE CORPORATION

2011 ANNUAL EQUIPMENT DEPLOYMENT SUMMARY

NRC Caribbean Region

COTP Zone or EPA Region	Contractor Name and OSRO #	Deployment Location	NRC Equipment Storage Site	Boom 6" - 18"	Boom 19" - 42"	Skimmer Drum	Skimmer Floating Suction	Skimmer Oleophilic Belt	Skimmer Oleophilic Disc / Brush	Skimmer Oleophilic Rope Mop
COTP San Juan	NRC - 0016	Guayanilla Bay, PR	San Juan, PR						1	
COTP San Juan	NRC - 0016	Guayanilla Bay, PR	San Juan, PR			1	1		1	1
COTP San Juan	NRC - 0016	Guayanilla Bay, PR	San Juan, PR	1,000'					1	
COTP San Juan	NRC - 0016	Yabucoa, PR	Yabucoa, PR		1,000'					1
COTP San Juan	NRC - 0016	St. Croix, VI	Christianstead, St. Croix, VI		1,000'			1		
N/A	NRC - 0016	Aruba	NRC Sentry, Aruba		1,000'					

NATIONAL RESPONSE CORPORATION

ATTESTATION

I, Steven A. Candito, President of National Response Corporation (NRC), an Oil Spill Removal Organization (OSRO) with full OSRO classifications in all Captain of the Port Zones, for all operating environments within our Area of Service do hereby attest, based upon the information provided to me by the members of the NRC Independent Contractor Network, each of whom are responsible for similar attestations to their own clients under the National Preparedness for Response Exercise Program and based on my own personal knowledge, that boom and skimming systems, more than adequate to satisfy the OSRO field equipment deployment drill requirements of OPA '90 have been deployed on your behalf in the United States East Coast, Gulf Coast, West Coast, Inland River and Caribbean Regions within the most recent calendar year. Further that NRC-owned equipment is inspected and maintained under a formal preventive maintenance program. Personnel training requirements are met through a formal equipment deployment-training program. The personnel who deployed the equipment demonstrated their ability to successfully deploy and operate the equipment and the equipment was in good working order. Further, records of these deployments are maintained at our headquarters in Great River, New York, USA.

Date: 17 February 2012

Steven A. Candito
President
National Response Corporation

Attachment B

ARTICLE 32 - SURVIVAL

32.1 Except as otherwise provided herein warranties, covenants and obligations at Articles 7, 8, 13 and 14 shall survive termination or cancellation of this Contract, regardless of the reason for such termination or cancellation, and shall continue in full force and effect.

IN WITNESS WHEREOF, the parties hereto by their duly authorized representatives have executed this Contract as of the day and year first above written.

THE O'BRIEN'S GROUP

By: K. Tim Perkins

Printed Name: K. TIM PERKINS

Title: CEO

Date: 5/17/07

Taxpayer ID #: 95-4540857

PLAINS MARKETING, L. P.
By Plains Marketing GP Inc.,
Its General Partner

By: Mark F. Shires

Printed Name: Mark F. Shires

Title: Senior Vice-President – Operations

Date: 7-13-07

Approved as to form
and content by
Legal and Contracts

(b) (7)(F)

[redacted]

0 0.125 0.25 0.5 0.75 1 Miles

PLAINS ALL AMERICAN PIPELINE, L.P.

Pacific Atlantic Terminals Pipeline System	
Crude, Products, & Natural Gas	Scale: 1:12,000
Contra Costa County, California	Sheet No.: 1/1

Printing Date: August 14, 2007
File: H:\Project_Files\Pipeline Systems\Pacific Atlantic Terminal\PacificAtlanticTerminal.mxd

FEASIBILITY AND EXECUTABILITY STATEMENT

CERTIFICATION OF RESPONSE RESOURCES

"I certify, to the best of my knowledge and belief, under penalty of perjury under the laws of the State of California, that the information contained in this Plains Products Terminals LLC Facility Response Plan is true and correct and that the plan is both feasibly and executable."

7/20/11
Date

Steve Caddell
Division Operations Manager

FIGURE 3-3 – PROBABILITY OF SURFACE OILING - SUMMER CONDITIONS

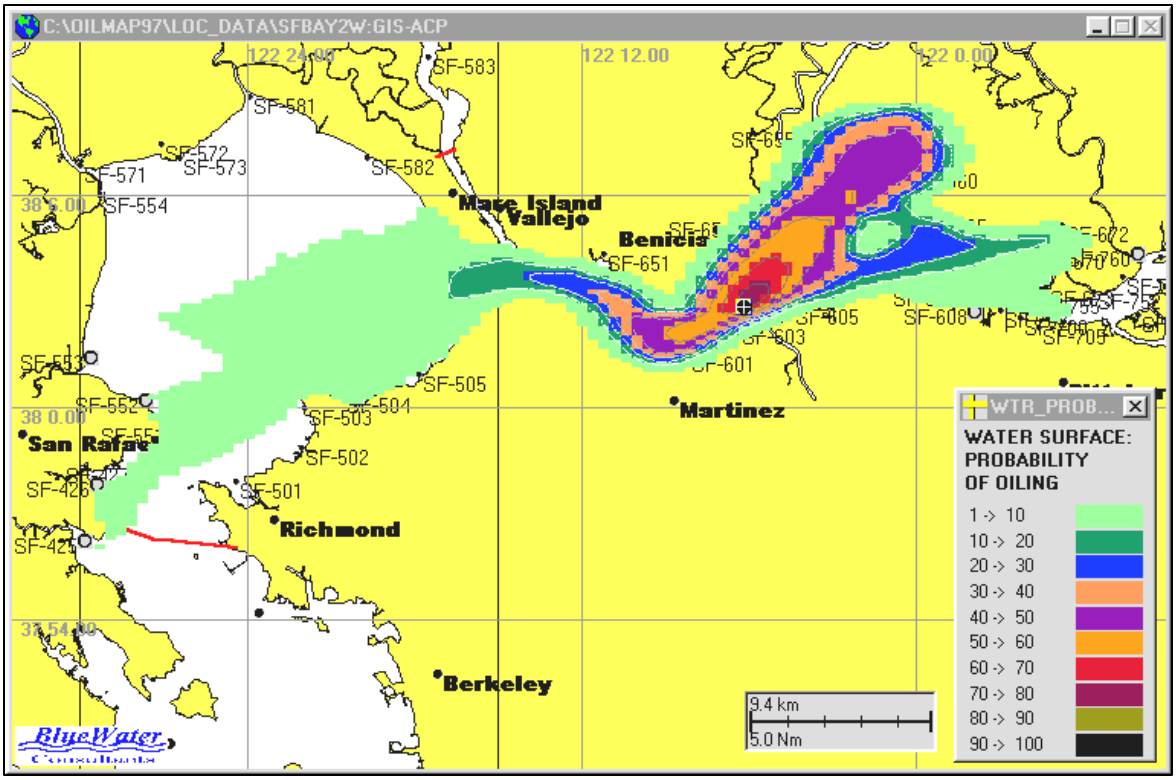
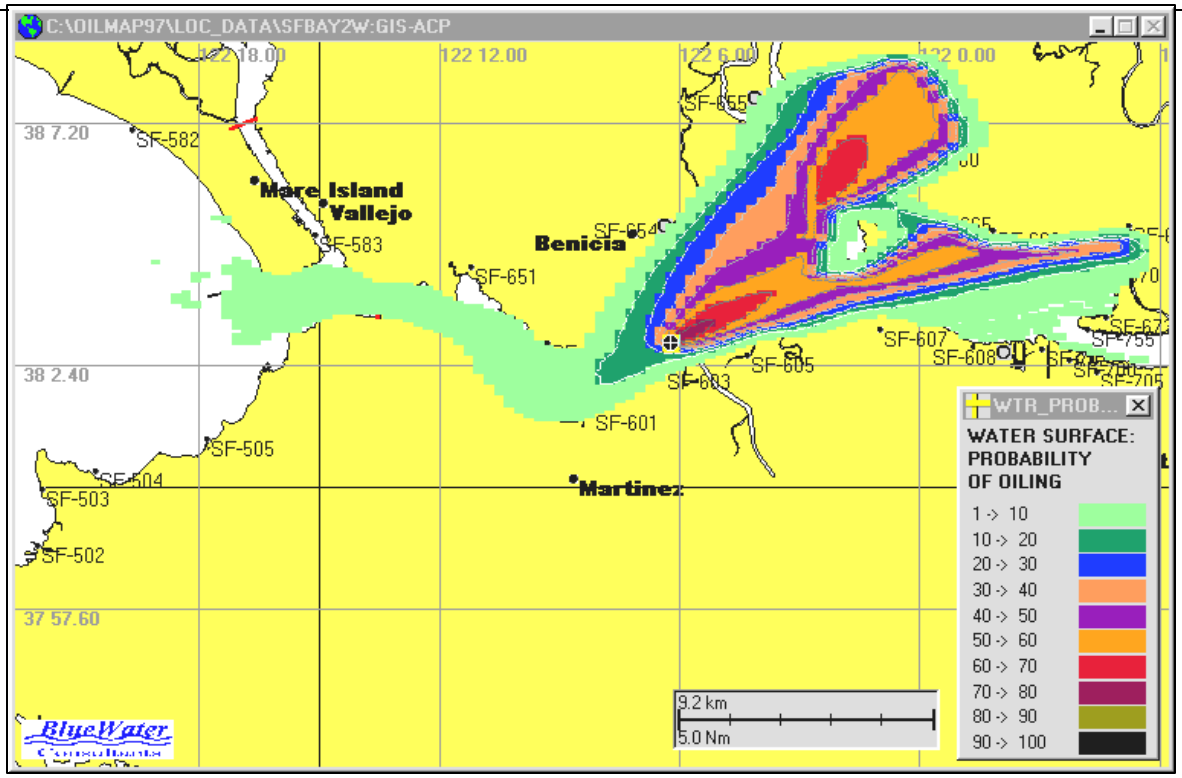


FIGURE 3-4 – PROBABILITY OF SURFACE OILING - WINTER CONDITIONS


C:\OILMAP97\LOC_DATA\SFBAY2W:GIS-ACP
122 18.00
122 12.00
122 6.00
122 0.00
38 7.20
38 2.40
37 57.60
SF-582
SF-583
SF-655
SF-654
SF-651
SF-607
SF-608
SF-605
SF-603
SF-601
SF-505
SF-504
SF-503
SF-502
Mare Island
Vallejo
Benicia
Martinez
WTR_PROB...
WATER SURFACE:
PROBABILITY
OF OILING
1 -> 10
10 -> 20
20 -> 30
30 -> 40
40 -> 50
50 -> 60
60 -> 70
70 -> 80
80 -> 90
90 -> 100
9.2 km
5.0 Nm
BlueWater

PLAINS
MARKETING, L.P.

CERTIFICATION OF QUALIFIED INDIVIDUAL

AND

ALTERNATE QUALIFIED INDIVIDUAL

Plains Marketing, L.P. hereby certifies that the individuals identified as Qualified Individual and Alternate Qualified Individual in this plan have the full authority in accordance with applicable federal and state regulations and this plan to:

1. Activate and engage in contracting with oil spill removal organizations.

2. Act as a liaison with the pre-designated Federal and State On-Scene Coordinators, and

3. Obligate funds required to carry out response activities.

Phillip R. Smith
Vice-President Operations
Plains Marketing, L.P.

Date: 11/4/10

Plains Marketing, L.P.
P. O. Box 4648 ▯ Houston, TX 77210-4648 ▯ (713) 646-4515 ▯ (713) 646-4310 Fax

PLAINS MARKETING, L.P.

Contract No. 026450-04240-PMLP

ENGINEERING SERVICES CONSULTING AGREEMENT

This ENGINEERING SERVICES CONSULTING AGREEMENT ("Agreement") is entered into as of the 31st day of March 2011, ("Effective Date") by and between Plains Marketing, L.P., a Texas limited partnership, and its affiliates, with a physical street address of 333 Clay, Suite 1600, Houston, Texas 77002 and a mailing address of P. O. Box 4648, Houston, Texas 77210-4648 (hereinafter "COMPANY") and **Robert J. Meyers & Associates** a Texas corporation with a mailing address of **31430 Capella Circle, Tomball, Texas 77375** (hereinafter "CONTRACTOR"). For purposes of this Agreement, the term "COMPANY" includes Plains All American Pipeline, L.P., and its Affiliates, including but not limited to Plains Marketing, L.P., Plains Pipeline, L.P., Plains Midstream Canada ULC , Plains LPG Services, L.P., Pacific Pipeline System LLC, Rocky Mountain Pipeline System LLC, Plains Products Terminals LLC, CDM Max, LLC, and Plains Pipeline – North Dakota LLC as well as any other limited liability company or limited partnership in which Plains All American Pipeline, L.P. owns or controls fifty percent or more of the equity. Either COMPANY or CONTRACTOR may be individually referred to herein as "Party" or jointly as "Parties."

WITNESSETH:

That for and in consideration of the covenants, contract, terms, provisions and conditions hereinafter set forth, the Parties do hereby mutually agree, each with the other, as follows:

ARTICLE 1 – SCOPE OF WORK

1.1 This Agreement does not obligate COMPANY to order services from CONTRACTOR nor does it obligate CONTRACTOR to provide services to COMPANY, but shall control and govern all services ordered by COMPANY and accepted by CONTRACTOR hereunder, and shall define the rights and obligations of COMPANY and CONTRACTOR with regard to the matters covered hereby.

1.2 COMPANY may, from time-to-time, request CONTRACTOR to perform engineering services (hereinafter referred to as "Work") hereunder by issuing a job order in the form provided by COMPANY (a "Work Order") to CONTRACTOR; however, this Agreement shall apply to any Work performed by CONTRACTOR on behalf of COMPANY regardless of whether or not a Work Order is issued unless otherwise agreed by the Parties in writing. CONTRACTOR shall commence services immediately after a Work Order has been executed by the Parties, and shall prosecute the services continuously, expeditiously and with adequate forces and due diligence.

Work shall not commence prior to execution of a Work Order by both COMPANY and CONTRACTOR.

1.3 CONTRACTOR shall diligently and competently carry out the Work under this Agreement and shall furnish experienced personnel, supervision, transportation, licenses, insurance, permits, services and all other things necessary or required in and for the proper and timely performance of the Work. Scope of Work may include but is not limited to the following:

- Prepare and maintain cost estimates, schedules, drawings, scope of work descriptions and other documents to facilitate project management.
- CONTRACTOR to provide engineering expertise and design for Projects on an as needed basis and shall prepare presentations of designs including drawings for regulatory submissions and approvals and fabrication and construction as necessary.
- Conduct technical studies and prepare reports.
- Write detailed specifications for materials for inclusion in Bills of Materials ("BOM").

- Bid and procure, as agent, "BOM" major items and installation services.
- Oversee inspection at fabrication shops, as COMPANY's agent, providing engineering design clarification.
- Provide two (2) sets of complete data books in hard copy and electronic format.
- Provide engineering support as requested by COMPANY.
- Issue Purchase Orders in the form provided by COMPANY ("Purchase Order"), code, confirm and approve invoices for payment by COMPANY.
- Expedite materials and equipment for projects associated with the Work.
- Submit weekly and monthly reports to COMPANY on project status and budget position.
- Project cost monitoring and control.
- Such other duties and responsibilities that may be agreed between the Parties or as required by the Work Order.

Further, CONTRACTOR shall furnish all materials and equipment as specified in the Work Order.

1.4 Regarding CONTRACTOR's performance of the Work, time is of the essence. CONTRACTOR shall complete the Work in accordance with the time limit(s) detailed in the Work Order and shall promptly notify COMPANY upon completion of each major item or portion of the Work. If performance of this Agreement is delayed by reason of change in the Scope of Work, the time for performing the Work shall be extended for the period of such delay.

1.5 Upon request by COMPANY, CONTRACTOR shall furnish a project schedule prior to commencement of the Work.

1.6 The CONTRACTOR shall be free to determine the hours of the day which it will perform the Work, provided, however, that the CONTRACTOR agrees to the extent possible to endeavor to make itself and its employees available to COMPANY during COMPANY regular business hours.

1.7 The enumeration of specific duties and obligations to be performed by the CONTRACTOR shall not be construed to limit the general undertakings of the CONTRACTOR.

ARTICLE 2 – TERM

2.1 This Agreement shall have a Primary Term effective March 31, 2011 to March 30, 2012 and shall continue into its Secondary Term from month-to-month thereafter until terminated by either party hereto upon not less than thirty (30) days' advance written notice to the other party. Work shall be started and shall be completed on the dates specified in the applicable Work Order. The term of this shall be extended until completion of any outstanding Work Order.

ARTICLE 3 – INSPECTION AND APPROVAL

3.1 All Work performed by CONTRACTOR hereunder shall be subject to inspection and approval by COMPANY. COMPANY may, at its discretion, employ the services of an engineering specialist for this purpose. Unless otherwise specified in the Work Order, all specifications and drawings must be approved by COMPANY, in writing, prior to commencement of any field construction Work based on the drawings.

3.2 Any inspection or approval of the Work given under this Agreement by COMPANY shall not relieve CONTRACTOR of its responsibility for compliance with this Agreement, nor from its responsibility for the quality of Work, nor from any warranty, guarantee or liability under law, either expressed or implied, in this Agreement.

ARTICLE 4 – COMPENSATION

4.1 Work to be furnished during the term of this Agreement shall be furnished at the rates agreed to in writing by the Parties ("Rate Sheet") unless otherwise provided in the applicable Work Order.

4.2 No overtime Work or premium rates will be paid or authorized by CONTRACTOR unless COMPANY has expressly approved such payment in writing.

4.3 CONTRACTOR must give thirty (30) days advance written notice of proposed rate changes to the Rate Sheet. No rate change or cost change will be effective until accepted by COMPANY in writing. Such change will not apply to any Work in progress at time of notice without COMPANY's written consent.

4.4 CONTRACTOR is responsible for the timely payment of any and all employment-related taxes, premiums and fees with respect to Work performed by CONTRACTOR. In the event that CONTRACTOR's employees or its subcontractors' employees are deemed to be COMPANY employees by any governmental authority, CONTRACTOR shall reimburse COMPANY in full for any corresponding taxes or fees paid by COMPANY.

ARTICLE 5 – PAYMENT

5.1 For lump sum Work, CONTRACTOR shall have the right to request that COMPANY make partial payments; provided, however, that COMPANY shall have the right to withhold up to and including fifteen percent (15%) of the amount of any invoice submitted to COMPANY by CONTRACTOR for labor, supervision and materials furnished by CONTRACTOR up to the time of completion and acceptance of the Work by COMPANY. Payment of said retainage shall be due upon COMPANY's acceptance of all Work and receipt of a fully executed notarized lien affidavit and lien waiver in the form attached hereto and incorporated herein as Exhibit A. For retainage, if any, CONTRACTOR shall invoice COMPANY for the same following COMPANY's acceptance of the Work and COMPANY'S receipt of a fully executed notarized lien affidavit and lien waiver in the form attached as Exhibit A. COMPANY shall pay the same thirty (30) days from receipt of said invoice and receipt of a fully executed notarized lien affidavit and lien waiver in the form attached as Exhibit A.

5.2 Unless specifically waived in writing by COMPANY, each invoice must, in addition to total charges, show separately on its face the Work Order reference, the labor costs or equipment costs, as applicable, material costs, and any applicable freight charges and sales and use taxes. For reimbursable Work, COMPANY's representative must sign time sheets, equipment logs, material tickets, or similar supporting documentation. This substantiation or any other evidence COMPANY may require shall be attached to the invoice. In addition, any applicable markups such as fringe benefits, unemployment taxes, workers' compensation insurance, payroll taxes, overhead and profit, etc. must be itemized. Equipment rental must be invoiced separately, on a monthly basis. The invoice must list each piece of equipment separately, with the description taken verbatim from the Rate Sheet submitted with this Agreement. A Monthly Equipment Time Log, signed by COMPANY's representative, must be attached to the invoice. Material and/or Third Party Equipment Rentals shall include third party invoices as support and be invoiced to COMPANY at the cost charged to CONTRACTOR without markup.

5.3 Subject to Section 5.2 above, COMPANY shall pay CONTRACTOR's invoice thirty (30) days from the accepted delivery by COMPANY of conforming goods, services, or equipment, together with required documentation including a fully executed notarized lien affidavit and lien waiver in the form attached as Exhibit A or receipt of invoice by COMPANY'S Accounting Department, whichever is later. Any prompt payment discount CONTRACTOR offers COMPANY shall be determined using the later date of when COMPANY receives a correct invoice and not the date of any incorrect invoice or COMPANY accepts delivery of conforming goods, services, or equipment, together with all supporting documentation including a fully executed notarized lien affidavit and lien waiver in the form attached as Exhibit A. For purposes of determining the date of receipt of an invoice by COMPANY, or receipt of a payment by CONTRACTOR, delivery is effective upon receipt by the Party to whom the invoice or payment is sent by a system that the COMPANY or CONTRACTOR has designated for the purpose of receiving invoices or payments;

provided that, an invoice or payment is deemed to have been received by the intended recipient at the address set forth above using personal delivery, expedited courier, messenger service, telecopy, ordinary mail, and electronic mail, but if received after the recipient's normal business hours shall be deemed to have been received on the next business day.

5.4 COMPANY may withhold payment for a disputed invoice or part thereof, without interest, until such dispute is resolved.

5.5 Sums due CONTRACTOR shall be adjusted by deducting any amounts paid by COMPANY to prevent or remove liens, claims, debts and encumbrances which are the responsibility of CONTRACTOR, or its subcontractors, or to satisfy other obligations of CONTRACTOR or its subcontractors hereunder, including all attorney's fees, costs and expenses.

5.6 CONTRACTOR shall submit to COMPANY with CONTRACTOR's invoice for final payment notarized lien affidavits and lien waivers executed by CONTRACTOR in the form attached as Exhibit A. **Submission of such affidavits and lien waivers shall be a condition precedent to final payment (including the release of retainage).**

5.7 No payment made under this Agreement shall constitute a waiver by COMPANY of the performance by CONTRACTOR of any of CONTRACTOR's obligations hereunder and any payment withheld shall be without prejudice to any other rights and remedies available to COMPANY.

5.8 Invoices are to be submitted by CONTRACTOR to COMPANY in a timely manner, but in no event later than three (3) months from the end of the month in which Work was performed.

5.9 This Section 5.9 applies only to work performed in the State of Louisiana. COMPANY is participating in the Quality Jobs / Louisiana Enterprise Zone Program, a Tax Incentive Program offered by the State of Louisiana and that COMPANY is seeking sales and use tax rebates from the Louisiana Enterprise Zone Program for the sales and use taxes paid by CONTRACTOR and its subcontractors in association with the performance of the Work. CONTRACTOR is responsible for paying and/or accruing all eligible sales taxes that are clearly due the State of Louisiana and local taxing authorities. All contractors, sub-contractors and vendors are required to pay or accrue Louisiana Sales and/or Use tax on all materials, furnishings, machinery, and equipment used to complete the Work, including all purchases made outside of the State of Louisiana. The Work Order shall include Louisiana Sales and Use Tax

The Louisiana Quality Jobs / Enterprise Zone Contract requires that COMPANY provide invoice documentation to the State of Louisiana for all sales/use taxes paid or accrued by CONTRACTOR representing COMPANY when purchasing materials, furnishings, equipment and supplies. CONTRACTOR and its subcontractors and vendors are required to provide a copy of CONTRACTOR's vendor invoices showing the details of the purchase and that Louisiana State sales tax was included on the invoice. If the invoice does not contain sales taxes, CONTRACTOR must provide COMPANY with CONTRACTOR's Louisiana sales tax account numbers and the dates that the tax was reported or accrued to the Louisiana taxing authorities.

If the material and supplies used to complete the Work were taken from inventory, CONTRACTOR is to provide a copy of an invoice showing that Louisiana State sales tax was paid on like inventory. If the invoice does not have COMPANY's project name and address on the invoice, a delivery ticket will be required to insure the equipment and materials are being used at the location of the Work. All supporting invoices must be provided at the time of CONTRACTOR's invoice. Failure to provide this information will delay payment to CONTRACTOR. CONTRACTOR is responsible for communicating this information to its subcontractors and vendors used to complete the Work.

COMPANY has hired a tax consultant, which will be working with COMPANY to coordinate the administration of the Enterprise Zone Program, including the pursuit of Louisiana sales and use tax rebates. CONTRACTOR agrees to (i) cooperate with the tax consultant, as reasonably required, concerning the materials and services provided under the Contract, (ii) respond to the tax consultant's questions and provide any reasonably requested information on a timely basis, (iii) use its commercially reasonable efforts to require all subcontractors, at all tiers, to agree to the same terms as CONTRACTOR with respect to the Louisiana sales and use tax rebate, and (iv) otherwise assist COMPANY and its tax consultant, as reasonably requested, with its efforts to collect and analyze transactional data related to the preparation of the Louisiana sales and use tax rebate claims.

ARTICLE 6 – CHANGES IN THE WORK

6.1 All changes in the Work shall be approved by COMPANY by means of a written change order to the Work Order (a "Change Order"), prior to the commencement of such changes.

6.2 COMPANY shall have authority to make minor changes in the Work not involving extra cost. At any time during the performance of the Work, COMPANY shall have the right to request modification(s) (by additions, deletions, substitutions or any other alterations) to the Scope of Work set forth in Article 1 or any other part of the Agreement. Upon receipt of COMPANY request, CONTRACTOR shall as soon as practicable and in any event within seven (7) days of such request, prepare a written evaluation assessing the effect of a proposed Change Order on the contract price and schedule as set out in the applicable Work Order.

COMPANY shall, within fourteen (14) days after receiving the evaluation, inform CONTRACTOR as to its approval or disapproval of, or comments on, the evaluation. If COMPANY decides to proceed with the changes and accepts an evaluation as submitted or after incorporating comments, it shall issue to CONTRACTOR a written Change Order with a full description of the changes and any mutually agreed adjustments to the Scope of Work, contract price or schedule. CONTRACTOR shall sign and return such Change Order to COMPANY as its acceptance of the requested changes and any specified variation to the Scope of Work, contract price or schedule.

CONTRACTOR shall carry out all changes required under any accepted Change Order and shall strictly comply with the schedule, terms and conditions set forth in such Change Order.

6.3 Any proposed change to the scope of work by either Party shall be provided in written format and contain a description of the work and the change in cost to COMPANY itemized. All change orders shall be approved in writing by an Authorized Representative of COMPANY prior to the commencement of any such work. A Change Order with a value in excess of $50,000.00 must be executed by an officer of COMPANY.

ARTICLE 7 – WARRANTY

7.1 The CONTRACTOR represents and warrants that it has the competency and skill necessary to perform the Work and shall cause its employees, servants, agents, contractors, subcontractors and the dedicated personnel to utilize professional skill, diligence and care reasonably expected of professional engineers to ensure that all Work is scheduled and completed to the satisfaction of COMPANY and is fit for the intended purpose. The CONTRACTOR shall provide the expertise and any other services not specifically mentioned herein, but which by reason of its capability, knows to be necessary to ensure that the best interests of COMPANY are maintained. In addition to any other remedies COMPANY may have, including rights of termination and compensation by way of damages under this Agreement or otherwise available at law, if the CONTRACTOR breaches this representation and warranty, COMPANY may insist that the CONTRACTOR re-perform, at no cost to COMPANY, such services as performed by the CONTRACTOR, as may be necessary to remedy any defects or deficiencies attributable to said

breach provided that COMPANY provides the CONTRACTOR with written notification of any such defects or deficiencies within ninety (90) days following its discovery of the same.

7.2 In the event CONTRACTOR was notified of any failure of CONTRACTOR's foregoing warranties and failed to correct promptly and adequately such Work, COMPANY shall have the right to correct or to have such Work corrected and COMPANY shall be entitled to deduct the cost of such corrective Work from any monies due or becoming due to CONTRACTOR under this Agreement or otherwise. In the event that no monies are due or shall become due to CONTRACTOR under this Agreement, then CONTRACTOR shall promptly pay COMPANY the costs incurred in correcting such Work, including but not limited to, COMPANY's general and administrative costs, internal overhead, and all other costs of such correction. Such recourse shall not have the effect of relieving the CONTRACTOR of its warranties or obligations, hereunder, but work performed by others shall not be subject to CONTRACTOR's warranty obligations.

7.3 COMPANY may be contracting for this Work and the benefits derived therefrom as agent for an affiliated entity of COMPANY. All of CONTRACTOR's warranties under this Agreement, and any warranties made by manufacturers, suppliers, subcontractors, agents or others acting in the interest of the Parties to this Agreement, shall inure to the benefit of such affiliate, as well as to COMPANY. CONTRACTOR shall make certain that all warranties not previously issued to such affiliate, where the Work is performed for such affiliate, are assigned to such affiliate upon completion of the Work.

ARTICLE 8 – INDEMNITY

8.1 **CONTRACTOR AGREES TO RELEASE, PROTECT, INDEMNIFY, HOLD HARMLESS, AND DEFEND COMPANY, ITS SUBSIDIARIES AND AFFILIATED COMPANIES, AND ITS AND THEIR RESPECTIVE AFFILIATES, OFFICERS, DIRECTORS, EMPLOYEES, WORKMEN, AGENTS, SERVANTS, CONTRACTORS (EXCLUDING CONTRACTOR), SUBCONTRACTORS, AND INVITEES (COLLECTIVELY THE "COMPANY GROUP"), FROM AND AGAINST ANY AND ALL LOSSES, DAMAGES (INCLUDING PUNITIVE DAMAGES), DEMANDS, CLAIMS, COSTS, SUITS, OR CAUSES OF ACTION (INCLUDING, BUT NOT LIMITED TO, ANY JUDGMENTS, LOSSES, LIABILITIES, FINES, EXPENSES, INTEREST, LEGAL FEES, COSTS OF SUIT, AND DAMAGES, WHETHER IN LAW OR EQUITY AND WHETHER IN CONTRACT, TORT OR OTHERWISE) HEREINAFTER "CLAIMS", FOR OR RELATING TO:**

8.1.1 **PERSONAL OR BODILY INJURY, INCLUDING DEATH AT ANY TIME RESULTING THEREFROM;**

8.1.2 **DAMAGES TO ALL REAL AND PERSONAL PROPERTY OF EVERY TYPE AND DESCRIPTION INCLUDING CONTRACTOR'S VIOLATION OF ANY ENVIRONMENTAL LAWS, REGULATORY REQUIREMENTS AND THE ASSOCIATED REMEDIATION COSTS RESULTING FROM SUCH VIOLATION;**

8.1.3. **TO THE EXTENT SUCH INJURY, DEATH OR PROPERTY LOSS OR DAMAGE ARISES OUT OF, RESULTS FROM, OR RELATES TO, EITHER DIRECTLY OR INDIRECTLY, THE WORK OR OTHER SERVICES PERFORMED OR PROVIDED BY CONTRACTOR PURSUANT TO THIS AGREEMENT, AND REGARDLESS OF WHETHER DUE OR ALLEGEDLY DUE TO THE NEGLIGENCE (WHETHER JOINT OR CONCURRENT), FAULT, BREACH OF DUTY, OR STRICT LIABILITY OF COMPANY GROUP, THE UNSEAWORTHINESS OF ANY VESSEL, OR ANY OTHER THEORY OF LEGAL LIABILITY, EXCEPTING ONLY COMPANY GROUP'S SOLE NEGLIGENCE, GROSS NEGLIGENCE OR WILLFUL MISCONDUCT. IN THE EVENT CONTRACTOR FAILS TO DEFEND AND PROTECT COMPANY GROUP PURSUANT TO THIS AGREEMENT, THEN COMPANY GROUP SHALL BE ENTITLED TO DEFEND AND**

PROTECT ITS INTERESTS AND CONTRACTOR SHALL BE LIABLE FOR ALL REASONABLE ATTORNEY'S FEES, COSTS, JUDGMENTS AND SETTLEMENTS, INCLUDING REASONABLE ATTORNEYS' FEES INCURRED IN ENFORCING THIS AGREEMENT;

8.1.4 VIOLATION OF OR FAILURE TO COMPLY WITH ANY APPLICABLE LAW, ORDINANCE, REGULATION, RULE OR ORDER, A BREACH BY CONTRACTOR, ITS EMPLOYEES, WORKMEN, AGENTS, SERVANTS, SUBCONTRACTORS OR VENDORS, OF ANY TERM, PROVISION OR WARRANTY CONTAINED HEREIN, WHICH OCCUR, EITHER DIRECTLY OR INDIRECTLY, IN CONNECTION WITH PERFORMANCE OF THE WORK CONTEMPLATED HEREUNDER OR BY REASON OF CONTRACTOR AND ITS EMPLOYEES, WORKMEN, AGENTS, SERVANTS, SUBCONTRACTORS AND VENDORS BEING PRESENT ON COMPANY'S PREMISES;

8.1.5 A BREACH BY CONTRACTOR, ITS EMPLOYEES, WORKMEN, AGENTS, SERVANTS, SUBCONTRACTORS, OR VENDORS, OR ANY TERM, PROVISION OR WARRANTY CONTAINED HEREIN, WHICH OCCUR, EITHER DIRECTLY OR INDIRECTLY, IN CONNECTION WITH PERFORMANCE OF THE WORK CONTEMPLATED HEREUNDER OR BY REASON OF CONTRACTOR AND ITS EMPLOYEES, WORKMEN, AGENTS, SERVANTS, SUBCONTRACTORS AND VENDORS BEING PRESENT ON COMPANY'S PREMISES, REGARDLESS OF COMPANY'S FAULT OR NEGLIGENCE OR STRICT LIABILITY, EXCEPT TO THE EXTENT THE TOTAL LIABILITY, LOSS OR DAMAGE IS ATTRIBUTABLE TO AND CAUSED BY THE SOLE AND EXCLUSIVE NEGLIGENCE OF COMPANY, OR EXCEPT TO THE EXTENT AS LIMITED BY APPLICABLE LAW; AND

8.1.6 INFRINGEMENT OF PATENT OR MISAPPROPRIATION OF TRADE SECRET OR PROPRIETARY RIGHTS OF ANY THIRD PARTY BY ANY DEVICE, PROCESS OR MATERIAL NOT SPECIFIED BY COMPANY.

8.2 CONTRACTOR'S AGREEMENT TO PROTECT, INDEMNIFY, HOLD HARMLESS AND DEFEND AS SET FORTH IN SECTION 8.1 ABOVE SHALL NOT BE NEGATED OR REDUCED BY VIRTUE OF CONTRACTOR'S INSURANCE CARRIER'S DENIAL OF INSURANCE COVERAGE OF THE OCCURRENCE OR EVENT WHICH IS THE SUBJECT MATTER OF THE CLAIMS AND/OR REFUSAL TO DEFEND CONTRACTOR OR COMPANY. IN ADDITION, CONTRACTOR WILL PAY ALL COSTS AND EXPENSES, INCLUDING LEGAL FEES AND ALL OTHER EXPENSES OF LITIGATION INCURRED BY COMPANY TO ENFORCE THE FOREGOING AGREEMENT TO PROTECT, INDEMNIFY, HOLD HARMLESS AND DEFEND COMPANY.

8.3 CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR THE CONTROL AND REMOVAL OF, AND SHALL RELEASE, PROTECT, DEFEND, INDEMNIFY, AND HOLD COMPANY GROUP HARMLESS FROM AND AGAINST ANY AND ALL LOSS OR DAMAGE OR CLAIMS ARISING FROM POLLUTION, THREAT OF POLLUTION, OR CONTAMINATION: (I) WHICH ORIGINATES OR EMANATES FROM SPILLS OF FUELS, LUBRICANTS, MOTOR OILS, PIPE DOPE, PAINT, SOLVENTS, BALLAST, BILGE AND GARBAGE, DEBRIS OR ANY OTHER SUBSTANCES, WHOLLY IN ITS POSSESSION AND CONTROL OR ORIGINATING FROM COMPANY GROUP'S VESSEL, EQUIPMENT, MATERIALS OR TRANSPORT, REGARDLESS OF WHETHER DUE OR ALLEGEDLY DUE TO THE NEGLIGENCE (WHETHER JOINT OR CONCURRENT), FAULT, BREACH OF DUTY, OR STRICT LIABILITY OF COMPANY GROUP, THE UNSEAWORTHINESS OF ANY VESSEL, OR ANY OTHER THEORY OF LEGAL LIABILITY; OR (II) WHICH OTHERWISE RESULTS FROM PERFORMANCE OF THE WORK HEREUNDER BY CONTRACTOR AND IS CAUSED BY THE NEGLIGENCE (WHETHER JOINT OR CONCURRENT) OF COMPANY GROUP. NOTWITHSTANDING THE FOREGOING, THE ASSUMPTIONS OF LIABILITY BY CONTRACTOR UNDER THIS SECTION 8.3 APPLY

ONLY TO THE COST OF, AND LIABILITY FOR, CONTROL AND REMOVAL OF SUCH POLLUTION AND CONTAMINATION AND SHALL, IN NO EVENT, ALTER, LESSEN OR AFFECT THE LIABILITIES OR RESPONSIBILITIES OF CONTRACTOR SPECIFIED ELSEWHERE IN THIS AGREEMENT, AND CONTRACTOR AGREES TO ASSUME RESPONSIBILITY FOR AND TO INDEMNIFY AND HOLD COMPANY GROUP HARMLESS FROM AND AGAINST ANY FINES, PENALTIES, COSTS OR EXPENSES RESULTING FROM POLLUTION OR CONTAMINATION CAUSED BY THE NEGLIGENCE (WHETHER JOINT OR CONCURRENT) OR OTHER FAULT OF CONTRACTOR.

8.4 CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR, AND SHALL RELEASE, PROTECT, DEFEND, INDEMNIFY, AND HOLD COMPANY GROUP HARMLESS FROM AND AGAINST, ANY AND ALL LOSS OR DAMAGE TO THE WORK, REGARDLESS OF CAUSE, OR CLAIMS ARISING THEREFROM, ARISING DURING THE COURSE OF THE WORK, AND REGARDLESS OF WHETHER DUE OR ALLEGEDLY DUE TO THE NEGLIGENCE (WHETHER JOINT OR CONCURRENT), FAULT, BREACH OF DUTY, OR STRICT LIABILITY OF COMPANY GROUP, THE UNSEAWORTHINESS OF ANY VESSEL, OR ANY OTHER THEORY OF LEGAL LIABILITY, EXCEPTING ONLY COMPANY GROUP'S SOLE NEGLIGENCE, GROSS NEGLIGENCE OR WILLFUL MISCONDUCT.

8.5 THE INDEMNITY OBLIGATIONS IN THIS AGREEMENT SHALL SURVIVE TERMINATION OF THIS AGREEMENT.

ARTICLE 9 – INSURANCE

Note: A waiver for the insurance requirements has been initiated by the EH&S Dept.

9.1 Without limiting in any way the scope of any obligations or liabilities assumed hereunder by CONTRACTOR, CONTRACTOR shall procure or cause to be procured and maintained at its expense, for the duration of this Agreement, and with insurance companies acceptable to COMPANY, the insurance policies described below. CONTRACTOR acknowledges that the endorsements and the type of Insurance coverage and the limits thereof, are minimum limits which shall not be reduced without the prior written consent of COMPANY, which consent is solely in the discretion of the COMPANY.

9.1.1 Workers' Compensation and Employer's Liability Insurance, covering the employees of CONTRACTOR for all compensation and other benefits required of CONTRACTOR by the Worker's Compensation or other statutory insurance laws and requirements in the state having jurisdiction over such employees, and over the location where the Work is being performed, including Alternate Employer. Employer's Liability Insurance with limits of not less than One Million Dollars ($1,000,000) per accident or occurrence.

9.1.2 Commercial General Liability Insurance, to cover liability for bodily injury and property damage with a combined single limit of not less than One Million Dollars ($1,000,000) per occurrence, including:

A. Contractual Liability to cover liability assumed under this Agreement;

B. Products Hazard Coverage for any and all products provided or furnished by or on behalf of CONTRACTOR during the course of service rendered by CONTRACTOR hereunder;

C. Completed Operations Hazard Coverage for any claim relating to defects or deficiencies in goods, products, and materials or services used or rendered by CONTRACTOR in connection with its operations;

D. Broad Form Property Damage Liability insurance;

E. Coverage for explosion, collapse, and underground hazards for work performed by CONTRACTOR involving equipment or materials of a volatile, incendiary or explosive nature or involving excavation, drilling or subsurface activity;

F. Independent Contractor's Contingent coverage;

G. Personal Injury Liability;

H. Premises Liability;

I. In Rem Endorsement;

J. Territorial extension to cover all work areas;

K. Watercraft exclusion deleted in both Contractual Liability Insurance and Contractual Liability Endorsement; and

L. Seepage and Pollution Liability, including, without limitation, cleanup on a sudden and accidental basis.

9.1.3 Business Automobile Liability Insurance, if owned, hired or non-owned automotive equipment is used in the performance of this Agreement, to cover liability for bodily injury and property damage with a combined single limit of not less than One Million Dollars ($1,000,000) per occurrence.

9.1.4 Professional Liability Insurance, covering any and all losses or liabilities resulting from any act, error or omission resulting from CONTRACTOR or any entity for whom CONTRACTOR is legally responsible, for rendering or failure to render engineering, construction management, project management and other services required to perform the Work, with a combined single limit of Five Million Dollars ($5,000,000) per occurrence;

9.1.5 Aircraft Liability, if applicable, to cover bodily injury and property damage liability with a combined single limit of not less than One Million Dollars ($1,000,000) per occurrence.

9.1.6 Marine Liability, if applicable, involving Work to be performed on or over water including docks, wharves, etc., Worker's Compensation and Employer's Liability coverage shall also include Maritime Employer's Liability including Transportation, Wages, Maintenance and Cure, Merchant Marine Act of 1920 (the "Jones Act"), U. S. Longshore and Harbor Workers' Act, and Outer Continental Shelf Land Act with limits of not less than One Million Dollars ($1,000,000) per occurrence.

For Work involving vessels and other watercraft, Worker's Compensation and Employer's Liability coverage shall also include Maritime Employer's Liability including Transportation, Wages, Maintenance and Cure, Merchant Marine Act of 1920 (the "Jones Act"), U. S. Longshore and Harbor Workers' Act, and Outer Continental Shelf Land Act with limits of not less than One Million Dollars ($1,000,000) per occurrence. Marine liability insurance for owned or chartered watercraft shall include liability for bodily injury and property damage with a combined single limit of not less than Ten Million Dollars ($10,000,000) per occurrence. Insurance shall be endorsed to specifically include full crew coverage (unless provided under Worker's Compensation); coverage for diving operations, if applicable; liability for seepage, pollution, containment and cleanup; collision liability; and, contractual liability.

9.1.7 Excess Liability Insurance, this policy shall be written on a "following form" basis and shall provide coverage in excess of the coverage required to be provided by

CONTRACTOR for employer's liability, commercial general liability insurance, business automobile liability insurance, professional liability insurance, maritime employer's liability insurance and aircraft liability insurance. The aggregate limit shall apply separately to each annual policy period, except for the products and completed operations coverage, which shall be a project aggregate.

Minimum limits:

Five Million Dollars ($5,000,000) combined single limit each occurrence;

Five Million Dollars ($5,000,000) aggregate limit, with such limits dedicated to the project.

9.1.8 Special Provisions Concerning Policies Placed by CONTRACTOR, all policies (except Worker's Compensation and Employer's Liability) shall include COMPANY GROUP as additional insureds to the extent of the liabilities contractually assumed under this Agreement by CONTRACTOR. Such insurance coverages shall specifically provide that they apply separately to each insured against which claim is made or suit is brought, except with respect to the limits of the insurer's liability. CONTRACTOR hereby waives, and shall cause its insurers to waive, all rights of subrogation against COMPANY GROUP when permitted by law. The insurance coverages required by CONTRACTOR hereunder shall be primary over any coverages maintained by COMPANY GROUP. All of CONTRACTOR's policies must include thirty (30) days written notice of cancellation to COMPANY GROUP.

The policy limits specified above are minimum requirements and not limits of liability and shall not be construed in any way as COMPANY's acceptance of responsibility for financial liabilities in excess of such limits. CONTRACTOR shall pay all deductibles and self-insured retentions, including defense costs, applicable to the insurance.

Prior to commencement of any Work, CONTRACTOR shall furnish COMPANY with Certificates of Insurance, which document that all coverages and endorsements required by this Agreement have been obtained. CONTRACTOR shall obtain renewal certificates as and when necessary and copies thereof shall be forwarded to COMPANY as soon as same are available and in any event prior to the expiration of the policy so renewed. These certificates shall provide that the insurer shall give thirty (30) days written notice to COMPANY prior to change or cancellation of any policy. In no event shall COMPANY's acceptance of an insurance certificate that does not comply with this Section constitutes a waiver of any requirement of this Article.

9.1.9 Subcontractors

CONTRACTOR shall require all its subcontractors to provide statutory Workers' Compensation insurance coverage. To the extent not provided for by the subcontractors and not covered by CONTRACTOR's insurance, deficiencies shall be the sole responsibility of CONTRACTOR.

9.1.10 **THIS SECTION 9.1.10 APPLIES ONLY TO WORK PERFORMED IN THE STATE OF LOUISIANA. FOR PURPOSES OF THE LOUISIANA WORKER'S COMPENSATION LAW, La. R.S. 23:1021 et seq., COMPANY AND CONTRACTOR AGREE THAT THE WORK PERFORMED BY CONTRACTOR AND ITS EMPLOYEES PURSUANT TO THIS AGREEMENT ARE AN INTEGRAL PART OF AND ARE ESSENTIAL TO THE ABILITY OF COMPANY TO GENERATE COMPANY'S GOODS, PRODUCTS AND SERVICES, AND THAT CONTRACTOR'S WORK AND SERVICES SHALL BE CONSIDERED PART OF COMPANY'S TRADE, BUSINESS, AND OCCUPATION, FOR PURPOSES OF La. R.S. 23:1061(A)(1). FURTHERMORE, COMPANY AND**

CONTRACTOR AGREE THAT COMPANY IS THE PRINCIPAL OR STATUTORY EMPLOYER OF CONTRACTOR'S EMPLOYEES FOR PURPOSES OF La. R.S. 23:1061(A) ONLY. IRRESPECTIVE OF COMPANY'S STATUS EITHER AS THE STATUTORY EMPLOYER OR AS THE SPECIAL EMPLOYER (AS DEFINED IN La. R.S. 23:1031(C)) OF CONTRACTOR'S EMPLOYEES, AND REGARDLESS OF ANY OTHER RELATIONSHIP OR ALLEGED RELATIONSHIP BETWEEN COMPANY AND CONTRACTOR'S EMPLOYEES, CONTRACTOR SHALL BE AND REMAIN AT ALL TIMES PRIMARILY RESPONSIBLE FOR THE PAYMENT OF LOUISIANA WORKER'S COMPENSATION BENEFITS TO ITS EMPLOYEES, AND NEITHER CONTRACTOR NOR ITS UNDERWRITERS SHALL BE ENTITLED TO SEEK CONTRIBUTION FOR ANY SUCH PAYMENTS FROM COMPANY.

ARTICLE 10 – JOB PERFORMANCE

10.1 CONTRACTOR shall perform all Work in such manner as to cause a minimum of interference with COMPANY's operations and shall conduct its Work in accordance with applicable laws and the then-currently acceptable industry safety standards to maintain adequate protection of persons and property during CONTRACTOR's performance hereunder. CONTRACTOR will perform its duties in a safe manner and in a good and workmanlike fashion in accordance with the standards of care and diligence normally practiced by other companies of a similar nature to CONTRACTOR for similar projects. CONTRACTOR will have in effect and will enforce a set of safety and loss prevention standards which comply with all laws, and COMPANY's minimum safety requirements, as may be amended or modified from time-to-time, a copy of which CONTRACTOR hereby acknowledges it has received and reviewed. Prior to commencement of Work, CONTRACTOR shall inspect the premises and facilities on which said Work is to be performed in order to be apprised of any and all apparent risk incident thereto.

10.2 COMPANY is a subscriber to ISNetworld. ISNetworld is responsible for monitoring contract compliance including, health and safety information, and current insurance certificates. CONTRACTOR shall be a subscriber to ISNetworld. If CONTRACTOR is not currently a subscriber to ISNetworld, CONTRACTOR shall become a member by contacting ISNetworld at 3001 Knox Street, Suite 200, Dallas, Texas 75205 (Phone No. 214-303-4900 Web site www.isnetworld.com). CONTRACTOR subscription fees to ISNetworld are CONTRACTOR'S responsibility

10.3 CONTRACTOR is solely responsible for determining the nature and scope of the risks to the environment and to human health and safety associated with the provision of the Work to be performed by CONTRACTOR. CONTRACTOR assumes all responsibility and liability for such risks.

10.3 All incidents (including accidents and near misses) must be reported. In the event an incident involving the property, equipment, or personnel of CONTRACTOR, COMPANY, or any third party occurs on COMPANY's property, or which arises out of, results from or is in any way connected with CONTRACTOR's Work or presence upon COMPANY's property or other activities pursuant to this Agreement, CONTRACTOR shall immediately report such accident to COMPANY's designated representatives set forth in Article 24 hereof. In addition, a written report of such incident must be prepared by CONTRACTOR and delivered to COMPANY's representative within twenty-four (24) hours after CONTRACTOR becomes aware of each such incident. This report should contain factual information only and should not contain opinion, speculation, or supposition as to fault, liability, or prevention. CONTRACTOR shall also provide COMPANY with a copy of each and every report of each such incident, including statements or other investigative material or documents which CONTRACTOR completes, or is required to submit, or does submit, to any entity other than COMPANY, including without limitation, any governmental agency or body, CONTRACTOR's insurers, or others.

ARTICLE 11 – LIENS

11.1 Progress payments and final payments shall be substantiated by notarized lien affidavits and lien waivers evidencing that all suppliers, subcontractor's and laborers have been paid in full for Work performed and materials furnished, up to and including the date(s) of such affidavits. COMPANY shall not be obligated to make any payment for Work performed until requested affidavits and lien waivers are received.

11.2 CONTRACTOR shall keep the Work free and clear of all liens. CONTRACTOR shall promptly and satisfactorily settle all claims, including lien claims of its subcontractors, for labor performed and supplies or materials furnished in connection with such Work. In the event CONTRACTOR fails or refuses to promptly and satisfactorily settle all such claims, COMPANY shall, after so notifying CONTRACTOR in writing, have the right to settle such claims on behalf of and for the account of CONTRACTOR, and deduct the amount from the contract price. Alternatively, COMPANY shall have the right to hold all sums due or to become due CONTRACTOR, without interest, until satisfactory evidence is furnished to it that all such claims and liens have been settled and released.

ARTICLE 12 – TERMINATION

12.1 COMPANY shall have the right to terminate this Agreement or the Work, in whole or in part, at any time by notice in writing to CONTRACTOR. Upon receipt of any such notice, CONTRACTOR shall cease all Work as provided in said notice and this Agreement or the Work shall terminate effective as of the date such notice is received by CONTRACTOR. COMPANY shall assume all obligations and shall be entitled to all privileges of CONTRACTOR in connection with any Work Order(s) issued prior to the termination of this Agreement, including any contract which CONTRACTOR has entered into for the supply of services, equipment, or materials. In the event COMPANY terminates this Agreement during CONTRACTOR's performance under a Work Order, the total settlement price shall be calculated as of the termination date based on Work completed up to and including that date based on the rates set forth in the Rate Sheet applicable to such Work Order. COMPANY shall reimburse CONTRACTOR for any costs directly, reasonably and irrevocably incurred and paid in good faith in respect of the completed Work, it being understood that the CONTRACTOR shall have an obligation to mitigate reimbursable costs. Such payments shall constitute the full and final amounts payable to CONTRACTOR by COMPANY hereunder and in no event shall CONTRACTOR be entitled to anticipated profits or any damages because of such termination.

12.2 Each Party hereto, whether performing or non-performing, breaching or non-breaching, defaulting or non-defaulting shall be entitled to setoffs, claims, counterclaims, and credits (disregarding whether a Party failed to perform, breached first, or defaulted first) in connection with any payment or the performance of any obligations under or in connection with this Agreement or termination of this Agreement. In case of a breach of this Agreement by either Party, the non-breaching Party shall give the breaching Party notice of the breach and a reasonable period to cure under the circumstances. This clause does not relieve a defaulting Party or breaching Party from its obligation to perform. All rights and remedies afforded by law or in equity with respect to material breaches or defaults are expressly reserved by each Party notwithstanding this provision.

ARTICLE 13 – SUSPENSION

13.1 COMPANY shall have the right to suspend all or any part of the Work at any time and for any reason not defined in Article 20 as "*force majeure*" by giving written notice of suspension to CONTRACTOR. Upon receipt of such notice, CONTRACTOR shall immediately take such measures as are, in the opinion of COMPANY's Representative, necessary or appropriate in order to affect such suspension and to safeguard and store the Work or part thereof during the period of suspension. In the event of suspension, COMPANY shall pay CONTRACTOR all

reasonable and verifiable additional costs incurred in effecting suspension and in safeguarding and storing the Work or part thereof.

13.2 Upon termination of any such suspension, CONTRACTOR agrees to re-commence the Work under the terms and conditions of the Agreement.

ARTICLE 14 – AUDIT RIGHTS AND CONTRACTOR ACCOUNTING PRINCIPLES

14.1 CONTRACTOR agrees to retain all records and accounts related to charges or CONTRACTOR invoices for a period of at least three (3) years from the completion date of any Work performed pursuant to this Agreement. For purposes herein, "records and accounts" shall include books, documents, accounting procedures and practices, in the form of computer data, or in any other form.

14.2 CONTRACTOR shall permit COMPANY access to, either in the field or at the home office, for review and audit, at all reasonable times, all records and accounts relating to costs and expenses invoiced to COMPANY under this Agreement, including, but not limited to, DOT and OSHA records and reports, supporting documentation, and all reimbursable costs and expenses for the Work.

14.3 CONTRACTOR shall respond in writing to COMPANY within thirty (30) days of submission by COMPANY of its audit findings. CONTRACTOR shall work diligently with COMPANY to resolve any differences with respect to the audit. Any adjustments or payments which must be made as a result of any such audit, inspection or examination of CONTRACTOR's invoices and/or records shall be made available within thirty (30) days of resolution of any adjustments to be made.

14.4 At its sole option, COMPANY may audit the CONTRACTOR'S records and accounts related to this Agreement to verify and determine the propriety of charges. At the COMPANY'S option, the audit may be performed by the COMPANY'S internal auditors and/or independent auditors selected by the COMPANY.

14.5 CONTRACTOR shall provide COMPANY access to records and accounts within thirty business (30) days after receipt of written request by COMPANY. CONTRACTOR shall comply with any requests resulting from an inspection, review, or audit by COMPANY in a reasonable and timely manner.

14.6 CONTRACTOR shall abide by and maintain accounting practices for all actual or prospective costs incurred in connection with the Work in a manner that complies with generally accepted accounting principles ("GAAP") as defined by the standards for accounting set forth by the American Institute of Certified Public Accountants ("AICPA"). These accounting practices shall include, but are not limited to methods of distinguishing direct costs from indirect costs and the basis used for allocating indirect costs. Upon request by COMPANY at any time, CONTRACTOR shall disclose in detail such accounting practices that CONTRACTOR contends comply with the requirement of this Section 14.6.

14.7 CONTRACTOR shall not submit any invoices or requests for payment or reimbursement to COMPANY that have not been recorded in the CONTRACTOR's records and accounts using accounting practices that comply with Section 14.6.

14.8 CONTRACTOR shall follow consistently and without variation the accounting practices described in Section 14.6 that are in place at the time of execution of this Agreement. A change to such accounting practices may be proposed, however, by either COMPANY or CONTRACTOR. Any such proposed changes must be agreed to in writing and signed by both CONTRACTOR and COMPANY. After the terms and conditions under which the change is to be made have been agreed to, the change must be applied prospectively to this Agreement.

ARTICLE 15 - COMPANY RIGHT TO WITHHOLD OR DENY PAYMENT TO CONTRACTOR

15.1 If at any time or times, upon audit or otherwise, COMPANY shall determine that any amount paid by COMPANY or invoiced to COMPANY pursuant to this Agreement is not or did not constitute an allowable cost or charge under this Agreement, COMPANY shall, at its sole discretion, elect one or more of the following options listed below:

(a) disallow the improper cost or charge and withhold or deny payment as more particularly described in Section 15.2;

(b) offset the amount of such overpayment against any future payments or retainage due CONTRACTOR hereunder; or

(c) submit to CONTRACTOR an invoice in the amount of such overpayment which shall promptly be paid by CONTRACTOR.

15.2 COMPANY has the right to withhold or deny payment to CONTRACTOR, when COMPANY has described in writing to CONTRACTOR that:

(a) CONTRACTOR has not performed services or failed to provide conforming goods or equipment subject to this Agreement

(b) Contractor has not provided with all supporting documentation including a fully executed notarized lien affidavit and lien waiver in the form attached as Exhibit A.

(c) CONTRACTOR has neglected, failed, or refused to furnish information or to cooperate with the inspection, review or audit of its Work and/or records and accounts;

(d) CONTRACTOR was overpaid by COMPANY; or

(e) CONTRACTOR is determined by COMPANY to be in non-compliance with generally acceptable accounting principles more particularly described in Section 14.6.

15.3 COMPANY may also, at its discretion, withhold monies due to CONTRACTOR or seek payment from CONTRACTOR on account of:

(a) adverse claims or liens filed or reasonable evidence indicating the probably filing of adverse claims or liens;

(b) failure of CONTRACTOR to make payment to a subcontractor or for equipment, materials or labor; or

(c) failure of CONTRACTOR to take appropriate action to correct discrepancies or deficiencies noted by COMPANY during review and inspection of the services or Work performed by CONTRACTOR.

15.4 If COMPANY determines that cause exists to withhold or deny payment to CONTRACTOR, COMPANY shall provide written notice to CONTRACTOR that COMPANY is withholding or denying payment to CONTRACTOR. Such notice shall specify the basis for COMPANY withholding payment and the amount to be withheld or denied.

ARTICLE 16 – CONFIDENTIALITY

16.1 All information obtained by the CONTRACTOR in the performance of this Agreement not in the public domain shall be considered confidential by CONTRACTOR. CONTRACTOR agrees to prevent information and data which it or its employees, agents or subcontractors obtained,

directly or indirectly, concerning the Work, the Work site, or any of COMPANY's property, plans or operations, from being disclosed to others without the prior written consent of COMPANY. CONTRACTOR will use the information solely for performance of the Work and for no other purpose. CONTRACTOR will not make or consent to publicity releases or announcements concerning this Agreement or CONTRACTOR's participation in the Work. CONTRACTOR shall not take photographs of the Work site or any of COMPANY's property without first obtaining COMPANY's written consent. CONTRACTOR shall require each of its subcontractors and agents to agree to the same limitations and obligations provided for in this Section. The provisions of this Section shall remain binding obligations on CONTRACTOR until the earlier of the date which is five (5) years after the expiration or termination of this Agreement or the date the confidential information has become part of the public domain by means other than disclosures or releases prohibited by this Agreement.

16.2 Upon completion of the Work under this Agreement, CONTRACTOR will (i) return all originals and copies of the confidential information to COMPANY, (ii) destroy any documents, reports, or drawings developed by CONTRACTOR and embracing confidential information of COMPANY, and (iii) remove from computer memory all of said confidential information therein residing.

16.3 Each Party acknowledges and agrees that the other Party may be irreparably injured by a breach of this Article, and that any such breach cannot be adequately compensated for by damages. The aggrieved Party shall be entitled to equitable relief, including injunctive relief and specific performance, in the event of any breach of the provisions of this Article by the other Party. Such remedies shall not be deemed to be exclusive remedies, but shall be in addition to all other remedies available at law or at equity. The aggrieved Party shall not be required to deposit any security or post any bond in connection with any of the above equitable relief, and each Party hereby waives any requirement for same.

16.4 Without limitation of, and in addition to, any rights a Party may have against the other Party arising by reason of any breach hereof, each Party shall:

(i) be liable to the other Party for all claims whatsoever which the other Party may suffer, sustain, pay or incur; and

(ii) **indemnify the other Party (and its personnel) against all claims whatsoever which may be brought against or suffered by the other Party or which it may sustain, pay or incur arising by reason of any breach by the other Party or its personnel of any of their obligations under this Article, and such obligation and indemnification shall survive the expiration or termination of this Agreement, notwithstanding anything to the contrary contained herein.**

ARTICLE 17 – PROPRIETARY RIGHTS

17.1 To the extent that the "work made for hire" rule under the Copyright Act of 1976 applies, CONTRACTOR acknowledges and agrees that the product of all Work by CONTRACTOR for COMPANY is a work made for hire and, as such, all rights in the Work belong to and are assigned to COMPANY. In addition, if the "work made for hire" rule under the Copyright Act of 1976 does not apply, CONTRACTOR agrees and hereby acknowledges that all rights in such Work are assigned and belong to COMPANY, and CONTRACTOR agrees to execute all documents requested by COMPANY to effect such assignment. CONTRACTOR specifically acknowledges and agrees that all right, title and interest in and to the product of all Work, including copyright of computer software and related work, is assigned to COMPANY, and shall pass to COMPANY upon payment by COMPANY of CONTRACTOR's invoice.

17.2 All drawings, flow diagrams, sketches, specifications, computer programs and printouts, native computer data and other records, regardless of form (hereinafter collectively referred to as "Records"), prepared by CONTRACTOR under the provisions of this Agreement, shall be the

property of COMPANY and may be used by COMPANY for any purpose. As part of the fulfillment of the Work Order, CONTRACTOR shall deliver to COMPANY copies, in the format(s) requested by COMPANY, of all Records upon completion of the Work, or in the event the Work is terminated for any reason, then immediately upon such termination.

17.3 Any and all (a) inventions, discoveries or improvements of any kind whatsoever conceived by the CONTRACTOR as a result, or in the course, of performing the Work, and (b) documents, drawings, designs, specifications, data, layout details, flow diagrams and other documents created or prepared by the CONTRACTOR in performing the Work; shall be the sole property of COMPANY and shall forthwith upon COMPANY's request be assigned in writing by the CONTRACTOR to COMPANY. The CONTRACTOR hereby covenants to assist COMPANY, at COMPANY's expense, with the making of any patent, copyright or trademark applications that COMPANY deems advisable.

ARTICLE 18 – COMPLIANCE WITH LAWS AND POLICIES

18.1 CONTRACTOR will fully comply with all applicable laws and regulations pertaining to working conditions including, but not limited to, workers' compensation, social security, federal, state and local income tax withholding, unemployment insurance, the Occupational Safety and Health Act, the Immigration Reform and Control Act of 1986, the Americans with Disabilities Act, and all applicable federal, state and local laws including without limitation those laws affecting employment, business opportunities, and the environment. CONTRACTOR is responsible for the timely payment of any and all employment-related taxes with respect to Work performed by CONTRACTOR. In the event that CONTRACTOR's employees or its subcontractors' employees are deemed to be COMPANY employees by any government authority, CONTRACTOR shall reimburse COMPANY for any corresponding taxes or fees paid by the COMPANY.

18.2 CONTRACTOR acknowledges receipt of, has read and understands, and shall abide by COMPANY POLICIES applicable to CONTRACTORS, a copy of which is attached hereto and incorporated herein as Exhibit B. COMPANY may amend Exhibit B from time-to-time at its sole discretion.

18.3 CONTRACTOR acknowledges receipt of, has read and understands, and shall abide by Exhibit C, attached hereto and incorporated herein, covering certain Equal Opportunity Certifications and Agreements applicable to business and operations.

18.4 CONTRACTOR agrees at all times in performance of the Work hereunder, to abide by all the federal (including all policies, orders and regulations), state, and local laws as said laws or regulations may be amended from time-to-time and all other laws, orders, rules and regulations, prescribed by any governmental body having jurisdiction. CONTRACTOR expressly guarantees that CONTRACTOR shall comply fully with all applicable federal (including all policies, orders and regulations), state and local laws, ordinances, rules and regulations, and COMPANY policies and shall furnish COMPANY with evidence of such compliance as COMPANY may require at any time.

18.5 CONTRACTOR also acknowledges receipt of, and shall abide by COMPANY's Safety Rules and Procedures Manual, if applicable, while performing any Work hereunder.

18.6 CONTRACTOR expressly guarantees that for all tools, materials and equipment to be furnished and used, and for all Work and labor to be performed under the terms of this Agreement and in every activity connected therewith, CONTRACTOR shall comply fully with all applicable federal, state and local laws, ordinances, rules and regulations, and shall furnish COMPANY evidence of such compliance as COMPANY may require at any time. If the services rendered under this Agreement are licensed by the state in which the Work is to be performed, CONTRACTOR must obtain and maintain the State license and must submit a copy to COMPANY prior to the performance of Work covered by this Agreement.

18.7 CONTRACTOR agrees that all products furnished or Work performed shall be in compliance with all applicable federal, state and local laws and regulations respecting the environment, including, but not limited to, the Clean Air Act, the Toxic Substance Control Act, the Safe Drinking Water Act, the Comprehensive Environmental Response, Compensation and the Liability Act, the Superfund Amendments and Reauthorization Act, the Environmental Planning and Community Right-To-Know Act, the Oil Pollution Act of 1990, the Clean Air Act Amendments of 1990, the Migratory Bird Treaty Act, the Endangered Species Act, and the Resource Conservation and Recovery Act. The handling of any solid or hazardous waste subject to the Resource Conservation and Recovery Act shall be in compliance with EPA Regulations at Parts 260 through 265, and Parts 122 through 125 of Title 40, Code of Federal Regulations, and any other applicable regulation under the Resource Conservation and Recovery Act, CONTRACTOR agrees at all times in performance of the Work hereunder, to abide by all the Federal, State, and local laws listed above as said laws or regulations may be amended from time-to-time subsequent to the effective date of this Agreement and all other laws, orders, rules and regulations, prescribed by any governmental body having jurisdiction.

18.8 CONTRACTOR agrees that, to the extent the work performed pursuant to this Agreement relates to the Consent Decree ("CD") dated September 20, 2010, between COMPANY and the United States Environmental Protection Agency, compliance with the relevant provisions of the CD is required and is of the essence of this Contract.

18.8.1 CONTRACTOR acknowledges receipt of the relevant portions of the CD, which are attached hereto as Exhibit D.

18.8.2 In the event of a material breach of CONTRACTOR's obligations under this Agreement which result in a violation of the CD, COMPANY shall be entitled to Agreement from CONTRACTOR, in addition to any other relief provided by this Agreement and by law, a sum of money, not to exceed two (2) times the total fees paid to CONTRACTOR pursuant to any relevant Work Order(s), or in the absence of any relevant Work Order(s), the relevant project pursuant to the Contract, to reimburse the COMPANY for any penalty paid by COMPANY on account of CONTRACTOR's actions or omissions which result in violation(s) of the CD, including court costs and reasonable attorney's fees incurred in connection with the enforcement of this provision. For the avoidance of doubt, this provision is not intended to create any right to recover attorney's fees or costs for any reason other than the enforcement of this provision regarding penalties assessed in connection with CONTRACTOR's non-compliance with the CD.

ARTICLE 19 – INDEPENDENT CONTRACTOR

19.1 CONTRACTOR is an independent CONTRACTOR with the right to supervise, manage, control, and direct the manner and methods for performing the Work. COMPANY is interested only in the results to be obtained; provided, however, the COMPANY shall be entitled to review and inspect the Work. It is understood and agreed that this Agreement does not create the relationship of employer and employee between COMPANY and the CONTRACTOR, nor any relationship between COMPANY and the dedicated personnel and that the CONTRACTOR is an independent CONTRACTOR. CONTRACTOR shall be solely responsible for the performance of the Work and shall have the exclusive direction and control over the conduct of the same. COMPANY shall be entitled to review and inspect CONTRACTOR's Work but any failure on the part of COMPANY to discover or reject Work not performed in accordance with this Agreement shall not be considered as acceptance by COMPANY of CONTRACTOR's Work. The CONTRACTOR agrees that it is not nor will it represent itself to be an employee of COMPANY and will not permit the dedicated personnel to make such representations. Accordingly, neither the CONTRACTOR nor the dedicated personnel will be eligible to participate in any employee benefit plans including, without limitation, life insurance, health care, disability income, dental, savings and pension plans.

19.2 COMPANY shall have the right to request removal from COMPANY's premises or the project, any employee(s), subcontractors or agents of CONTRACTOR who in COMPANY's sole opinion,

has engaged in improper conduct, is not performing in a satisfactory manner or is not qualified to perform assigned Work. CONTRACTOR shall promptly comply with such request.

ARTICLE 20 – FORCE MAJEURE

20.1 The term "*force majeure*", as used herein, shall mean an unforeseen event or occurrence beyond the reasonable control and without the fault or negligence of the affected Party including, but not limited to, earthquakes, inclement weather, fire, explosions, malicious mischief, insurrection, riot, strikes, lockouts, boycotts, picketing, labor disputes or disturbances (excluding strikes, lockouts, boycotts, pickets, labor disputes or disturbances or other industrial disputes or action involving the CONTRACTOR or CONTRACTOR's employees or its subcontractors or vendors or any of their employees), acts of the public enemy, war (declared or undeclared), compliance with any order or directive of any governmental agencies or authorities or representatives of any government acting under claim or color of authority, loss of transportation facilities ordinarily available to and used by a Party in the performance of the obligations imposed by this Agreement; where such event, occurrence or compliance would render the affected Party's performance illegal or physically impossible.

20.2 Neither CONTRACTOR nor COMPANY shall be under any obligation or subject to any liability for failure to carry out respectively the terms and provisions of this Agreement during the time and to the extent that such failure is due solely to *force majeure*. The Party affected by *force majeure* must give notice stating the time of occurrence and full particulars of the *force majeure* in writing to the other Party as soon as possible after the occurrence of the *force majeure*. The obligation of the Party giving notice of *force majeure* shall be suspended during the continuance of the *force majeure* event. Nothing in this Article shall be construed to relieve either Party of its obligation to pay monies due under the Agreement.

ARTICLE 21 – SUBCONTRACTING AND ASSIGNMENTS

21.1 CONTRACTOR may subcontract any part of the Work with prior written approval of COMPANY, but CONTRACTOR shall not be relieved of or released from, any of its obligations or responsibilities under this Agreement. For purposes of this Agreement, Work performed by subcontractors shall be deemed to be Work performed by CONTRACTOR. If requested, CONTRACTOR shall provide COMPANY with an executed copy of each subcontract and Work Order, or other written agreement entered into with a subcontractor (hereinafter referred to as "Purchase Agreement") issued by CONTRACTOR for the performance of the Work. CONTRACTOR shall ensure that the terms and conditions of any such subcontract or Purchase Agreement shall comply with and correspond to the terms and conditions of this Agreement. Changes in subcontractors, nature of Work sublet, or scope of Work sublet shall also be subject to the prior written approval of COMPANY.

21.2 Neither this Agreement nor any rights thereunder shall be assignable by CONTRACTOR without the prior written consent of the COMPANY and any such assignment without COMPANY's prior written consent will be void as to COMPANY.

21.3 Each subcontract for a portion of the Work or Purchase Agreement with respect to the Work which is assigned by CONTRACTOR to the COMPANY shall provide, that such assignment is effective only upon (a) termination of the Agreement by the COMPANY, and (b) the assumption of the subcontract or Purchase Agreement by COMPANY in writing. Each subcontract of the Work or Purchase Agreement with respect to the Work shall provide that, upon termination of the Agreement by COMPANY, the COMPANY may, in its sole discretion, assume the rights and obligations of the CONTRACTOR under the subcontract or Purchase Agreement arising on or after the effective date of the COMPANY's written assumption of the subcontract or Purchase Agreement. CONTRACTOR shall include the following, or a substantially similar provision, in all subcontracts for the Work or Purchase Agreement with respect to the Work:

"Upon the termination or suspension, for any reason, of the prime contract between COMPANY and CONTRACTOR, COMPANY may assume this Purchase Agreement or this subcontract between CONTRACTOR and subcontractor, effective from and after the date of assumption. Any assumption of this Purchase Agreement or this subcontract by COMPANY shall be in a writing executed by COMPANY"

21.4 "Agreement Documents" shall mean this Agreement, the Exhibits to this Agreement, documents listed in, and incorporated by reference in this Agreement, and Modifications issued after execution of this Agreement. A "Modification" is (1) a written amendment to this Agreement signed by both Parties, (2) a Construction Change Directive or (3) a written order for a minor change in the Work issued by or on behalf of Plains Marketing, L.P. or its affiliates. Unless specifically enumerated in the Agreement, the Agreement Documents do not include CONTRACTOR's Bid Documents.

CONTRACTOR shall obtain a written agreement from each of its subcontractors, which agreement shall provide that:

1 the subcontractor, to the extent of the Work performed by the subcontractor, is bound to the CONTRACTOR by the terms of the Agreement Documents;

2. the subcontractor shall be responsible to the CONTRACTOR for all the obligations and responsibilities that the CONTRACTOR is responsible for COMPANY pursuant to the Agreement Documents and the law;

3. the rights of COMPANY under the Agreement Documents with respect to the Work to be performed by the subcontractor are preserved and protected so that subcontracting thereof will not prejudice such rights;

4. COMPANY shall have the same rights, remedies, redress and causes of action against the subcontractor which the CONTRACTOR has against the subcontractor pursuant to the Agreement Documents and the law;

5. COMPANY shall have the same rights, remedies, redress and causes of action against the subcontractor which COMPANY has against the CONTRACTOR pursuant to the Agreement Documents and the law;

6. the subcontractor shall have the same rights, remedies, redress and causes of action against the COMPANY, which the CONTRACTOR has against COMPANY pursuant to the Agreement Documents and the law;

7. the subcontractor shall require each of its sub-subcontractors to enter into similar agreements; and

8. in case of any inconsistencies between the Agreement Documents and the terms of the subcontract, the terms of the Agreement Documents shall govern.

ARTICLE 22 – GOVERNING LAW AND VENUE

22.1 The validity, interpretation and performance of this Agreement shall be interpreted in accordance with the laws in force in the state of Texas, without reference to choice of law statutes. The state and federal courts located in Harris County, Texas shall have exclusive jurisdiction to hear and adjudicate upon any and all disputes in relation to this Agreement.

22.2 The prevailing Party in any litigation or other proceeding to enforce this Agreement, or any related matter, (including all appeals, if any), shall be entitled to recover from the non-prevailing Party all

attorney's fees, court costs, witness fees and all other costs of such actions necessary to enforce the rights of the Party under this Agreement.

ARTICLE 23 – PERMITS

23.1 Prior to commencing any activities contemplated under this Agreement, CONTRACTOR warrants that it shall obtain and maintain all permits, bonds, and licenses, at its sole expense, that CONTRACTOR is required by law to obtain in connection with performance of Work covered herein and CONTRACTOR shall, upon request, provide copies of said permits, bonds and licenses to COMPANY.

ARTICLE 24 – NOTICES

24.1 All statements, insurance certificates and other routine correspondence shall be sent to COMPANY by registered or certified mail, postage prepaid, return receipt requested, or delivered in person or by commercial courier or sent by facsimile to:

Plains Marketing, L.P.
333 Clay Street, Suite 1600
Houston, Texas 77002
Attn: Contracts and Insurance
Facsimile: 713-289-7422

24.2 No legal notice required or permitted hereunder concerning a claim or breach arising hereunder or notice of termination shall be valid unless given in writing and shall be deemed to have been validly given only if delivered in person or sent by registered or certified mail, postage prepaid, return receipt requested, facsimile or commercial courier to:

Plains Marketing, L.P.
333 Clay Street, Suite 1600
Houston, Texas 77002
Attn: Lawrence J. Dreyfuss, Vice President
Facsimile: 713-646-4216

All notices to CONTRACTOR shall be sent to:

Robert J. Meyers & Associates
31430 Capella Circle
Tomball, Texas 77375
Attention: Robert Meyers
Facsimile:

ARTICLE 25 – ENTIRETY OF AGREEMENT

25.1 This Agreement, any Work Order issued hereunder and attachments to this Agreement or any Work Order represent the entire understanding and agreement between the Parties hereto and supersedes any and all prior contracts, whether written or oral, that may exist between the Parties regarding the Work. No terms, conditions, prior course of dealings, course of performance, usage or trade, understandings, Purchase Agreement, or contract purporting to modify, vary, supplement or explain any provision of this Agreement shall be effective unless in writing and signed by representatives of both Parties authorized to amend this Agreement.

25.2 This Agreement may be amended or modified only by written amendment signed by both Parties. Any attempt by either Party, through a Work Order, Purchase Agreement, invoice, or other document, to vary in any degree any of the terms of this Agreement shall be deemed immaterial

and shall be void, unless this provision is expressly waived in an amendment executed as specified hereinabove.

25.3 Drafts of this Agreement and correspondence prior to the execution of this Agreement shall not be used by either Party as evidence of the intent of the Parties or otherwise be admissible in evidence in interpreting this Agreement.

ARTICLE 26 – SEVERABILITY

26.1 The provisions of this Agreement are severable, and if any clause or provisions hereof shall be held invalid or unenforceable in whole or in part in any jurisdiction, then such invalidity or unenforceability shall affect only such clause or provision, or part thereof, in such jurisdiction and shall not in any manner affect such clause or provision in any other jurisdiction, or any other clause or provision in this Agreement in any jurisdiction. Any such clause or provision held invalid or unenforceable, in whole or in part, to the extent permitted by law, shall be restricted in applicability or reformed to the minimum extent required for such clause or provision to be enforceable.

ARTICLE 27 – BINDING EFFECT

27.1 All rights conferred by this Agreement shall be binding upon, inure to the benefit of, and be enforceable by or against the respective successors and permitted assigns of the Parties hereto.

27.2 It is expressly understood that the provisions of this Agreement do not impart enforceable rights in anyone who is not a Party or a successor or permitted assign of a Party hereto. No third party (including an employee or a contractor of a Party) is intended to have or shall have any rights under this Agreement.

ARTICLE 28 – EXHIBITS AND WORK ORDERS

28.1 Each Exhibit to this Agreement and any Work Orders issued pursuant hereto are incorporated herein and made a part hereof for all purposes.

ARTICLE 29 – WAIVER

29.1 Any waiver by either Party of any provision or condition of this Agreement shall not be construed or deemed to be a waiver of any other provision or condition of this Agreement, nor a waiver of a subsequent breach of the same provision or condition, unless such waiver is expressed in writing and signed by the Parties. COMPANY's consent to delay in the performance by CONTRACTOR of any obligation shall not be applicable to any other obligation. Delay in the enforcement of any remedy in the event of a breach of any term or condition, or in the exercise by either Party of any right, shall not be construed as a waiver of such remedy or right.

ARTICLE 30 – ETHICAL BUSINESS PRACTICES

30.1 No director, officer, employee or agent of CONTRACTOR shall give or receive any commission, fee, rebate, or gift, except those articles of nominal value given as sales promotion or holiday remembrances, or the value of reasonable entertainment consistent with local social and business custom, or enter into any business arrangement with any director, employee or agent of COMPANY without prior written notification thereof to COMPANY. CONTRACTOR shall promptly notify COMPANY of any violation of this Section and any consideration received as a result of such violation shall be paid or credited to COMPANY.

30.2 CONTRACTOR shall disclose in writing and shall assist COMPANY in identifying any financial transactions between any employee of COMPANY, including family members, and CONTRACTOR, its officers, directors, shareholders/owners and employees.

30.2 CONTRACTOR shall disclose in writing and shall assist COMPANY in identifying any financial transactions between any employee of COMPANY, including family members, and CONTRACTOR, its officers, directors, shareholders/owners and employees.

ARTICLE 31 – SURVIVAL

31.1 Except as otherwise provided herein, all warranties, covenants and obligations at Articles 7, 8, 9, 11, 13 and 16 shall survive termination or cancellation of this Agreement, regardless of the reason for such termination or cancellation, and shall continue in full force and effect.

ARTICLE 32 – MUTUAL PREPARATION

32.1 This Agreement shall be considered for all purposes as prepared through the joint efforts of the Parties hereto and shall not be construed against any Party as a result of its involvement in the negotiation, drafting or execution hereof.

IN WITNESS WHEREOF, the Parties hereto by their duly authorized representatives have executed this Agreement on the dates indicated beneath their respective signatures but effective as of the Effective Date set forth above.

ROBERT J. MEYERS & ASSOCIATES

By: _____

Name: Robert J. Meyers

Title: President

Taxpayer ID#: 76-0326060

Plains Marketing, L.P.
By: Plains Marketing GP Inc.,
Its General Partner

By: _____

Name: James L Ferrell

Title: Managing Director Supply Chain Mgmt

EXHIBIT A

CONTRACTOR'S FINAL AFFIDAVIT AND LIEN WAIVER
(To be executed by CONTRACTOR with the Invoice for Final Payment)

State of _____
County of _____

The undersigned _____("CONTRACTOR"), has, been engaged under an Engineering Services Consulting Agreement or Purchase Agreement with COMPANY (for the purposes of this **CONTRACTOR'S FINAL AFFIDAVIT AND LIEN WAIVER,** the term "COMPANY" includes Plains All American Pipeline, L.P., and its affiliates, including but not limited to Plains Marketing, L.P., Plains Pipeline, L.P., Plains Marketing Canada, L.P., Plains LPG Services, L.P., Pacific Pipeline System LLC, Rocky Mountain Pipeline System LLC, CDM Max, LLC, as well as any other company, limited liability company or limited partnership in which Plains All American Pipeline, L.P. owns or controls fifty percent or more of the equity) to provide certain materials, equipment, services and/or labor or work relating to _____ ("Project"), which is located at _____, and is more particularly described as follows:

_____
_____
_____
_____

Upon receipt of the sum of US $_____, (amount in Invoice for final payment submitted with this **CONTRACTOR'S FINAL AFFIDAVIT AND LIEN WAIVER**), CONTRACTOR waives and releases any and all liens or claims of liens against the COMPANY, Project and Property, all claims, demands, actions, causes of action or other rights at law, in contract, tort, equity or otherwise that CONTRACTOR has, may have had or may have in the future against COMPANY arising out of this Major Service Contract, Purchase Agreement or the Project, whether or not known to the CONTRACTOR at the time of execution of this **CONTRACTOR'S FINAL AFFIDAVIT AND LIEN WAIVER.**

CONTRACTOR represents that all of its obligations legal, equitable or otherwise, relating to or arising out of the Major Service Contact, Purchase Agreement, Project or subcontracts have been fully satisfied (except for that work and obligations that survive the termination or expiration of the Major Service Contract and/or Purchase Agreement, including warranties and correction of defective work).

CONTRACTOR does hereby certify that the Major Service Contract and/or Purchase Agreement has been fully and finally completed (except for that work and obligations that survive the termination or expiration of the Major Service Contract and/or Purchase Agreement, including warranties and correction of defective work), including certification that all labor has been fully and entirely paid, that all taxes have been paid, or will be paid when due, that all valid state sales and use taxes have been paid, that all taxes required by law to be withheld from employees or others have been withheld and remitted to the proper taxing authority, or will be remitted when due, that all premiums for insurance requirements, all claims for damages of any nature arising for the fulfillment of the Major Service Contract and/or Purchase Agreement, and that all materials, supplies, etc., all labor and bills for materials, supplies, etc., of any and all subcontractors have been paid.

This **CONTRACTOR'S FINAL AFFIDAVIT AND LIEN WAIVER** is freely and voluntarily given, and CONTRACTOR acknowledges and represents that it has fully reviewed the terms and conditions of this **CONTRACTOR'S FINAL AFFIDAVIT AND LIEN WAIVER**, that it is fully informed with respect to the legal effect of this **CONTRACTOR'S FINAL AFFIDAVIT AND LIEN WAIVER**, and that it has voluntarily chosen to accept the terms and conditions of this **CONTRACTOR'S FINAL AFFIDAVIT AND LIEN WAIVER** in return for the payment recited above. CONTRACTOR understands, agrees and acknowledges that, upon payment, this document waives rights unconditionally and is fully enforceable to extinguish all claims of CONTRACTOR as of the date of execution of this document by CONTRACTOR.

CONTRACTOR AGREES TO INDEMNIFY, DEFEND AND HOLD THE COMPANY, ITS PARENT, THEIR RESPECTIVE PARENTS, AFFILIATES AND SUBSIDIARIES AND THEIR RESPECTIVE DIRECTORS, OFFICERS, AGENTS, EMPLOYEES AND INVITEES ("COMPANY INDEMNIFIED PARTIES") FROM AND AGAINST ANY AND ALL LOSSES, CLAIMS, LIENS, DAMAGES, COSTS AND EXPENSES OF ANY KIND AND NATURE AGAINST COMPANY INDEMNIFIED PARTIES OR THE PROJECT OR THE PROPERTY ARISING OUT OF OR RELATING TO CONTRACTORS FAILURE TO PERFORM OR FULFILL ANY OF THE ACTS OR OBLIGATIONS REFERRED TO IN THIS CONTRACTOR'S FINAL AFFIDAVIT AND LIEN WAIVER.

ROBERT J. MEYERS & ASSOCIATES

By: _____
Name: _____
Title: _____
Date: _____

Exhibit B

COMPANY POLICIES
APPLICABLE TO CONTRACTORS

CONTRACTOR agrees to comply as follows:

(I) (No Smoking Policy). To require its employees, subcontractors, agents and representatives to adhere to COMPANY's No Smoking Policy. The Policy generally prohibits smoking in COMPANY's buildings and on COMPANY's property except as otherwise designated.

(II) (Anti-Harassment Policy). To require its employees, subcontractors, agents and representatives to adhere to COMPANY's Anti-Harassment Policy while on the premises or engaged in COMPANY business. The Policy prohibits all forms of harassment, including sexual harassment, which creates an intimidating, hostile or offensive working environment.

(III) (Weapons Policy). To require its employees, subcontractors, agents and representatives to adhere to COMPANY's Weapons Policy. The Policy strictly prohibits the use, possession or concealing of any weapons, whether licensed or not and including all firearms and explosives, while on COMPANY's premises.

COMPANY reserves the right to conduct personal searches at any time. COMPANY intends to use personal searches when it believes the Policy may have been violated and/or for the purpose of deterrence and assurance that there is compliance with this Policy.

(IV) (Safety and Security Policy). To establish, administer, and enforce safety rules and procedures and shall require its employees, subcontractors, agents and representatives to adhere to COMPANY's Safety and Security Policies.

(V) (Drug and Alcohol Policy). To notify its employees, subcontractors, agents and representatives of COMPANY's Drug and Alcohol Policy which prohibits CONTRACTOR's employees, subcontractors, agents, and representatives from:

A. using, possessing, distributing, purchasing or selling drugs or alcohol while on COMPANY premises or while engaged in COMPANY business, including travel to and from a particular work area or areas;

B. reporting to and/or performing work for the COMPANY with unauthorized drugs or alcohol in excess of the Policy limit (.04% B.A.C.) in their body; or

C. refusing to submit to routine searches of their person, their personal property, and COMPANY or CONTRACTOR assigned property, while entering on or leaving COMPANY premises.

CONTRACTOR agrees to remove and replace, for the purposes of fulfilling its obligations to the COMPANY under this Contract, any of its employees, subcontractors, agents and representatives found to be in violation of its own anti-drug plan and/or COMPANY's Drug and Alcohol Policy, or those that the COMPANY believes to be in violation of the Drug and Alcohol Policy whose compliance with the Policy cannot be certified to by CONTRACTOR based upon laboratory testing acceptable to the COMPANY.

The following paragraphs addressing CONTRACTOR drug testing policies and procedures are not applicable to CONTRACTORS providing non-safety sensitive activities and/or services. CONTRACTORS providing non-safety activities and/or services (including but not limited to labor, equipment and materials) under the terms and conditions of this Contract are not required to have their own drug testing policies and procedures in place. However, while performing said services

for COMPANY, CONTRACTOR and its employees, agents and representatives are required to comply with the COMPANY's applicable Drug and Alcohol policies, as outlined herein. COMPANY shall be solely responsible for determining whether or not any particular contract services or activities are considered safety sensitive with respect to whether or not a specific CONTRACTOR must have its own drug and alcohol misuse and prevention program in place.

If applicable, CONTRACTOR certifies that all of its employees, subcontractors, agents and representatives who may perform work covered by this Contract are subject to Laboratory Testing Provisions which are substantially equal to COMPANY's Policy in all respects (COMPANY's Laboratory Testing Provisions are described in paragraphs 1 through 4 listed below). CONTRACTOR agrees to permit COMPANY, or its authorized representative, access to CONTRACTOR's property and records, without prior notification, for the purposes of examining/auditing CONTRACTOR's policies, practices and procedures pertaining to this requirement. Any deficiencies, as determined by COMPANY, can result in CONTRACTOR being removed from the work and/or being required to implement specified modifications prior to proceeding with work.

A. The facilities performing the test (laboratory analysis) shall be properly licensed and fully accredited.

B. COMPANY conducts drug and alcohol testing under the following circumstances:

1. Pre-Employment Testing - All applicants for employment are required to submit to Laboratory Testing following their acceptance of a contingent job offer and prior to beginning work (drug screen only).

2. Reasonable Suspicion Testing - Undertaken when responsible officials have reasonable suspicion to believe an employee is in violation of COMPANY's Policy. For example, Laboratory Testing may be conducted in connection with a search if contraband is found in common areas and ownership cannot be determined; if an employee's performance, involvement in an accident, actions or appearance leads local management to believe there may be a violation of the Policy; or if an employee is charged with or being investigated in connection with a drug-related or alcohol-related criminal offense. The foregoing examples are not meant to be exclusive; other circumstances may arise which would constitute reasonable suspicion to request Laboratory Testing.

3. Random Testing - All employees performing work in safety sensitive positions at all COMPANY locations are subject to random drug and alcohol testing as outlined below, with the exception of employees who are covered by a D.O.T. random testing program.

   COMPANY defines a safety sensitive position as one in which requires that the employee perform the duties which are related to the safe operation or security of a facility or a piece of equipment and which, if not performed properly, could result in a serious safety risk or environmental hazard to employees, a facility, or the general public. All employees who have the direct responsibility of supervising employees who perform such duties are considered as occupying a safety-sensitive position.

   Random Testing will be conducted at an annualized rate of 25% for those who work on pipelines and associated equipment and at 50% for those who fall under FHWA regulations.

4. Return to Work Testing - Employees who are permitted to return to work following a positive laboratory test or other Policy violation and/or rehabilitation

are subject to Laboratory Testing as determined by Health Services, and as outlined in a Return to Work Agreement.

5. Aviation Department Testing - Employees in COMPANY's Aviation Department are subject to periodic unannounced testing at least once per year.

6. Government Required Testing - Employees will be required to submit to Laboratory Testing as required by the U.S. Department of Transportation or by other federal, state or local governmental agencies.

C. Definitions Contained in COMPANY's Policy

1. Company

"COMPANY" Plains All American Pipeline, L.P., and its affiliates, including but not limited to Plains Marketing, L.P., Plains Pipeline, L.P., Plains Marketing Canada, L.P., Plains LPG Services, L.P., Pacific Pipeline System LLC, Rocky Mountain Pipeline System LLC, CDM Max, LLC, as well as any other limited liability company or limited partnership in which Plains All American Pipeline, L.P. owns or controls fifty percent (50%) or more of the equity.

2. Unauthorized Drugs

For the purpose of this Policy, the term "Unauthorized Drugs" shall mean any substance, other than an Authorized Substance, which is, or has the effect on the human body of being, a narcotic, depressant, stimulant, hallucinogen, or cannabinoid, their precursors, derivatives, or analogues, and includes, but is not limited to, those substances scheduled as controlled substances pursuant to the Federal Controlled Substances Act, inhalants, "designed drugs", and "look-a-likes".

3. Authorized Substances

Substances having a physiological, psychological, or biochemical effect which are lawfully prescribed or which are available without a prescription, which are lawfully obtained by an employee and which an employee possesses and uses in the appropriate manner, in the dosages and for the purposes for which the substances were prescribed or manufactured, are considered "Authorized Substances" for the purposes of this Policy. In the case of alcohol, such is excluded from this definition to the extent its possession of consumption places an employee in violation of the "Alcohol Policy".

4. Company Premises

"Company Premises" includes, but is not limited to, Plains All American Pipeline, L.P. owned, rented, used, or leased property, including lodging furnished or paid for by the COMPANY; COMPANY work site locations, offices, and/or parking lots; or COMPANY owned, leased, or rented vehicles, aircraft, vessels, or equipment.

5. Alcohol

"Alcohol" includes, but not limited to, distilled spirits, liquor, beer, wine, malt liquor or any other intoxicants used for beverage purposes.

6. Under the Influence of Alcohol

"Under the Influence" shall mean that an individual is affected by Alcohol in any detectable manner. Evidence of being under the influence may be established by a professional or lay person's opinion, a physiological test/analysis, or a biochemical test/analysis. An "Under the Influence" determination is not limited to nor must it consist of evidence of impairment of physical or mental ability or misconduct. An employee whose blood alcohol content is found to be equivalent to or greater than the governmentally recognized level for being under the influence shall be presumed to be Under the Influence of Alcohol.

7. Blood Alcohol Content

Additionally, an employee whose blood alcohol level content is determined during work hours to be equivalent to or greater than .04 percent Blood Alcohol Content will be in violation of this Policy.

8. Contraband

"Contraband" for purposes of this Policy shall mean drug paraphernalia.

9. Laboratory Testing

"Laboratory Testing" includes, but is not limited to, a physiological test/analysis or a biochemical test/analysis, including urinalysis, breath analysis, and blood analysis.

10. Personal Search

"Personal Search" includes a search of employees' personal property located on COMPANY Premises, including but not limited to, their personal effects, lockers, baggage, desks, lunch boxes, containers, purses, billfolds, parcels; private vehicles if on COMPANY Premises and living quarters, if furnished or paid for by the COMPANY; any COMPANY property assigned to employees; and a limited search of the person.

11. Policy Violations

COMPANY considers any of its employees who have a positive drug test result; have a blood alcohol content .04% or higher during working hours; possess prohibited materials, fail to cooperate with COMPANY requests for testing and/or searches; or who otherwise violate any provision of its Policy are subject to severe disciplinary action up to and including discharge for the first violation.

D. Resource Listing

American Council for Drug Education	800-488-DRUG
Compliance Services	318-457-2443
DISA Contractors Consortium	800-752-6432
Drug Regulations Compliance, Inc.	318-868-7569
Institute for a Drug Free Workplace	202-842-7400
National Clearinghouse for Alcohol & Drug Information Workplace Helpline	800-843-4971
National Institute on Drug Abuse	301-443-6245
Pipeline Testing Consortium, Inc.	316-669-8800
DOT 49CFR, Parts 192, 195 & 199	

EXHIBIT C

I. EQUAL OPPORTUNITY
(Applicable to all contracts and Purchase Agreements in excess of $10,000)

During the performance of this contract, the CONTRACTOR agrees as follows:

(1) The CONTRACTOR will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The CONTRACTOR will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer, recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The CONTRACTOR agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.

(2) The CONTRACTOR will, in all solicitations or advertisements for employees placed by or on behalf of the CONTRACTOR, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(3) The CONTRACTOR will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency contracting officer, advising the labor union or workers' representative of the CONTRACTOR's commitments under section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The CONTRACTOR will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The CONTRACTOR will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the CONTRACTOR's noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part and the CONTRACTOR may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The CONTRACTOR will include the provisions of paragraphs (1) through (7) in every subcontract or Purchase Agreement unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The CONTRACTOR will take such action with respect to any subcontract or Purchase Agreement as may be directed by the Secretary of Labor as a means of enforcing such provisions including sanctions for noncompliance: *Provided, however*, that in the event the CONTRACTOR becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the CONTRACTOR may request the United States to enter into such litigation to protect the interests of the United States.

II. EQUAL OPPORTUNITY FOR WORKERS WITH DISABILITIES
(Applicable to all contracts and Purchase Agreements in excess of $10,000)

(1) The CONTRACTOR will not discriminate against any employee or applicant for employment because of physical or mental disability in regard to any position for which the employee or applicant for employment is qualified. The CONTRACTOR agrees to take affirmative action to employ, advance in employment and otherwise treat qualified individuals with disabilities without discrimination based on their physical or mental disability in all employment practices, including the following:

(i) Recruitment, advertising, and job application procedures;

(ii) Hiring, upgrading, promotion, award of tenure, demotion, transfer, layoff, termination, right of return from layoff and rehiring;

(iii) Rates of pay or any other form of compensation and changes in compensation;

(iv) Job assignments, job classifications, organizational structures, position descriptions, lines of progression, and seniority lists;

(v) Leaves of absence, sick leave, or any other leave;

(vi) Fringe benefits available by virtue of employment, whether or not administered by the CONTRACTOR;

(vii) Selection and financial support for training, including apprenticeship, professional meetings, conferences, and other related activities, and selection for leaves of absence to pursue training;

(viii) Activities sponsored by the CONTRACTOR including social or recreational programs; and

(ix) Any other term, condition, or privilege of employment.

(2) The CONTRACTOR agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the act.

(3) In the event of the CONTRACTOR's noncompliance with the requirements of this clause, actions for noncompliance may be taken in accordance with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the act.

(4) The CONTRACTOR agrees to post in conspicuous places, available to employees and applicants for employment, notices in a form to be prescribed by the Deputy Assistant Secretary for Federal Contract Compliance Programs, provided by or through the contracting officer. Such notices shall state the rights of applicants and employees as well as the CONTRACTOR's obligation under the law to take affirmative action to employ and advance in employment qualified employees and applicants with disabilities. The CONTRACTOR must ensure that applicants and employees with disabilities are informed of the contents of the notice (e.g., the CONTRACTOR may have the notice read to a visually disabled individual, or may lower the posted notice so that it might be read by a person in a wheelchair).

(5) The CONTRACTOR will notify each labor organization or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the CONTRACTOR is bound by the terms of section 503 of the Rehabilitation Act of 1973, as amended, and is committed to take affirmative action to employ and advance in employment individuals with physical or mental disabilities.

(6) The CONTRACTOR will include the provisions of this clause in every subcontract or Purchase Agreement in excess of $10,000, unless exempted by the rules, regulations, or orders of the Secretary issued pursuant to section 503 of the act, as amended, so that such provisions will be binding upon each subcontractor or vendor. The CONTRACTOR will take such action with respect to any subcontract or Purchase Agreement as the Deputy Assistant Secretary for Federal Contract Compliance Programs may direct to enforce such provisions, including action for noncompliance.

III. AFFIRMATIVE ACTION FOR DISABLED AND VIETNAM ERA VETERANS (Applicable to contracts and Purchase Agreements in excess of $10,000)

(a) The CONTRACTOR will not discriminate against any employee or applicant for employment because he or she is a disabled veteran or veteran of the Vietnam era in regard to any position for which the employee or applicant for employment is qualified. The CONTRACTOR agrees to take affirmative action to employ, advance in employment and otherwise treat qualified disabled veterans and veterans of the Vietnam era without discrimination based upon their disability or veterans status in all employment practices such as the following: Employment, upgrading, demotion or transfer, recruitment, advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship.

(b) The CONTRACTOR agrees to list all employment openings which exist at the time of the execution of this contract and those which occur during the performance of this contract, including those not generated by this contract and including those occurring at an establishment of the CONTRACTOR other than the one wherein the contract is being performed, but excluding those of independently operated corporate affiliates, at an appropriate local office of the State employment service system wherein the opening occurs. The CONTRACTOR further agrees to provide such reports to such local office regarding employment openings and hires as may be required. State and local government agencies holding Federal contracts of $10,000 or more shall also list all their employment openings with the appropriate office of the State employment service, but are not required to provide those reports set forth in paragraphs (d) and (e).

(c) Listing of employment openings with the employment service system pursuant to this clause shall be made at least concurrently with the use of any other recruitment source or effort and shall involve the normal obligations which attach to the placing of a bona fide job order, including the acceptance of referrals of veterans and nonveterans. The listing of employment openings does not require the hiring of any particular job applicant or from any particular group of job applicants, and nothing herein is intended to relieve the CONTRACTOR from any requirements in Executive orders or regulations regarding nondiscrimination in employment.

(d) The reports required in paragraph (b) of this clause shall include, but not be limited to, periodic reports which shall be filed at least quarterly with the appropriate local office or, where the CONTRACTOR has more than one hiring location in a State, with the central office of that State employment service. Such reports shall indicate for each hiring location (1) the number of individuals hired during the reporting period, (2) the number of non-disabled veterans of the Vietnam era hired, (3) the number of disabled veterans of the Vietnam era hired, and (4) the total number of disabled veterans hired. The reports should include covered veterans hired for on-the-job training under 38 U.S.C. 1787. The CONTRACTOR shall submit a report within 30 days after the end of each reporting period wherein any performance is made on this contract identifying data for each hiring location. The CONTRACTOR shall maintain at each hiring location copies of the reports submitted until the expiration of one year after final payment under the contract, during which time these reports and related documentation shall be made available, upon request, for examination by any authorized representatives of the contracting officer or of the Secretary of Labor. Documentation would include personnel records respecting job openings, recruitment and placement.

(e) Whenever the CONTRACTOR becomes contractually bound to the listing provisions of this clause, it shall advise the employment service system in each State where it has establishments of the name and location of each hiring location in the State. As long as the CONTRACTOR is contractually bound to these provisions and has so advised the State system, there is no need to advise the State system of subsequent contracts. The CONTRACTOR may advise the State system when it is no longer bound by this contract clause.

(f) This clause does not apply to the listing of employment openings which occur and are filled outside of the 50 States, the District of Columbia, Puerto Rico, Guam, and the Virgin Islands.

(g) The provisions of paragraphs (b), (c), (d), and (e) of this clause do not apply to openings which the CONTRACTOR proposes to fill from within his own organization. This exclusion does not apply to a particular opening once an employer decides to consider applicants outside his own organization for that opening.

(h) As used in this clause:

(1) "All employment openings" includes all positions except executive and top management, those positions that will be filled from within the CONTRACTOR's organization, and positions lasting three days or less. This term includes full-time employment, temporary employment of more than three days' duration, and part-time employment.

(2) "Appropriate office of the state employment service system" means the local office of the Federal-state national system of public employment offices with assigned responsibility for serving the area where the employment opening is to be filled, including the District of Columbia, Guam, the Commonwealth of Puerto Rico, and the Virgin Islands.

(3) "Positions that will be filled from within the CONTRACTOR's organization" means employment openings for which no consideration will be given to persons outside the CONTRACTOR's organization (including any affiliates, subsidiaries, and parent companies) and includes any openings which the CONTRACTOR proposes to fill from regularly established "recall" lists. The exception does not apply to a particular opening once an employer decides to consider applicants outside of his or her own organization.

(i) The CONTRACTOR agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the Act.

(j) In the event of a CONTRACTOR's noncompliance with the requirements of this clause, actions for noncompliance may be taken in accordance with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the Act.

(k) The CONTRACTOR agrees to post in conspicuous places, available to employees and applicants for employment, notices in a form to be prescribed by the Director, provided by or through the contracting officer. Such notice shall state the CONTRACTOR's obligation under the law to take affirmative action to employ and advance in employment qualified disabled veterans and veterans of the Vietnam era for employment, and the rights of applicants and employees.

(l) The CONTRACTOR will notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the CONTRACTOR is bound by the terms of the Vietnam Era Veterans Readjustment Assistance Act, and is committed to take affirmative action to employ and advance in employment qualified disabled veterans and veterans of the Vietnam era.

(m) The CONTRACTOR will include the provisions of this clause in every subcontract or Purchase Agreement of $10,000 or more unless exempted by rules, regulations, or orders of the Secretary issued pursuant to the Act, so that such provisions will be binding upon each subcontractor or

vendor. The CONTRACTOR will take such action with respect to any subcontract or Purchase Agreement as the Director of the Office of Federal Contract Compliance Programs may direct to enforce such provisions, including action for noncompliance.

IV. EMPLOYMENT REPORTS ON DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA (Applicable to all contracts containing the clause "Affirmative Action for Disabled and Vietnam Era Veterans")

(a) The CONTRACTOR shall report at least annually, as required by the Secretary of Labor, on:

(1) The number of special disabled veterans and the number of veterans of the Vietnam era in the workplace of the CONTRACTOR by job category and hiring location; and

(2) The total number of new employees hired during the period covered by the report, and of that total, the number of special disabled veterans, and the number of veterans of the Vietnam era.

(b) The above items shall be reported by completing the form entitled *Federal Contractor Veterans' Employment Report VETS-100.*

(c) Reports shall be submitted no later than September 30 of each year.

(d) The employment activity report required by paragraph (a)(2) of this clause shall reflect total hires during the most recent 12-month period as of the ending date selected for the employment profile report required by paragraph (a)(1) of this clause. CONTRACTORs may select an ending date: (1) As of the end of any pay period during the period July 1 through September 1 of the year the report is due, or (2) as of December 31, if the CONTRACTOR has previous written approval from the Equal Employment Opportunity Commission to do so for purposes of submitting the Employer Information Report EEO-1 (Standard Form 100).

(e) The count of veterans reported according to paragraph (a) of this clause shall be based on voluntary disclosure. Each CONTRACTOR subject to the reporting requirements at 38 U.S.C. 2012(d) shall invite all special disabled veterans and veterans of the Vietnam era who wish to benefit under the affirmative action program at 38 U.S.C. 2012 to identify themselves to the CONTRACTOR. The invitation shall state that the information is voluntarily provided, that the information will be kept confidential, that disclosure or refusal to provide the information will not subject the applicant or employee to any adverse treatment and that the information will be used only in accordance with the regulations promulgated under 38 U.S.C. 2012.

(f) *Subcontracts.* The CONTRACTOR shall include the terms of this clause in every subcontract or Purchase Agreement of $10,000 or more unless exempted by rules, regulations, or orders of the Secretary.

V. UTILIZATION OF SMALL, SMALL DISADVANTAGED AND WOMEN-OWNED SMALL BUSINESS SUBCONTRACTING PLAN (Applicable to contracts in excess of $500,000)

Where required by the Contracting Officer and applicable regulations, the subcontractor shall agree to submit and negotiate a subcontracting plan which separately addresses subcontracting with small business concerns, with small disadvantaged business concerns and with women-owned small business concerns. The plan shall be included in and made a part of the resultant contract. The subcontracting plan shall be negotiated within the time specified by the Contracting Officer. Failure to submit and negotiate the subcontracting plan shall make the offeror ineligible for award of a contract.

VI. DRUG-FREE WORKPLACE
(Applicable to contracts of any dollar value if the contract is with an individual, otherwise applicable to contracts in excess of $100,000, except contracts for the acquisition of commercial items)

(a) Definitions. As used in this clause:

Controlled substance means a controlled substance in schedules I through V of section 202 of the Controlled Substances Act (21 U.S.C. 812) and as further defined in regulation at 21 CFR 1308.11-1308.15.

Conviction means a finding of guilt (including a plea of nolo contendere) or imposition of sentence, or both, by any judicial body charged with the responsibility to determine violations of the Federal or State criminal drug statutes.

Criminal drug statue means a Federal or non-Federal criminal statute involving the manufacture, distribution, dispensing, possession or use of any controlled substance.

Drug-free workplace means the site(s) for the performance of work done by the CONTRACTOR in connection with a specific contract at which employees of the CONTRACTOR are prohibited from engaging in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance.

Employee means an employee of a CONTRACTOR directly engaged in the performance of work under a Government contract. *Directly engaged* is defined to include all direct cost employees and any other CONTRACTOR employee who has other than a minimal impact or involvement in contract performance.

Individual means an offeror/CONTRACTOR that has no more than one employee including the offeror/CONTRACTOR.

(b) The CONTRACTOR, if other than an individual, shall, within 30 days after award (unless a longer period is agreed to in writing for contracts of 30 days or more performance duration); or as soon as possible for contracts of less than 30 days performance duration:

(1) Publish a statement notifying its employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the CONTRACTOR's workplace and specifying the actions that will be taken against employees for violations of such prohibition;

(2) Establish an ongoing drug-free awareness program to inform such employees about:

(i) The dangers of drug abuse in the workplace;

(ii) The CONTRACTOR's policy of maintaining a drug-free workplace;

(iii) Any available drug counseling, rehabilitation, and employee assistance programs; and

(iv) The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace.

(3) Provide all employees engaged in performance of the contract with a copy of the statement required by subparagraph (b)(1) of this clause.

(4) Notify such employees in writing in the statement required by subparagraph (b)(1) of this clause that, as a condition of continued employment on this contract, the employee will:

(i) Abide by the terms of the statement; and

(ii) Notify the employer in writing of the employee's conviction under a criminal drug statute for a violation occurring in the workplace no later than 5 days after such conviction.

(5) Notify the Contracting Officer in writing within 10 days after receiving notice under subdivision (b)(4)(ii) of this clause, from an employee or otherwise receiving actual notice of such conviction. The notice shall include the position title of the employee;

(6) Within 30 days after receiving notice under subdivision (b)(4)(ii) of this clause of a conviction, take one of the following actions with respect to any employee who is convicted of a drug abuse violation occurring in the workplace:

(i) Taking appropriate personnel action against such employee, up to and including termination; or

(ii) Require such employee to satisfactorily participate in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency.

(7) Make a good faith effort to maintain a drug-free workplace through implementation of subparagraphs (b)(1) through (b)(5) of this clause.

(c) The CONTRACTOR, if an individual, agrees by award of the contract or acceptance of a Purchase Agreement, not to engage in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance while performing this contract.

(d) In addition to other remedies available to the Government, the CONTRACTOR's failure to comply with the requirements of paragraph (b) or (c) of this clause may, pursuant to FAR 23.506, render the CONTRACTOR subject to suspension of contract payments, termination of the contract for default, and suspension or debarment.

EXHIBIT D

CONSENT DECREE

FOR THE SOUTHERN DISTRICT OF TEXAS

UNITED STATES OF AMERICA	)	
	)	
Plaintiff,)		
	)	
v.	)	Civil Action No.
	)	
PLAINS ALL AMERICAN PIPELINE, L.P.; PLAINS PIPELINE, L.P.; PLAINS MARKETING GP INC.; and PLAINS MARKETING, L.P.,	)	
	)	
Defendants.	)	
	)	

CONSENT DECREE

Plaintiff, United States of America, on behalf of the United States Environmental Protection Agency ("EPA"), has filed a Complaint in this action concurrently with the lodging of this Consent Decree, alleging that the Defendants, Plains All American Pipeline, L.P.; Plains Pipeline, L.P.; Plains Marketing GP Inc.; and Plains Marketing, L.P. (hereinafter collectively referred to as "Plains"), are liable for civil penalties and injunctive relief to the United States pursuant to the Clean Water Act ("CWA" or the "Act"), 33 U.S.C. § 1251 et seq., as amended.

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Plains neither admits nor denies any liability to the United States arising out of the transactions or occurrences alleged in the Complaint.

The Parties recognize, and the Court by entering this Consent Decree finds, that this Consent Decree has been negotiated by the Parties in good faith and will avoid litigation between the Parties and that this Consent Decree is fair, reasonable, and in the public interest.

NOW, THEREFORE, before the taking of any testimony, without the adjudication or admission of any issue of fact or law except as provided in Section I of this Consent Decree (Jurisdiction and Venue), and with the consent of the Parties, **IT IS HEREBY ADJUDGED, ORDERED, AND DECREED** as follows:

I. JURISDICTION AND VENUE

1. This Court has jurisdiction over the subject matter of this action, pursuant to 28 U.S.C. §§ 1331, 1345, and 1355, and Section(s) 309(b), 309(d), 311(b), and 311(n) of the CWA, 33 U.S.C. §§ 1319(b), 1319(d), 1321(b), and 1321(n). This Court has personal jurisdiction over the Parties to this Consent Decree. Venue is appropriate in this District pursuant to 33 U.S.C. § 1319(b) and 28 U.S.C. §§ 1391(b) and (c), and § 1395(a), because Plains resides, is located, and otherwise may be found in this judicial district, and Plains conducts business in this judicial district. For purposes of this Consent Decree, or any action to enforce this Consent Decree, Plains consents to this Court's jurisdiction and to venue in this judicial district.

2. For purposes of this Consent Decree only, Plains agrees that the Complaint states claims upon which relief may be granted pursuant to CWA Section(s) 309 and 311, 33 U.S.C. §§ 1319 and 1321.

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II. APPLICABILITY

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7. Plains shall provide a copy of this Consent Decree to all officers and supervisory employees whose duties include compliance with any provision of this Consent Decree. Plains shall provide a copy of Sections V, VI, X, and any other relevant portion of this Consent Decree to any other employee or agent whose duties include compliance with any provision of this Consent Decree, as well as to any contractor retained to perform work required under this Consent Decree. Plains shall condition any such contract upon performance of the work in conformity with the terms of this Consent Decree.

8. In any action to enforce this Consent Decree, Plains shall not raise as a defense the failure by any of its officers, directors, employees, agents, or contractors to take any actions necessary to comply with the provisions of this Consent Decree.

III. DEFINITIONS

9. Terms used in this Consent Decree that are defined in the CWA or in regulations promulgated pursuant to the CWA shall have the same meanings assigned to them in the CWA or such regulations, unless otherwise provided in this Consent Decree. Whenever the terms set forth below are used in this Consent Decree, the following definitions shall apply:

A. "Category I Pipeline(s)" shall mean Pipelines that are regulated pursuant to the Safety Regulations and are not Category II, Category III, or Category IV Pipelines;

B. "Category II Pipeline(s)" shall mean Pipelines that are regulated pursuant to the Safety Regulations and are either Category II-A (Gathering) Pipelines or Category II-B (Low-Stress) Pipelines;

i. "Category II-A (Gathering) Pipeline(s)" shall mean any section of Category II Pipeline that meets all of the following criteria:

a. Has a nominal diameter from 6 5/8 inches (168 mm) to 8 5/8 inches (219.1 mm);

b. Is located in or within one-quarter mile (.4 km) of any Unusually Sensitive Area; and

c. Operates at a maximum pressure established under 49 C.F.R. § 195.406 corresponding to:

1. A stress level greater than 20-percent of the specified minimum yield strength of the Pipeline; or

2. If the stress level is unknown or the Pipeline is not constructed with steel pipe, a pressure of more than 125 psi (861 kPa) gage.

ii. "Category II-B (Low-Stress) Pipeline(s)" shall mean any section of Category II Pipeline that meets all of the following criteria:

a. Has a nominal diameter of 8 5/8 inches (219.1 mm) or more;

b. Is located in or within one-half mile (.8 km) of any Unusually Sensitive Area; and

c. Operates at a maximum pressure established under 49 C.F.R. § 195.406 corresponding to:

1. A stress level equal to or less than 20- percent of the specified minimum yield strength of the Pipeline; or

2. If the stress level is unknown or the Pipeline is not constructed with steel pipe, a pressure equal to or less than 125 psi (861 kPa) gage.

C. "Category III Pipeline(s)" shall mean Pipelines that are not regulated pursuant to the Safety Regulations and are either Category III-A (Gathering) Pipelines or Category III-B (Low-Stress) Pipelines;

i. "Category III-A (Gathering) Pipeline(s)" shall mean any section of Category III Pipeline that meets all of the following criteria:

a. Has a nominal diameter from 6 5/8 inches (168 mm) to 8 5/8 inches (219.1 mm);

b. Is located in or within one-quarter mile (.4 km) of any High Consequence Area; and

c. Operates at a maximum pressure established under 49 C.F.R. § 195.406 corresponding to:

1. A stress level greater than 20-percent of the specified minimum yield strength of the Pipeline; or

2. If the stress level is unknown or the Pipeline is not constructed with steel pipe, a pressure of more than 125 psi (861 kPa) gage.

ii. "Category III-B (Low-Stress) Pipeline(s)" shall mean any section of Category III Pipeline that meets all of the following criteria:

a. Has a nominal diameter of 8 5/8 inches (219.1 mm) or more;

b. Is located in or within one-half mile (.8 km) of any High Consequence Area; and.

c. Operates at a maximum pressure established under 49 C.F.R. § 195.406 corresponding to:

1. A stress level equal to or less than 20- percent of the specified minimum yield strength of the Pipeline; or

2. If the stress level is unknown or the Pipeline is not constructed with steel pipe, a pressure equal to or less than 125 psi (861 kPa) gage.

D. "Category IV Pipeline(s)" shall mean all Pipeline other than Category I Pipeline(s), Category II Pipeline(s), or Category III Pipeline(s);

E. "Centerline Verification" shall mean the process of validating the accuracy of the Pipeline centerline in the Geographic Information System ("GIS") spatial

database to its true global location so as to comply with the National Pipeline Mapping System ("NPMS") quality rating of "G" (good) or better;

F. "Complaint" shall mean the complaint filed by the United States in this action;

G. "Consent Decree" shall mean this Consent Decree and all appendices attached hereto;

H. "Day" shall mean a calendar day unless expressly stated to be a business day. In computing any period of time under this Consent Decree, where the last day would fall on a Saturday, Sunday, or federal holiday, the period shall run until the close of business of the next business day;

I. "Defendants" shall mean Plains All American Pipeline, L.P.; Plains Pipeline, L.P.; Plains Marketing GP Inc.; and Plains Marketing, L.P. (collectively referred to herein as "Plains");

J. "EPA" shall mean the United States Environmental Protection Agency and any of its successor departments or agencies;

K. "Effective Date" shall have the definition provided in Section XIV of this Consent Decree;

L. "High Consequence Area(s)" or "HCA(s)" shall have the same meaning as described in 49 C.F.R § 195.450;

M. "Listed Discharges" shall mean the discharges of crude oil from Plains' Pipelines and Replacement and/or Substitute Breakout Tanks into the environment that are listed in Appendix A to this Consent Decree;

N. "Paragraph" shall mean a portion of this Consent Decree identified by an Arabic numeral;

O. "Parties" shall mean the United States and Defendants;

P. "PHMSA" shall mean the Pipeline and Hazardous Materials Safety Administration, currently an agency of the United States Department of Transportation, and any of its successor departments or agencies;

Q. "Pipeline" shall mean any pipe operated by Plains in the United States used for crude oil service, other than intra-facility flowlines, intra-facility gathering lines, or Pipeline permanently removed from service (emptied of crude oil and purged); provided that, if any Pipeline removed from service is subsequently put back into crude oil service, the Pipeline shall be subject to all applicable requirements of this Consent Decree;

R. "Plaintiff" shall mean the United States;

S. "Replacement and/or Substitute Breakout Tank(s)" shall mean any aboveground crude oil tank owned and/or operated by Plains that is used as a replacement and/or substitute (regardless of whether it is a permanent, temporary, or stand-by replacement or substitute) for an existing breakout tank used to relieve surges in Pipelines, including but not limited to relief tanks.

T. "Safety Regulations" shall mean the PHMSA regulations promulgated at 49 C.F.R. Part 195, as in effect on the Effective Date;

U. "Section" shall mean a portion of this Consent Decree identified by a roman numeral;

V. "Segment" shall mean a discrete section of a Pipeline that is bounded and defined by instrumentation, such as meters, or by physical features, such as valves;

W. "Slack-Line Operations" shall mean Pipeline operating conditions during which a given Segment of Pipeline is not entirely filled with oil or is partly void;

X. "United States" shall mean the United States of America, acting on behalf of EPA; and

Y. "Unusually Sensitive Area(s)" or "USA(s)" shall have the same meaning as described in 49 C.F.R § 195.6.

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V. COMPLIANCE REQUIREMENTS

14. Until termination of this Consent Decree, Plains shall implement or continue to implement the measures contained in this Section with the objective of preventing future unauthorized discharges of crude oil from Plains' Pipelines and Replacement and/or Substitute Breakout Tanks.

15. **Enhanced Integrity Management and Corrosion Control.**

A. IMP Requirements for Category I, Category II-B, and Category III-B Pipelines. Plains shall assess, operate, and maintain all Category I, Category II-B, and Category III-B Pipelines in accordance with the requirements of Plains' IMP, subject to the requirements of sub-paragraph 15.G.

B. RSP Screening of Category II-A, Category III-A, and Category IV Pipelines. Plains shall assess, operate, and maintain all Category II-A, Category III-A, and Category IV Pipelines in accordance with the requirements of Plains' RSP, subject to the requirements of sub-paragraph 15.G. Plains shall develop and implement action plans detailing risk mitigation actions to address the risks or other anomalies found during the RSP in accordance with the risk category schedule set forth in Section 7 of Plains' RSP (or the corresponding section(s) of any updated versions of Plains' RSP).

C. Integrity Management of Category II and Category III Pipelines.

i. Category II-A and Category III-A (Gathering) Pipelines. For all Category II-A and Category III-A Pipelines as of the Effective Date of this Consent Decree, Plains shall operate and maintain such Pipelines in conformity with the safety requirements for rural gathering pipelines established in 49 C.F.R. 195.11(b); provided, however, that with respect to the specific provisions listed below, Plains shall also meet the following accelerated schedules:

a. By no later than the Effective Date, Plains shall identify all Segments of Pipeline meeting the definition of either a Category II-A or Category III-A Pipeline; and

b. By no later than the Effective Date, Plains shall develop and implement a continuing public education program as described in 49 C.F.R. § 195.440; and

c. By no later than July 3, 2010, Plains shall develop and implement a corrosion control program as described in 49 C.F.R. Part 195, subpart H.

ii. Category II-B and Category III-B (Low-Stress) Pipelines. In addition to the requirements of sub-paragraph 15 .A, for all Category II-B and Category III-B Pipelines as of the Effective Date of this Consent Decree, Plains shall:

a. By no later than the Effective Date, identify all Segments of Pipeline meeting the definition of either a Category II-B or Category III-B Pipeline; and

b. By no later than July 3, 2013, Plains shall complete baseline assessments of all Category II-B and III-B Pipelines in conformity with 49 C.F.R. § 195.452(c). By no later than January 3, 2011, Plains shall complete at least 50-percent of these baseline assessments (based on the total mileage of Category II-B and III-B Pipeline to be assessed), beginning with the highest risk pipe; and

c. By no later than July 3, 2010, Plains shall develop and implement a corrosion control program as described in 49 C.F.R. Part 195, subpart H.

D. New Pipeline Acquisitions.

i. Initial Screening. Plains shall complete initial screening of all Category II- A, Category III-A, and Category IV Pipeline(s) purchased or otherwise acquired by Plains after July 1, 2009, in accordance with Plains' RSP, pursuant to the following schedule:

a. Provided that digital maps with Centerline Verification of the Pipeline(s) purchased or otherwise acquired are available to Plains, Plains shall complete initial screening of no less than 1,000 miles of Pipeline per twelve-month period from the date of each purchase or acquisition until all such newly purchased or acquired Pipeline is screened; or

b. If digital maps with Centerline Verification are not available for any portion of the Pipeline(s) purchased or otherwise acquired, Plains shall complete initial screening of all Pipeline(s) with digital maps and Centerline Verification at a rate of no less than 1,000 miles of Pipeline per twelve-month period from the date of each purchase or acquisition until all such newly purchased or acquired Pipeline is screened. After completing initial screening of all such Pipeline(s) with digital mapping and Centerline Verification, Plains shall complete GIS digital mapping, Centerline Verification, and initial screening of no less than 500 miles of Pipeline without digital mapping and Centerline Verification per twelve-month period from the date initial screening of the Pipeline(s) with digital mapping and Centerline Verification is complete until all such purchased or acquired Pipeline(s) is digitally mapped, Centerline-Verified and screened.

c. For purposes of determining the rate and deadline for completing initial screening under this sub-paragraph 15. D., the availability of digital maps with Centerline Verification shall be determined individually for each separate purchase or acquisition of Pipeline. If Plains makes additional purchases or acquisitions of Pipeline before completing initial screening of an earlier purchase or

acquisition covered by this sub-paragraph 1 5.D., Plains shall complete initial screening of all Pipelines purchased or otherwise acquired at an overall rate of no less than 1,000 miles of Pipeline per twelve-month period until only one set of Pipeline(s) purchased or acquired remains to be initially screened, in which case Plains shall complete initial screening of the remaining set of Pipeline(s) in accordance with sub-paragraph 15.D.i.a or 15.D.i.b., as applicable.

ii. Integrity Management of Newly Purchased or Acquired Category II and Category III Pipelines. Plains shall determine the proper Category for newly purchased or acquired Pipeline(s) at the time of purchase or acquisition, and based on mapping available at that time. For any Category II or Category III Pipelines purchased or otherwise acquired after the Effective Date of this Consent Decree, Plains shall also comply with the requirements of sub-paragraph 15.C. by the specified deadlines if the deadline for a particular requirement will not pass within six months from the date of purchase or acquisition. If a deadline specified in sub¬paragraph 15.C. has already passed or will pass within six months from the date of purchase or acquisition, Plains shall comply with the requirements of sub-paragraph 15.C., as well as sub-paragraph 15.A for Category II-B and III-B Pipeline(s), within six months from the date of purchase or acquisition. If subsequent centerline verification requires that a newly purchased or acquired Pipeline be designated under a different Category, Plains shall have six months from the date of such re-categorization to comply with the requirements of this Paragraph.

E. Geographic Information Systems ("GIS") Mapping. By no later than July 1, 2010, Plains shall complete initial digital GIS mapping and Centerline Verification of all Pipelines operated by Plains as of May 1, 2010. For any Pipeline(s) purchased or acquired by Plains after May 1, 2010, Plains shall complete initial digital GIS mapping and Centerline Verification of all such Pipelines in accordance with the schedules and requirements provided in sub-paragraph 15 .D.i.b.

F. Anode Beds, Internal Corrosion Control, and Close Interval Surveys. Plains shall spend no less than a total of $6,000,000 during the two-year period including calendar years 2010 and 2011 on the following activities to mitigate threats posed by corrosion of Plains' Pipeline(s): (i) replacement or installation of no fewer than 120 anode beds and/or rectifiers; (ii) installation of equipment to inject corrosion inhibitor and biocides for internal corrosion control, and (iii) performance of close interval surveys on no fewer than 2400 miles of Pipeline.

G. Subsequent Revisions to Plains' IMP or RSP.

i. From the Effective Date until the termination of this Consent Decree, Plains shall not implement any material changes to Plains' IMP or RSP that are less protective of navigable waters and/or adjoining shorelines, as those terms are defined in 33 U.S.C. § 1362 and any implementing regulations, without prior

written approval from EPA. For the purpose of this Consent Decree, "material changes" shall mean any change that:

a. removes the designation of any Segment of Pipeline that, as of the Effective Date, Plains has designated as one that "could affect a HCA," or removes this designation from any Segment of Pipeline that Plains is required to so designate pursuant to the requirements of this Consent Decree, except with respect to a Pipeline or Segment of Pipeline that is permanently removed from service after the Effective Date by emptying it of all crude oil and purging it; or

b. reduces the stringency of the Pipeline risk assessment, evaluation, and repair procedures, methods, and criteria established in Plains' IMP and/or RSP such as:

1. baseline assessment or risk screening procedures and methods;

2. requirements for implementing and/or re-assessing RSP Action Plans, as well as the underlying Pipeline preventative and mitigative measures; or

3. extends the required timeframes for performing any of the actions described in this sub-paragraph 15.i.b.

ii. Within 90 Days after receiving notice from EPA that Plains has made a material change to its IMP or RSP in a manner that EPA has determined to be less protective of navigable waters, or within such other time as agreed to by EPA, Plains shall implement its former IMP or RSP, or shall implement modifications that EPA determines are equivalent to the former provisions of Plains' IMP or RSP.

16. **Enhanced Pipeline Leak Detection**.

A. Weekly Aerial Patrols. Plains shall conduct weekly aerial patrols (weather permitting) of all Category I Pipeline(s), Category, II-A Pipeline(s), Category II-B Pipeline(s), and Category III-B Pipeline(s), including any such Pipeline purchased or otherwise acquired after the Effective Date of this Consent Decree to identify indications of a leak or spill of oil. Plains shall also conduct weekly aerial patrols (weather permitting) of all Pipeline Segments in the systems from which the discharges listed in Appendix A occurred. At its option, Plains may conduct the weekly patrols (weather permitting) on foot or by motorized vehicle, provided that, in such instances, Plains shall visually inspect surface conditions over the entire Pipeline right-of-way that would otherwise be flown in order to identify indications of a leak or spill of oil.

B. Implementation of API 1130 Compliant CPM Leak Detection. Plains will comply with the performance standards for Computational Pipeline Monitoring ("CPM") Leak Detection described in API 1130 on the Segments of Pipeline identified in "Appendix B," for so long as those Segments of Pipeline are in service. By no later than December 31, 2011, Plains shall install CPM equipment on an additional 30 Segments of Pipeline and operate such Segments of Pipeline and CPM equipment in accordance with API1130.

C. Enhancement of API 1130 Compliant CPM Leak Detection and Minimization of Slack-Line Operations.

i. Investigation. By no later than December 31, 2011, Plains shall complete and document an investigation of the Pipeline Segments listed on Appendix B (and any Segments added to CPM pursuant to sub-paragraph 1 6.B) that is designed to identify potential enhancements to Plains' leak detection capabilities and measures to minimize Slack-Line Operations and/or mitigate the effects of Slack-Line Operations on the CPM leak detection systems on those Pipeline Segments. This investigation shall incorporate, but is not limited to, an evaluation of the following elements:

a. Reviewing both the migration of the CPM Pipeline Segments listed on Appendix B to, and the implementation of the additional 30 new CPM Pipeline Segments referenced in sub-paragraph 1 6.B in, the Telvent OASySTM DNA Pipeline Monitoring (PLM) CPM application used in Plains' Midland, TX Operational Control Center;

b. Examining Slack-Line Operations on all Pipeline Segments subject to this sub-paragraph 16.C, including an analysis of whether reduction or elimination of Slack-Line Operation is practicable, and the effect of such reduction or elimination on leak detection capability. The examination of Slack- Line Operations shall include, but is not limited to, an evaluation of:

1. Slack-Line Operations during "shut-in" and flowing Pipeline operating conditions, including by reviewing recent and relevant over/short measurements;

2. The amount of slack volume during "shut-in" and flowing Pipeline operating conditions;

3. The amount of time required to refill the Pipeline(s) during "start-up" operations;

4. The ability of the CPM systems to adhere to API 1130 considering the effect of Plains' Slack-Line Operations and over/short measurement capabilities on CPM leak detection capabilities; and

5. Measures to minimize Slack-Line Operations and/or mitigate the effects of Slack-Line Operations on the CPM leak detection systems. Such measures may include, but are not limited to, consideration and implementation of one or more of the following for each Segment of Pipeline:

   A. No action required, provided that current CPM leak detection system tolerances are adequate to detect leaks and/or spills given the Pipeline's Slack-Line Operations or Slack-Line Operations are not present;
   B. Revision of operating procedures for the applicable Segment of Pipeline, including the "start-up" and "shut-in" procedures;
   C. Installation of valves or pressure control devices to provide additional back-pressure, taking into consideration the limitations of the Segment of Pipeline and connecting facilities to safely contain such pressure; and
   D. Adjusting the CPM alarm limits to account for the expected refilling of the slack volumes so that leaks or spills are detected, but false indicators are avoided.

c. Historical SCADA data or other available data to identify and examine uncertainties and/or variability in measured Pipeline flow rates, operating pressures, temperatures, tank levels, and/or Pipeline operations in order to: (i) determine Plains' CPM leak detection capability and (ii) determine achievable Pipeline Segment alarm limits that do not result in excessive nuisance alarms.

ii. Action Plans. Based on the findings of the investigation described above, Plains shall develop action plans as the investigation progresses. Such action plans shall include one or more of the measures identified in sub-paragraph 16.C.i.b.5. and any other actions that Plains may also take to improve the leak detection system and/or minimize Slack-Line Operations. Plains shall complete the development of all action plans by no later than March 31, 2012. Plains shall complete implementation of all enhancements to the CPM leak-detection capabilities and/or Slack- Line Operations identified in the action plans prior to Plains submitting a request for termination of this Consent Decree.

17. **Requirements for Replacement and/or Substitute Breakout Tanks**.

A. By no later than the Effective Date of the Consent Decree, Plains' Replacement and/or Substitute Breakout Tanks must meet the following requirements:

i. Requirement for "Sufficient Capacity": All Replacement and/or Substitute Breakout Tanks must meet the design capacity requirements specifically needed to receive and safely contain oil from surges, pressure relief events, operational upsets, or other abnormal events in the associated pipeline system, as well as any applicable design capacity requirements necessary to comply with good engineering practice.

ii. Requirement for "Secondary Containment":

a. "Secondary Containment" for Replacement and/or Substitute Breakout Tanks shall mean secondary containment and/or other diversionary structures sufficient to contain the entire capacity of the Replacement and/or Substitute Breakout Tank and sufficient freeboard to contain precipitation. In all cases, the entire system for Secondary Containment, including walls and floor, must be sufficiently impervious so as to contain oil, and must be constructed so that any discharge from the primary containment system will not escape the system for Secondary Containment before cleanup occurs; and

b. All Replacement and/or Substitute Breakout Tanks must be properly located within Secondary Containment areas until the tank is permanently closed. The Secondary Containment requirement shall apply regardless of whether the Replacement and/or Substitute Breakout Tank is being used for supplemental storage capacity during an abnormal event and existing Secondary Containment is not available. In such circumstances, Secondary Containment must be constructed and the Replacement and/or Substitute Breakout Tank must be properly located within such Secondary Containment areas until the Replacement and/or Substitute Breakout Tank is permanently closed.

18. **Personnel and Training**.

A. Plains will preserve and staff the following employee positions until at least July 31, 2011:

i. PHMSA/IMP Records Coordinator and five records specialists;

ii. Pipeline Integrity Coordinator for Non-PHMSA Regulated Pipelines;

iii. Pipeline Integrity Coordinator for Internal Inspection;

iv. Senior Measurement and Quality Control Manager;

v. Pipeline Control Center Training Supervisor;

vi. Control Center Shift and Console Supervisors;

vii. One Call Administrator; and

viii. Two Leak Detection Engineers.

B. If an employee filling any of the positions listed above in sub-paragraph 18.A is not able to perform his/her duties for an extended period of time, is terminated, or leaves his/her employment with Plains, Plains shall designate an alternate employee as soon as possible who is

capable of performing all duties, responsibilities, and authorities required by the position until the original employee is able to resume his/her position or a new full-time replacement is employed by Plains.

C. Plains shall train all employees assigned to operate and maintain Category III-A and Category IV Pipelines in conformity with the Operator Qualification requirements of 49 C.F.R. 195, subpart G. Plains shall also conduct mandatory pre-screening testing for all new pipeline controller applicants using a computer simulator- based console operator assessment.

19. Plains shall train field personnel performing Pipeline maintenance on proper Pipeline cleaning techniques and procedures.

20. Permits. Where any compliance obligation under this Section requires Plains to obtain a federal, state, or local permit or approval, Plains shall submit timely and complete applications and take all other actions necessary to obtain all such permits or approvals. Plains may seek relief under the provisions of Section VIII of this Consent Decree (Force Majeure) for any delay in the performance of any such obligation resulting from a failure to obtain, or a delay in obtaining, any permit or approval required to fulfill such obligation, if Plains has submitted timely and complete applications and has taken all other actions necessary to obtain such permit or approval.

VI. REPORTING REQUIREMENTS

21. Plains shall submit the following reports to the persons designated in Section XIII of this Consent Decree (Notices):

A. By no later than six months after the Effective Date, and every sixth months thereafter until this Consent Decree terminates pursuant to Section XVII of this Consent Decree (Termination), Plains shall submit a semi-annual report to EPA that shall discuss, for the preceding six months: (i) the status of the compliance measures required under Section V of this Consent Decree; (ii) a detailed listing of the specific items for which expenditures required under sub-paragraph 15.F. were made; (iii) Plains' progress regarding the completion of any required milestones under this Consent Decree, including, but not limited to summaries of the RSP Action Plans required pursuant to sub-paragraph 15.B. and a description of actions taken pursuant to

the RSP Action Plans during the preceding six months; (iv) summaries of each action plan developed pursuant to sub-paragraph 16.C.ii. and a description of actions taken to implement the action plans during the preceding six months; (v) any problems encountered or anticipated in complying with this Consent Decree, as well as implemented or proposed solutions; (vi) the status of any necessary permit applications; (vii) a listing and description of any material changes Plains has made to its IMP or RSP (including a copy of any amendments thereto); and (viii) the total miles of Pipeline purchased, acquired, or sold during the preceding six months, if any.

B. The reports required under this Section shall also include a description of any non-compliance with the requirements of this Consent Decree and an explanation of the violation's likely cause and of the remedial steps taken, or to be taken, to prevent or minimize such violation. If the cause of a violation cannot be fully explained at the time the report is due, Plains shall so state in the report. Plains shall investigate the cause of the violation and shall then submit an amendment to the report, including a full explanation of the cause of the violation, within 30 Days of the Day Plains becomes aware of the cause of the violation. Nothing in this Paragraph or the following Paragraph relieves Plains of its obligation to provide the notice required by Section VIII of this Consent Decree (Force Majeure).

22. Each report submitted by Plains under this Section shall be signed by an official of the submitting party and shall include the following certification:

> I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on any personal knowledge I may have and my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

23. The reporting requirements of this Consent Decree do not relieve Plains of any reporting obligations required by the CWA or implementing regulations, or by any other federal, state, or local law, regulation, permit, or other requirement.

24. Any information provided pursuant to this Consent Decree may be used by the United States in any proceeding to enforce the provisions of this Consent Decree and as otherwise permitted by law.

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X. INFORMATION COLLECTION AND RETENTION

44. The United States and its representatives, including attorneys, contractors, and consultants, shall have the right of entry with respect to Plains' Pipeline and/or Replacement and/or Substitute Breakout Tanks or any other facility covered by this Consent Decree, at all reasonable times, upon presentation of credentials, to:

1. monitor the progress of activities required under this Consent Decree;
2. verify any data or information submitted to the United States in accordance with the terms of this Consent Decree;
3. obtain samples and, upon request, splits of any samples taken by Plains or its representatives, contractors, or consultants;
4. obtain evidence, including documents, photographs, and other data; and
5. assess Plains' compliance with this Consent Decree.

45. Upon request, Plains shall provide EPA or its authorized representatives splits of any samples taken by Plains. Upon request, EPA shall provide Plains splits of any samples taken by EPA.

46. Notwithstanding the provisions of Section XVII of this Consent Decree (Termination), until five years after the termination of this Consent Decree, Plains shall retain, and shall instruct its contractors and agents to preserve, all documents, records, or other information (including documents, records, or other information in electronic form) in its or its contractors' or agents' possession or control, or that come into its or its contractors' or agents' possession or control, and that are generated in connection with or as part of Plains' performance of its obligations under this Consent Decree. This information-retention requirement shall apply regardless of any contrary corporate or institutional policies or procedures. At any time during this information-retention period, upon request by the United States,

Plains shall provide copies of any documents, records, or other information required to be maintained under this Paragraph, subject to the assertion of privilege as described in Paragraph 47.

47. At the conclusion of the information-retention period provided in the preceding Paragraph, Plains shall notify the United States at least 90 Days prior to the destruction of any documents, records, or other information subject to the requirements of the preceding Paragraph and, upon request by the United States, Plains shall deliver any such documents, records, or other information to EPA within 30 days of the United States' request. Plains may assert that certain documents, records, or other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If Plains asserts such a privilege, it shall provide the following: (1) the title of the document, record, or information; (2) the date of the document, record, or information; (3) the name and title (if the title is available) of each author of the document, record, or information; (4) the name and title (if the title is available) of each addressee and recipient; (5) a description of the subject of the document, record, or information; and (6) the privilege asserted by Plains. However, any underlying documents, records, or other information from which Plains has compiled the semi-annual reports required under Section VI of this Consent Decree (Reporting Requirements) or any other submission required by this Consent Decree shall not be withheld on grounds of privilege.

48. Plains may also assert that information required to be provided under this Section is protected as Confidential Business Information ("CBI") under 40 C.F.R. Part 2. As to any information that Plains seeks to protect as CBI, Plains shall follow the procedures set forth in 40 C.F.R. Part 2.

49. This Consent Decree in no way limits or affects any right of entry and inspection, or any right to obtain information, held by the United States pursuant to applicable federal laws, regulations, or permits, nor does it limit or affect any duty or obligation of Plains to maintain documents, records, or other information imposed by applicable federal or state laws, regulations, or permits.

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XVII. TERMINATION

66. By no earlier than July 31, 2013, and after Plains has completed performance of its obligations required by this Consent Decree, including Section IV (Civil Penalty), Section V (Compliance

Requirements), Section VI (Reporting Requirements), and the payment of any accrued stipulated penalties, Plains may submit to the United States a written Request for Termination, stating that Plains has satisfied those requirements, together with all necessary supporting documentation.

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TABLE 2.6-1 - INITIAL 24 HR. SENSITIVE AREAS AT RISK SUMMARY

Adjust for Actual Current Flow and Wind Direction

Winter Season - Range of Possible Impact During The Initial 24 Hrs

Site ID	Impact BY HR (Ref.OCA)	Site Description	Assignment	Date/Time Required	Date/Time Completed
SF-695	N/A	Suisun Marsh North: Denverton / Nurse Slough Drainage			
SF-690	N/A	Suisun Marsh Central: Grizzly Isl			
SF-680	N/A	Suisun Marsh West; Suisun Slough			
SF-630C	3 hr.	Suisun Shoal			
SF-605	3 hr.	Hastings Sl., Point Edith and Seal Isl.			
SF-603	3 hr.	Bulls Head Marsh and Pacheco Creek			
SF-601	3 hr.	Martinez Marsh and Shell Dock Marsh			
SF-652	3 hr.	Benicia Marsh			
SF-654	6 hr.	Goodyear Marsh			
SF-651	6 hr.	Southampton Bay			
SF-632	6 hr.	Ryer Island			
SF-631	6 hr.	Roe Island			
SF-670	12 hr.	Honker Bay			
SF-668	12 hr.	Dutton Island			
SF-667	12 hr.	Freeman & Snag Islands			
SF-665	12 hr.	Simmons Island			
SF-633	12 hr.	Middle Ground Island			
SF-607	12 hr.	Belloma Slough			
SF-672	12 hr.	Honker Bay North – Spoonbill Ck and Vansickle Island			
SF-671	12 hr.	Honker Bay West – Wheeler Island			
SF-660	12 hr.	Grizzly Bay			
SF-655	18 hr.	Joice Island, Suisun Slough, and Montezuma Slough			
SF-583	18 hr.	Napa River Marshes			
SF-673	24 hr.	Honker Bay East – Chipps Island Shore			
SF-608	Over 24 hr	Shore Acres Marsh			

Note: 1) The time for impact is based on proximity determined by the OCA Trajectory scenario for the initial 24 hr. period. Apply specific trajectory for specific environmental conditions and protection priorities.
2) Refer to Section 3 for details on the OCA Trajectory.
3) N/A indicates that there was no forecasted impact from the OCA Trajectory scenario;

In event of an actual response, protection priorities should consider actual wind and state of tidal current conditions and adjust the OCA priorities accordingly.

TABLE 2.6-1 - INITIAL 24 HR. SENSITIVE AREA AT RISK SUMMARY
Adjust for Actual Current Flow and Wind Direction

Summer Season - Range of Possible Impact During The Initial 24 Hrs

Site ID	Impact BY HR (Ref.OCA)	Site Description	Assignment	Date/Time Required	Date/Time Completed
SF-695	N/A	Suisun Marsh North: Denverton / Nurse Slough Drainage			
SF-690	N/A	Suisun Marsh Central: Grizzly Isl			
SF-680	N/A	Suisun Marsh West; Suisun Slough			
SF-630C	3 hr.	Suisun Shoal			
SF-605	3 hr.	Hastings Sl., Point Edith and Seal Isl.			
SF-603	3 hr.	Bulls Head Marsh and Pacheco Creek			
SF-654	6 hr.	Goodyear Marsh			
SF-652	6 hr.	Benicia Marsh			
SF-632	6 hr.	Ryer Island			
SF-631	6 hr.	Roe Island			
SF-601	6 hr.	Martinez Marsh and Shell Dock Marsh			
SF-668	12 hr.	Dutton Island			
SF-667	12 hr.	Freeman & Snag Islands			
SF-665	12 hr.	Simmons Island			
SF-655	12 hr.	Joice Island, Suisun Slough, and Montezuma Slough			
SF-651	12 hr.	Southampton Bay			
SF-633	12 hr.	Middle Ground Island			
SF-607	6 hr	Belloma Slough			
SF-672	12 hr.	Honker Bay North – Spoonbill Ck and Vansickle Island			
SF-671	12 hr.	Honker Bay West – Wheeler Island			
SF-670	18 hr.	Honker Bay			
SF-660	18 hr.	Grizzly Bay			
SF-673	18 hr.	Honker Bay East – Chipps Island Shore			
SF-608	18 hr	Shore Acres Marsh			
SF-702	18 hr	Stake Point Marsh			
SF-752	24 hr.	Chipps Isl. South			
SF-755	24 hr	Spoonbill Creek			
SF-705	24 hr.	Mallard Island			
SF-583	Over 24 hr	Napa River Marshes (Mare Isl. St.)			

Note:
1) The time for impact is based on proximity determined by the OCA Trajectory scenario for the initial 24 hr. period. Apply specific trajectory for specific environmental conditions and protection priorities.
2) Refer to Section 3 for details on the OCA Trajectory.
3) N/A indicates that there was no forecasted impact from the OCA Trajectory scenario;

In event of an actual response, protection priorities should consider actual wind and state of tidal current conditions and adjust the OCA priorities accordingly.

STANDBY SPILL RESPONSE READINESS AGREEMENT

This Service Agreement (the "Agreement") is between:

Plains Products Terminals LLC, a Delaware limited liability company and its affiliates (the "Dock") located at 2801 Waterfront Road, Martinez, CA 94553; and

So Cal Ship Services ("SCSS") located at 971 South Seaside Avenue, Terminal Island, CA 90731.

The Dock and SCSS are referred to individually as a "Party" and collectively as the "Parties".

1.0 EFFECTIVE DATE AND TERM

1.1 This Agreement is effective as of January 1, 2010, but will not be enforceable until both Parties sign this Agreement.

1.2 This Agreement is in effect from the effective date above through December 31, 2012.

2.0 SCOPE OF WORK

2.1 SCSS shall furnish all labor, materials, equipment, transportation, and supervision to perform standby spill response readiness and small boat services in accordance with Attachment 1, "Scope of Work, Standby Spill Response Readiness and Small Boat Services, Plains – Martinez Terminal" ("Attachment 1").

2.2 SCSS acknowledges that the specifications provided in Attachment 1 are in compliance with the requirements of California Code of Regulations Title 2, Division 3, Chapter 1 Article 5, §2395 (c) (4) and Subchapter 6, Article 1.1 §844 (c) (1) (C) (2); and BASS (Bay Area Ship Services ("BASS") Facility, 201 East Fifth Street, Benicia, CA) can successfully execute the specification of Attachment 1.

2.3 The Dock acknowledges that should a spill occur, spill response activities are provided by SCSS on an emergency basis; that the purpose of each spill response is to minimize, to the extent practicable, the environmental damage, health risks and safety risks resulting from the spill of hazardous substances; and that the hazardous substances involved in a spill may not be eliminated from the scene of a spill or other affected areas by a spill response. SCSS does not warrant, by the scope of services or by undertaking a spill response that such response will render the scene of the spill, or area affected by the spill safe for any form of human activity, or compliance with any Federal, State or local law.

2.4 SCSS shall obtain and maintain an appropriate OSRO Rating as maybe required by California OSPR or US Coast Guard.

2.5 SCSS shall comply with all applicable laws of the Federal, State and local governments in the performance of the above services.

STANDBY SPILL RESPONSE READINESS AGREEMENT

3.0 RATES AND CONSIDERATIONS

3.1 For standby spill response readiness, the Dock agrees to pay for each vessel's persistent oil transfer period in the amount of $1,800.00 for each twenty-four (24) hour period or portion thereof with a minimum advanced monthly payment for standby spill response readiness in the amount of $10,000.00 per month.

3.1.1 A vessel's persistent oil transfer period shall be from the vessel's arrival at the Dock's wharf with vessel's mooring lines secured, until the Dock lets go vessel's mooring lines and the vessel departs the Dock's wharf.

3.2 In the case of an actual response, for a response vessel (as crewed, supplied and equipped in Attachment 1), the Dock agrees to pay $225.00 per hour. This includes an actual response to a notification and authorization from the Dock for a spill, possible spill, Dock spill response exercise or Dock spill response drill.

3.2.1 If the response vessel is impacted by any and all related spill contaminates, the above response vessel rate will continue until the vessel is cleaned of all contaminates and returned to serviceable condition.

3.2.2 If the boom is impacted by any and all related spill contaminates, the current Rate Schedule (ADM-300) shall apply until the boom is renewed, cleaned of all contaminates or the Dock is invoiced by SCSS for the renewal boom as a prepaid expense.

3.3 The Dock agrees to pay the current Rate Schedule for any spill response equipment, personnel, material and supplies used on a spill, possible spill, exercise or drill.

3.4 The Dock agrees, at its own expense, to thoroughly clean SCSS vessels and equipment impacted by any and all related spill contaminates and return vessels and equipment to serviceable condition, to the reasonable satisfaction of SCSS, including paint, hull and machinery damage that may have occurred during employment on a spill.

3.5 The Dock agrees, at its own expense, to remove and legally dispose of any and all related spill contaminated materials and supplies including cleaning residue and waste, and SCSS generated trash during any spill response service. This shall include, but is not limited to, contaminated absorbent pads, absorbent boom, gloves, Tyvek suits, etc.

3.6 SCSS shall obtain and maintain any applicable Federal, State and local government permits at its own expense, including an appropriate OSRO Rating that may become required by California OSPR or US Coast Guard.

3.7 All drills or exercises that may be required by California OSPR for SCSS to obtain or maintain any required OSRO Rating shall be conducted at SCSS expense.

3.8 The Dock agrees to pay the current Rate Schedule under Oil Spill and Industrial Services for any non-spill response small boat services.

3.9 SCSS may from time to time during the course of this Agreement replace the current Rate Schedule with a new Rate Schedule without prior notice and all services performed by SCSS shall be invoiced to the Dock and paid by the Dock in accordance with the new Rate Schedule. The Dock shall be notified of any change to the Rate Schedule..

3.10 SCSS shall deliver completed work to the Dock, free of all encumbrances, obligations, liens and assessments.

STANDBY SPILL RESPONSE READINESS AGREEMENT

4.0 PAYMENT TERMS AND CONDITIONS

4.1 The monthly advanced minimum payment of $10,000.00 is due on the first of each month before services is provided.

4.1.1 A discount of 1% will be accepted for payments received 15 days prior to the month of service.

4.2 For any additional monthly Standby Spill Response Readiness services beyond the minimum payment, BASS shall invoice these services following the month of service and payment shall be due upon submission of an invoice to the Dock.

4.3 For spill response or other small boat services, BASS shall invoice these services upon completion and payment shall be due upon submission of an invoice to the Dock.

4.4 A Late Charge of 1.5% will be assessed for any invoice not paid in full within thirty (30) days from submission of an invoice to the Dock.

4.5 Submission is considered three (3) days after the date postmarked if mailed, or the day of receipt at the Dock if faxed, emailed or hand delivered (in person or by express mail service).

4.6 All payments shall be made to:

Bay Area Ship Services
971 South Seaside Avenue
Terminal Island, CA 90731
Contact: Toni Banda
310-519-4032 (Direct Line)
310-510-4016 (Fax)

5.0 SCSS's INSURANCE

5.1 SCSS agrees at its sole cost and expense to procure and continuously maintain in full force and effect throughout the term of this Agreement, and with reliable insurance companies having an A.M. Best rating of "A-" or better, the following insurance coverage:

5.1.1 Hull and machinery insurance, including full collision liability, on all vessels owned or operated by SCSS in the performance of this Agreement with a limit equal to or greater than the fair market value of each vessel.

5.1.2 Protection and Indemnity insurance covering SCSS liabilities in the amount of at least $3,000,000, including collision liability and crew coverage.

5.1.3 Statutory Workers Compensation and Employers Liability insurance, extended to include coverage pursuant to the Longshoreman's and Harbor Workers' Compensation Act and the Jones Act, if applicable, for all employees of SCSS with per occurrence minimum limits of $1,000,000.

5.1.4 Commercial General Liability and Marine Services insurance, including contractual liability for bodily injury and property damage to the extent of SCSS's indemnity, with personal and advertising injury, independent contractor's liability, products and completed operations and contractual liability with per occurrence minimum limits of $1,000,000.

5.1.5 Excess Protection and Indemnity, including collision and contractual liability insurance in the amount of $9,000,000 shall be carried on all policies above.

5.2 BASS is a named insured on all above policies.

STANDBY SPILL RESPONSE READINESS AGREEMENT

5.3 All above policy deductibles shall be at SCSS expense.

5.4 SCSS shall name the Dock, their related and affiliated companies and their employees, and officers as additional insured on the above policies (except worker's compensation) to the extent of the indemnity obligations and risks assumed by SCSS under this Agreement.

5.5 All policies shall also provide that the Dock receive not less than thirty (30) days notice prior to any material change or cancellation of the above coverage.

6.0 INDEMNITY

6.1 SCSS shall defend, protect, indemnify, and hold harmless the Dock, its parent, subsidiaries, client, contractors, and their respective officers, directors, employees, and insurers (the "Dock Indemnitees") from and against any claim and all causes of actions involving or arising out of damage to or loss of any of SCSS's equipment, vessels, or property except as explicitly indicated in this Agreement, or for personal injury or death to employees of SCSS; by whomever brought and however caused, whether the claim or loss arises out of the performance of the Agreement or out of the activities of the Dock, whether the claim is groundless or not, and whether the damage, loss, injury or death is caused in whole or in part by the negligence or fault of the Dock Indemnitees, or by the defect in any equipment or property of any the Dock Indemnitees.

6.2 The Dock shall defend, protect, indemnify, and hold harmless SCSS, its parent, subsidiaries, contractors, and their respective officers, directors, employees, vessels, and insurers ("SCSS Indemnitees") from and against any claim and all causes of action and actions involving or arising out of damage to or loss of any of the Dock's equipment, or property, or for personal injury or death to employees of the Dock, by whomever brought and however caused, whether the claim or loss arises out of the performance of the Agreement of out of the activities of SCSS, whether the claim is groundless or not, and whether the damage, loss, injury or death is caused in whole or part by negligence or fault of the SCSS Indemnitees, or the unseaworthiness of any vessel or by the defect in an equipment or property of any the SCSS Indemnitees.

6.3 In the event the Dock employs other contractors, or has agents or invitees, in addition to it own employees, on a SCSS vessel, the Dock agrees to have said contractors, agents and/or invitees execute an indemnity agreement in favor of SCSS, on the same terms and condition set forth herein, indemnifying for any loss or claim with respect to the respective equipment, property and employees of said contractors, agents and invitees, and to require said contractors, agent and invitees to insure said obligation for limits sufficient to satisfy the indemnity obligation herein. To the extent said contractors, agent and/or invitees of the Dock have not executed a similar indemnity and insured same, the Dock agrees to indemnify all parties indemnified herein for any claims for loss of property or equipment of its contractors, agents and invitees as well as for any claims for injuries, illness, disease or death of employees of said contractors, agents, and/or invitees to the same extent the Dock has agreed to indemnify with respect to the Dock's own property, equipment and employees.

6.4 The Dock shall defend, protect, indemnify, and hold harmless SCSS Indemnitees from and against all claims, costs, expenses, actions, proceedings, suits, demands and liabilities whatsoever arising out of or resulting from any other actual or threatened pollution damage and the cost of clean up or control thereof arising from any acts or omissions of the Dock, their personnel, a vessel at the Dock's facility, their contractors, or of whomsoever, which cause or allow

discharge, spills or leaks from the Dock's facility or from a vessel at the Dock's facility.

6.5 With respect to any other claims asserted by third parties not covered by the indemnity provision above, whether for personal injury, property damage, pollution liability or otherwise, the Dock and SCSS agree to indemnify, defend and hold harmless each other to the extent of the proportionate fault assigned to each.

6.6 Notwithstanding anything to the contrary in this Agreement, the Dock agrees that neither SCSS shall be liable to the Dock for any loss of profits, business interruption, costs of insurance or other consequential damages arising out of or in connection with the performance or non-performance of this Agreement.

7.0 PERMITS AND FINDS

7.1 Throughout the term of this Agreement, the Dock shall procure and maintain in full force and effect all permits and licenses as require by applicable laws and regulations necessary for the Dock to perform their work.

7.2 SCSS shall not be responsible for any consequences arising from the Dock's failure to maintain any permit or license, or from their acts, errors or omissions with respect to obtaining a permit or license, or by their failure to comply with any applicable law or regulation.

7.3 Throughout the term of this Agreement, SCSS shall procure and maintain in full force and effect all permits and licenses as require by applicable laws and regulations necessary for SCSS to perform their work.

7.4 Each Party shall defend, hold harmless and indemnify the other against any fines, penalties or actions arising out its failure to obtain and maintain their respective permits, licenses, certificates or documentation as required by applicable laws and regulations.

8.0 ASSIGNMENT

8.1 SCSS shall not assign or transfer this Agreement, or any interest therein or any part thereof, except to SCSS affiliate Bay Area Ship Services ("BASS"), 201 East Fifth Street, Benicia, CA 94510, without written consent from the Dock.

9.0 FORCE MAJEURE

9.1 The performance of this Agreement, except for the payment of money for services already rendered, may be suspended by either party in the event performance of this Agreement is prevented by a cause beyond the reasonable control of either Party. Such causes shall include, but not limited to, acts of God (Force Majeure), acts of war, riots, fire, explosion, accident, flood or sabotage; lack of adequate fuel, power, raw materials, labor or transportation facilities; Governmental laws, regulations, requirements, orders or actions; breakage or failure of machinery or equipment; national defense requirements; injunctions or restraining orders; labor trouble, strike, lockout or injunction (neither Party shall be required to settle a labor dispute against its own best judgment).

10.0 RELATIONSHIP OF PARTIES

10.1 SCSS is not the Dock's employee and shall perform all services under this Agreement as an independent contractor.

10.2 Under no circumstances shall any Party to this Agreement be deemed an employee or partner of the other, nor shall either Party act as an agent for the other Party.

STANDBY SPILL RESPONSE READINESS AGREEMENT

11.0 GOVERNING LAW

11.1 The validity, interpretation and performance of the Agreement shall be governed and construed in accordance with the laws of the State of California.

11.2 The parties agree that venue for purposes of any arbitration or other proceedings shall be conducted in Los Angeles County, California.

12.0 DISPUTE RESOLUTION

12.1 Both Parties shall make every effort to resolve any dispute. Pending resolution, SCSS shall continue to perform obligations under this Agreement as directed by the Dock, and the Dock shall continue to make payments for undisputed items.

12.2 Any disputes not resolved by the Parties and except for disputes, claims or controversies arising out of the indemnification obligations set forth in this Agreement, to the full extent permitted by Law, all disputes shall be resolved by final and binding arbitration in accordance with the Commercial Arbitration Rules of the American Arbitration Association. Judgment upon the award may be entered and enforced in any court having jurisdiction thereof.

12.3 The obligations contained in this section shall continue and survive the termination of this Agreement.

12.4 The non-prevailing Party shall pay the prevailing Party reasonable attorneys' fees and costs.

13.0 SEVERABILITY

13.1 If any portion of this Agreement is held to be invalid or unenforceable for any reason by a court or governmental authority of competent jurisdiction, then such portion will be deemed to be stricken and the remainder of this Agreement shall continue in full force and effect.

14.0 MODIFICATIONS

14.1 This Agreement may not be modified except by an agreement in writing signed by both Parties.

15.0 HEADING

15.1 All paragraph 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 particle section, subsection, sentence or clause of the Agreement.

16.0 NOTICE

16.1 Any notice, communication or statement required or permitted to be given hereunder shall be in writing and deemed to have been sufficiently given when delivered in person or by registered or certified mail, postage prepaid, return receipt requested, to the address of the respective party below:

16.1.1 The Dock

Plains Products Terminals LLC
2801 Waterfront Road
Martinez, CA 94553

16.1 2 SCSS

So Cal Ship Services
971 South Seaside Avenue
Terminal Island, CA 90731

STANDBY SPILL RESPONSE READINESS AGREEMENT

17.0 TERMINATION

17.1 This Agreement shall continue for the term stated in this Agreement, or this Agreement shall continue from month to month until either Party terminates this Agreement, at its sole discretion, by giving the other Party thirty (30) days prior written Notice of Termination.

17.2 If this Agreement is terminated, any work in progress shall be completed at the direction and discretion of the Dock and any and all outstanding obligations or debts shall be honored and survive the termination of this Agreement.

18.0 ENTIRE AGREEMENT

18.1 This Agreement and its attachments represent the entire understanding and Agreement between the Parties hereto and supersede any and all prior Agreements, whether written or oral, that may exist between the Parties regarding same. No terms, conditions, prior course of dealings, course of performance, usage or trade, understanding, purchase orders or Agreement purporting to modify, vary, supplement or explain any provision of this Agreement shall be effective unless in writing, signed by representatives of both Parties authorized to amend this Agreement.

19.0 AUTHORITY

19.1 The individuals signing this Agreement on behalf of their respective Party represent that they are authorized to sign this Agreement on behalf of the Party for whom they are signing and that this Agreement has been duly authorized by the party.

20.0 EXECUTION

20.1 This Agreement may be executed in counter parts, and when each Party hereto has signed and delivered at least one such counterpart, each counterpart shall be deemed an original and, when taken together with the other signed counterparts, shall constitute on Agreement, which shall be binding upon and effective as to both Parties hereto. This Agreement is not binding on either Party until both Parties have executed and delivered one or more counterparts to the other Party.

The Parties have executed this Agreement by their duly authorized representatives below:

The Dock: Plains Products Terminals LLC

MCR

Authorized Representative (signature) — Date: 4/9/2010

MIKE ROUNDS - DISTRICT MANAGER

Print Name and Title

SCSS: So Cal Ship Services

Authorized Representative (signature) — Date: 3-25-2010

Mark Wrobel General Mgr.

Print Name and Title

SCOPE OF WORK
STANDBY SPILL RESPONSE READINESS
Plains – Martinez Terminal

January 1, 2010

1.0 Work Scope

1.1 So Cal Ship Services ("SCSS") shall provide standby spill response readiness for Plains Products Terminals LLC, Martinez Terminal (the "Dock") in accordance with California Code of Regulations Title 2, Division 3, Chapter 1 Article 5, §2395 (c) (4) and Subchapter 6, Article 1.1 §844 (c) (1) (C) (2)) for persistent oil transfers.

1.1.1 "Persistent Oil" means a petroleum-based oil that does not meet the distillation criteria for a non-persistent oil. "Non-Persistent Oil" means a petroleum-based oil, such as gasoline, diesel or jet fuel, which evaporates relatively quickly; specifically, an oil with hydrocarbon fractions, at least 50 percent of which, by volume, distills at a temperature of 645 degrees Fahrenheit and at least 95 percent of which, by volume, distills at a temperature of 700 degrees Fahrenheit (CCR Tile 2, Division 3, Chapter 1, Article 5, §2395 (b)(2)).

1.2 A Standby Boom Boat (a boom boat with a two person crew and supplied with 600 feet of 20 inch harbor boom) will be in readiness at SCSS affiliate Bay Area Ship Services ("BASS") Facility, 201 East Fifth Street, Benicia, CA to deploy oil boom in case of an oil discharge or possible oil discharge into the navigable waters surrounding the Dock's wharf; during vessel loading and offloading of persistent oil. Readiness shall be from the time of vessel's tie up until the vessel let go.

1.3 Upon notification and authorization from the Dock of a spill, potential spill, exercise or drill for a persistent oil transfer, BASS shall respond with a Standby Boom Boat.

1.3.1 The Dock shall provide BASS response crew with a designated Person in Charge (PIC) and communicate to BASS any special hazard risks involved in the containment of any hazardous substance the Dock is aware of or becomes aware of.

1.3.2 BASS's Standby Boom Boat will take directions from the Dock's designated PIC until the arrival of the Dock's spill response team; then the boom boat will take directions from the designated Incident Commander.

1.3.3 If an oil spill occurs from a vessel's persistent oil transfer, additional vessels, crews, materials and supplies will be made available if requested. However, the Dock shall understand that BASS will use its best effort to provide any additional equipment and services required in a spill response, nevertheless the Dock must understand that BASS cannot guarantee that all of the additional BASS resources will be available for any particular assignment or emergency situation beyond the contracted equipment and crew.

1.3.4 If an oil spill occurs at the Dock's facility or wharf for any other reason than a vessel's persistent oil transfer, vessels, crews, materials and supplies may not be immediately available if requested by the Dock. The Dock shall understand that

SCOPE OF WORK – Plains, Martinez Terminal

BASS will use its best effort to provide any equipment and services required in a spill response, however, the Dock must understand that BASS cannot guarantee that vessels, crews, materials and supplies under contract with other customers will be made immediately available.

1.3.5 Exercises and announced drills may be scheduled with twelve (12) hours advanced notice. BASS will only be in a ready state for unannounced drills when a vessel is at the Dock's wharf.

1.4 All other requests for small boat services not specifically mentioned above will be reviewed to obtain a mutually agreed scope of work for a specific requested service. Small boat services are subject to vessel and crew availability, or at the Docks discretion, conducted in conjunction with standby boom readiness.

2.0 BASS's Responsibilities

2.1 BASS shall maintain a monitored contact telephone number 24 hours a day and 365 days a year, including all Holiday for initiation of an emergency spill response and to monitor any other work activities.

2.2 BASS shall maintain and have readily available a Standby Boom Boat for immediate response to a notification of a spill, possible spill, exercise or drill as outlined in Section 1.2 and 1.3.4.

2.2.1 The Standby Boom Boat shall be:
- 2.2.1.1 supplied with 600' of 20 inch harbor boom,
- 2.2.1.2 equipped with a VHF marine radio, and
- 2.2.1.3 provided with a cellular phone.

2.2.2 The Standby Boom Boat shall be crewed with an experienced boat operator and a deckhand.
- 2.2.2.1 The boat operator shall be trained in effective boom deployment and oil spill response.
- 2.2.2.2 The boat operator and deckhand shall maintain 24-Hour Hazwoper certificates.
- 2.2.2.3 Each crew member shall have appropriate Personal Protection Equipment to Level C, including individual H2S monitors.
- 2.2.2.4 Documentation of crew certification, training and drug free certificate shall be made available upon request.

2.3 BASS shall monitor vessel traffic to and from the Dock, but this shall not relieve the Dock's responsibility to notify BASS of the commencement or completion of a persistent oil transfer.

2.4 BASS shall supply to the Dock a primary contact phone number, and operation cellular phone numbers.

2.5 BASS shall request and obtain permission from the Dock before conducting boom training at or near the Dock's facility.

SCOPE OF WORK – Plains, Martinez Terminal

3.0 Dock's Responsibilities

3.1 The Dock shall supply BASS a schedule of persistent oil transfers.
- 3.1.1 This schedule shall be supplied on a daily basis, Monday through Friday.
- 3.1.2 This schedule shall provide scheduled or pending transfers for a minimum of 30 days from the date of the schedule.

3.2 The Dock shall notify BASS a minimum of four (4) hours prior to a vessel arrival with persistent oil transfer and shortly after the vessel's departure. It is preferred that notices be made by email at bass@ship-services.com for the purpose of billing documentation.

3.3 The Dock shall supply to BASS and maintain a spill response contact phone list and identify the Dock's VHF marine radio working channel.

3.4 The Dock shall provide BASS with the Dock's safety and security measures and procedures related to any anticipated work to be preformed by BASS at or adjacent to the Dock's facility.

3.4 The Dock shall provide any additional communication equipment (e.g., UHF company radios) as the Dock deems necessary for Standby Boom Boat's direct communication with the Dock or the Dock's Spill Recovery OSRO.

3.5 The Dock shall make the water area beneath and around their dock available to BASS to conduct boom training, if such activities do not interfere with the Dock's operations.

FIGURE 3-1 - SPILL TIME CONTOUR MAP - SUMMER CONDITIONS

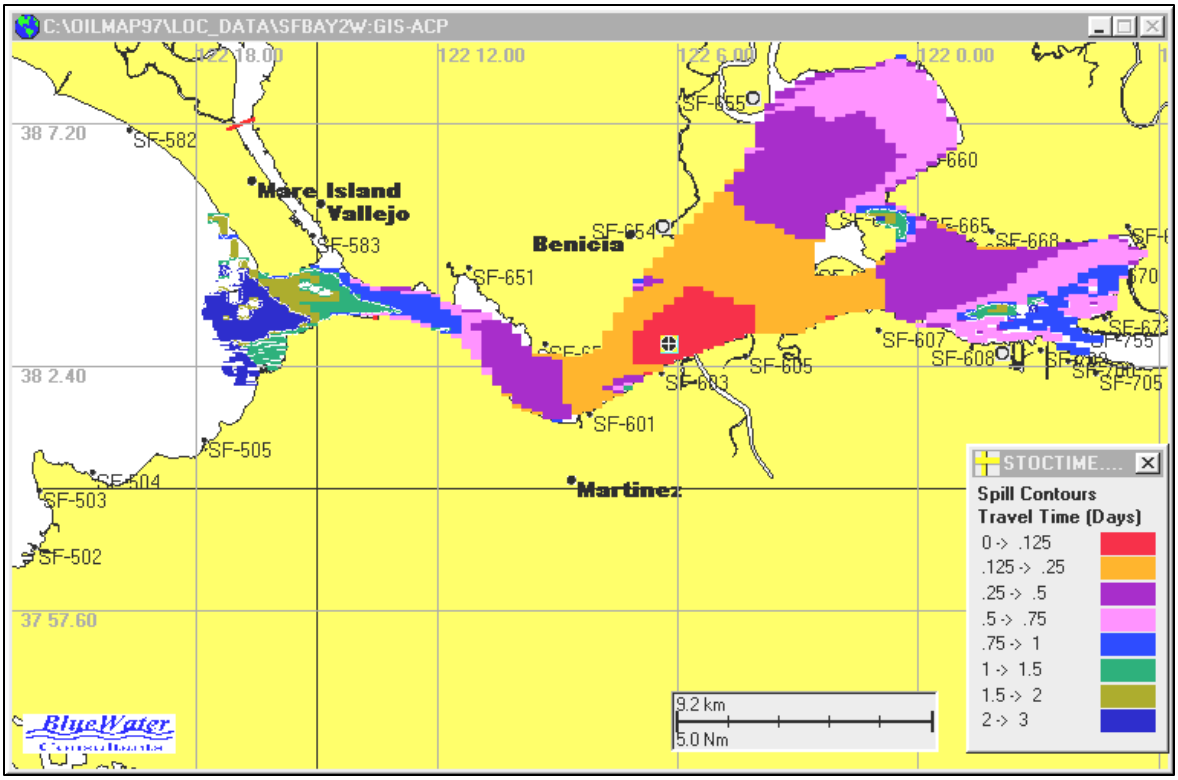
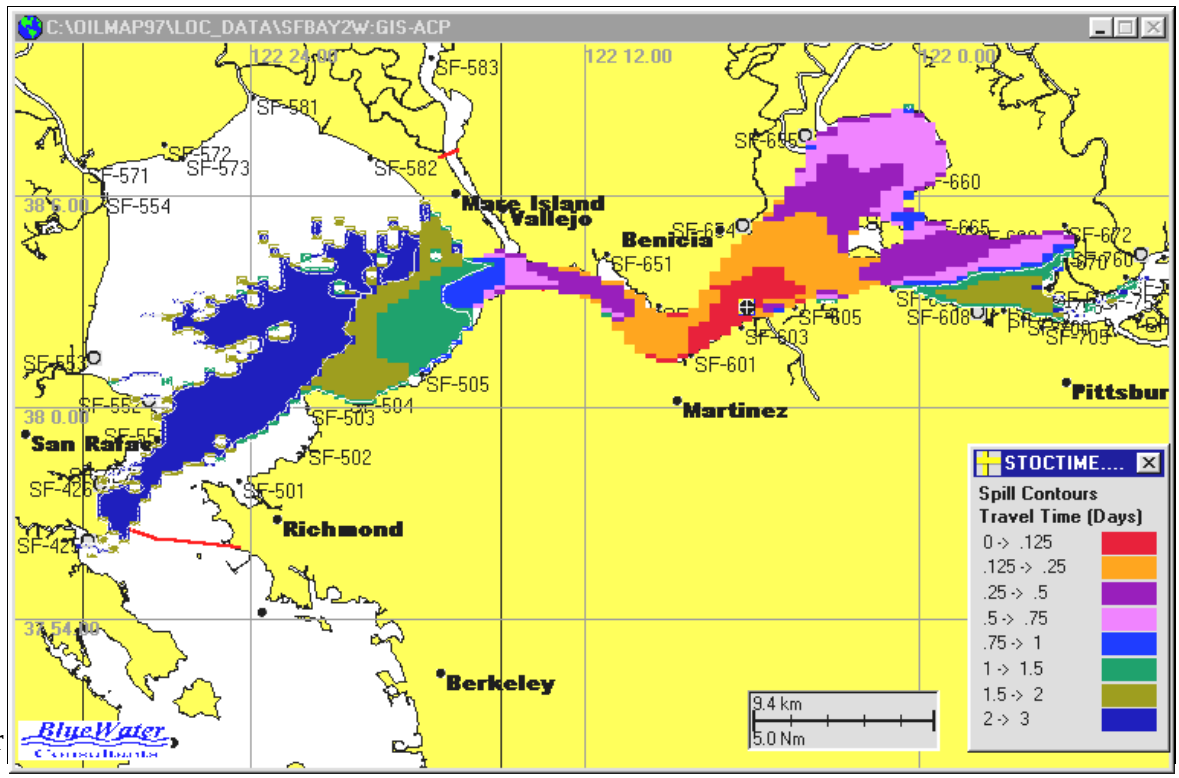


FIGURE 3-2 - SPILL TIME CONTOUR MAP - WINTER CONDITIONS

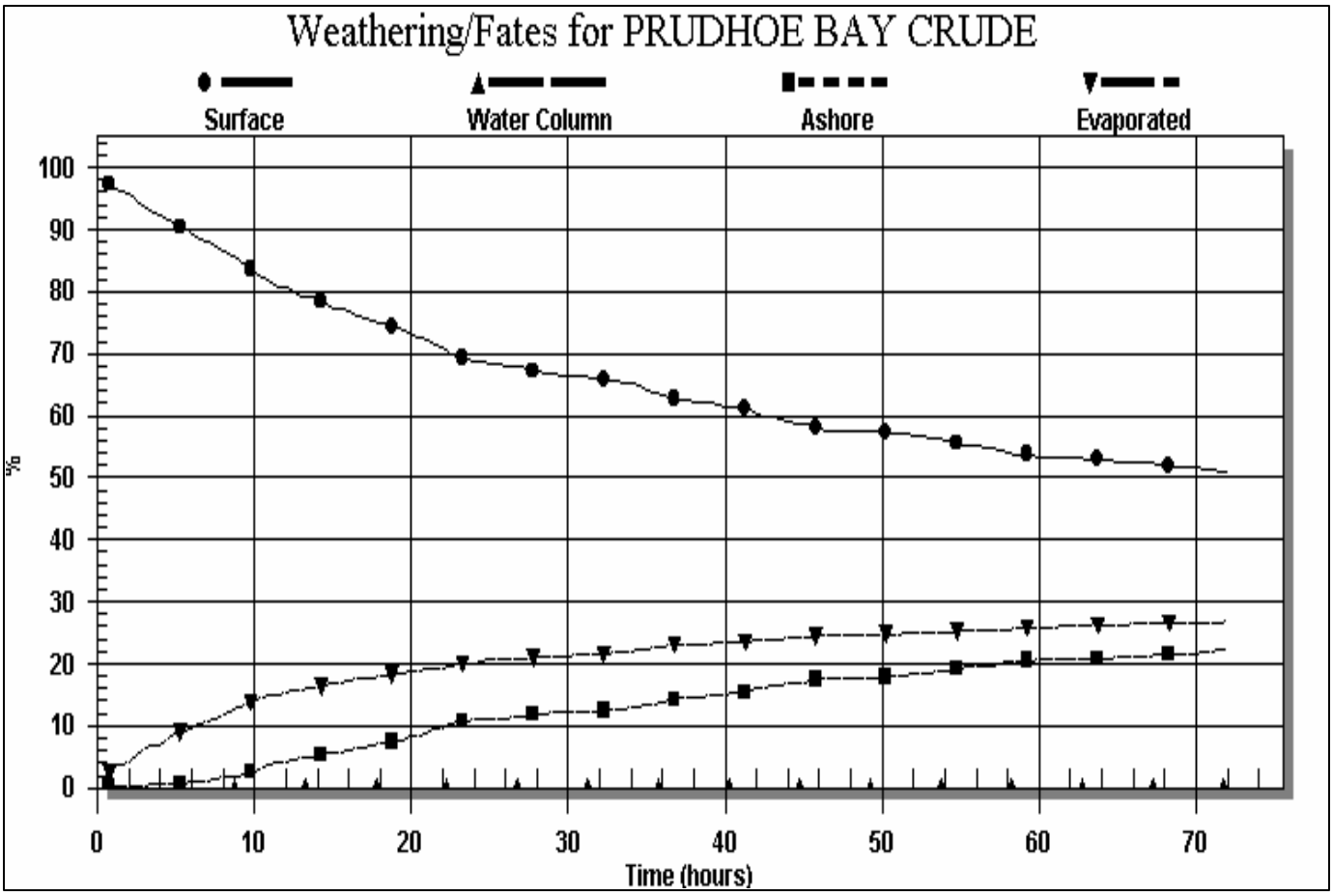


Mar

(b) (7)(F)

[redacted]

FIGURE 3-5 WEATHERING AND FATES GRAPH



Predicted oil mass balance for Prudhoe Bay Crude Oil (on the surface, in the water column, and evaporated versus time assuming a constant 10-knot wind

(b) (7)(F)

[redacted]

PLAINS MARKETING, L.P.

Contract No. 026450-04868-PMLP.2.17

MAJOR SERVICE CONTRACT

PLAINS MARKETING, L. P.
333 Clay, Suite 1600
Houston, Texas 77002

THIS CONTRACT (hereinafter "Contract") is entered into as of the **20TH** day of **October**, **2011** by and between **Plains Marketing, L.P.,** a Texas limited partnership, **and Its Affiliates**, with a physical street address of 333 Clay, Suite 1600, Houston, Texas 77002 and a mailing address of P. O. Box 4648, Houston, Texas 77210-4648 (hereinafter "COMPANY") and **Worley Catastrophe Response** with a mailing address of **P.O. Box 249, Hammond, Louisiana 70404** (hereinafter "CONTRACTOR"). For purposes of this Contract, the term "COMPANY" includes Plains All American Pipeline, L.P., and Its Affiliates, including but not limited to Plains Marketing, L.P., Plains Pipeline, L.P., Plains Midstream Canada ULC , Plains LPG Services, L.P., Pacific Pipeline System LLC, Rocky Mountain Pipeline System LLC, Plains Products Terminals LLC, CDM Max, LLC, and Plains Pipeline – North Dakota LLC as well as any other limited liability company or limited partnership in which Plains All American Pipeline, L.P. owns or controls fifty percent or more of the equity.

WITNESSETH:

THAT for and in consideration of the covenants, contract, terms, provisions and conditions hereinafter set forth, the parties do hereby mutually agree, each with the other, as follows:

ARTICLE 1 – SCOPE OF WORK

1.1 This Contract does not obligate COMPANY to order services from CONTRACTOR nor does it obligate CONTRACTOR to provide services to COMPANY, but shall control and govern all services ordered by COMPANY and accepted by CONTRACTOR hereunder, and shall define the rights and obligations of COMPANY and CONTRACTOR with regard to the matters covered hereby.

1.2 COMPANY may, from time-to-time, request CONTRACTOR to perform services (including any supervision, labor, equipment, materials and any other items necessary to perform the work requested; hereinafter referred to as "Work") hereunder by issuing a Work Order to CONTRACTOR (the "Work Order").
The Work shall not commence prior to execution of the Work Order by both COMPANY and CONTRACTOR; however, this Contract shall apply to any Work performed by CONTRACTOR on behalf of COMPANY regardless of whether or not a Work Order is issued unless otherwise agreed by the parties in writing.

1.3 CONTRACTOR shall carry out the Work under this Contract and shall furnish experienced personnel, supervision, small tools, transportation, licenses, insurance, permits, services and all other things necessary or required in and for the proper and timely performance of the Work. Further, CONTRACTOR shall furnish all materials and equipment as specified in the Work Order. CONTRACTOR's equipment, including, but not limited to, small tools and consumables, is the sole responsibility of the CONTRACTOR. COMPANY is not responsible for their cost, maintenance, wear, tear, or destruction.

1.4 Regarding CONTRACTOR's performance of the Work, time is of the essence. CONTRACTOR shall complete the Work in accordance with the Contract within the time limit(s) detailed in the Work Order and shall promptly notify COMPANY upon completion of each major item or portion of the Work.

1.5 Upon request by COMPANY, CONTRACTOR shall furnish a project schedule prior to commencement of the Work.

ARTICLE 2 -TERM

2.1 This Contract shall have a Primary Term effective **October 20, 2011** to **October 19, 2014** and shall continue into its Secondary Term from month-to-month thereafter until terminated by either party hereto upon not less than thirty (30) days' advance written notice to the other party. Work shall be started and shall be completed on the dates specified in the applicable Work Order. The term of this Contract shall be extended until completion of any outstanding Work Order.

ARTICLE 3 - INSPECTION AND APPROVAL

3.1 All fabricated material may be inspected (at COMPANY's discretion) at CONTRACTOR's facility before shipment. CONTRACTOR shall notify COMPANY's representative at least five (5) working days before the inspection is required.

3.2 All Work performed by CONTRACTOR hereunder shall be subject to inspection, testing and approval by COMPANY. COMPANY may, at its discretion, employ the services of specialist inspection and testing agencies for this purpose. Unless otherwise specified in the Work Order, all drawings will be approved by COMPANY, in writing, prior to commencement of any Work based on the drawings.

3.3 Any inspection or approval of the Work given under this Contract by COMPANY shall not relieve CONTRACTOR of its responsibility for compliance with this Contract, nor from its responsibility for the quality of the Work, nor from any warranty, guarantee or liability under law, either expressed or implied, in this Contract.

3.4 When the Work has been completed in accordance with this Contract, CONTRACTOR shall so notify COMPANY in writing. COMPANY shall then inspect the Work and if it is found not to be in compliance with this Contract, COMPANY shall so notify CONTRACTOR in writing specifying the details of such non-compliance. At CONTRACTOR's expense, CONTRACTOR shall promptly correct all Work noted to be in noncompliance and notify COMPANY once corrections have been made. COMPANY shall then reinspect the Work to determine Contract compliance. If COMPANY rejects the Work or any part thereof which is reinspected, then the procedure set forth above shall be repeated until Work not in compliance is corrected and the Work is accepted by COMPANY.

ARTICLE 4 - COMPENSATION

4.1 Work to be furnished during the term of this Contract shall be furnished at the rates agreed to in writing by the parties (the "Rate Sheet") unless otherwise provided in the applicable Work Order.

4.2 No overtime Work or premium rates will be paid or authorized by CONTRACTOR unless COMPANY has expressly approved such payment in writing.

4.3 CONTRACTOR must give thirty (30) days advance written notice of proposed rate changes to the Rate Sheet. No rate change or cost change will be effective until accepted by COMPANY in writing. Such change will not apply to any Work in progress at time of notice without COMPANY's written consent.

ARTICLE 5 - PAYMENT

5.1 For lump sum Work, CONTRACTOR shall have the right to request that COMPANY make partial payments; provided, however, that COMPANY shall have the right to withhold up to and including fifteen percent (15%) of the amount of any invoice submitted to COMPANY by CONTRACTOR for labor, supervision and materials furnished by CONTRACTOR up to the time of completion and acceptance of the Work by COMPANY. Payment of said retainage shall be due upon COMPANY's acceptance of all Work. For retainage, if any, CONTRACTOR shall invoice COMPANY for the same following COMPANY's acceptance of the Work and COMPANY shall pay the same within thirty (30) days from receipt of said invoice.

5.2 Unless specifically waived in writing by COMPANY, each invoice must, in addition to total charges, show separately on its face the labor costs or equipment costs, as applicable, material

costs, and any applicable freight charges and sales and use taxes. For reimbursable Work, COMPANY's representative must sign time sheets, equipment logs, material tickets, or similar supporting documentation. This substantiation or any other evidence COMPANY may require shall be attached to the invoice. In addition, any applicable markups such as fringe benefits, unemployment taxes, workers' compensation insurance, payroll taxes, overhead and profit, etc. must be itemized. Equipment rental must be invoiced separately, on a monthly basis. The invoice must list each piece of equipment separately, with the description taken verbatim from the Rate Sheet submitted with the Contract. A Monthly Equipment Time Log, signed by COMPANY's representative, must be attached to the invoice. Material and/or Third Party Equipment Rentals shall include third party invoices as support.

5.3 Subject to paragraph 5.2 above, COMPANY shall pay CONTRACTOR's invoice within thirty (30) days of receipt of such invoice by COMPANY's Accounts Payable Department. For purposes of determining the date of receipt of an invoice by COMPANY, or receipt of a payment by CONTRACTOR, delivery is effective upon receipt by the party to whom the invoice or payment is sent by a system that the COMPANY or CONTRACTOR has designated for the purpose of receiving invoices or payments; provided that, an invoice or payment is deemed to have been received by the intended recipient at the address set forth above using personal delivery, expedited courier, messenger service, telecopy, ordinary mail, and electronic mail, but if received after the recipient's normal business hours shall be deemed to have been received on the next business day.

5.4 COMPANY may withhold payment for a disputed invoice or part thereof, without interest, until such dispute is resolved.

5.5 Sums due CONTRACTOR shall be adjusted by deducting any amounts paid by COMPANY to prevent or remove liens, claims, debts and encumbrances which are the responsibility of CONTRACTOR, or its subcontractors, or to satisfy other obligations of CONTRACTOR or its subcontractors hereunder.

5.6 No payment made under this Contract shall constitute a waiver by COMPANY of the performance by CONTRACTOR of any of CONTRACTOR's obligations hereunder and any payment withheld shall be without prejudice to any other rights and remedies available to COMPANY.

ARTICLE 6 - CHANGES IN THE WORK

6.1 All changes in the Work shall be approved by means of a written Change Order to the Work Order.

6.2 COMPANY shall have authority to make minor changes in the Work not involving extra cost. No extra Work or claim for additional compensation or time to complete the Work shall be made without a written Change Order, signed on behalf of COMPANY and delivered to CONTRACTOR. Where CONTRACTOR considers that any change or variation in the Work would be beneficial, CONTRACTOR shall advise COMPANY of its proposal, and COMPANY shall decide whether to proceed with such change or variation.

6.3 Extra "Work" or claims invoiced as extra "Work" or extra claims, which have not been issued as a written Change Order to the Work Order will not be authorized for payment. CONTRACTOR shall not perform any extra Work without a properly executed Change Order signed by the COMPANY'S authorized representative.

ARTICLE 7 - WARRANTY

7.1 CONTRACTOR warrants that it is experienced in the Work to be undertaken on behalf of COMPANY, possesses the skills and resources to complete the Work and has the authority to fulfill its obligations under this Contract. The Work shall be performed in a good and workmanlike manner by qualified, careful and efficient workers in accordance with the Contract, in strict conformity with the best standard practices and in a manner protective of its employees, the public and the environment.

7.2 CONTRACTOR will warrant the foregoing warranties in paragraph 7.1 above for a period of one (1) year from the date the Work is completed and accepted by COMPANY, however, for any latent defects discovered in the Work, the foregoing warranties of paragraph 7.1 above shall

continue for a period of three (3) years from the date the Work is completed and accepted by COMPANY. For purposes herein, latent defects shall be defects that could not have been discovered by a reasonably thorough inspection. In the event any Work fails to meet any of the foregoing warranties within the period specified above, without waiving any other rights or remedies COMPANY may have at law, CONTRACTOR agrees forthwith to correct, repair or replace the Work and any damage to other work or material at CONTRACTOR's expense without cost to COMPANY.

7.3 Labor, equipment and materials furnished by CONTRACTOR pursuant to paragraph 7.2 to correct defects shall be warranted by CONTRACTOR in accordance with the warranties set forth in paragraphs 7.1 and 7.2 for a period of twelve (12) months from the date of completion of the correction.

7.4 In the event CONTRACTOR was notified of any failure of CONTRACTOR's foregoing warranties and failed to correct promptly and adequately such Work, COMPANY shall have the right to correct or to have such Work corrected and COMPANY shall be entitled to deduct the cost of such corrective Work from any monies due or becoming due to CONTRACTOR under this Contract or otherwise. In the event that no monies are due or shall become due to CONTRACTOR under this Contract then CONTRACTOR shall promptly pay COMPANY the costs incurred in correcting such Work.

7.5 COMPANY may be contracting for this Work and the benefits derived therefrom as agent for its affiliate. All of CONTRACTOR's warranties or guarantees under this Contract, and any warranties or guarantees made or given by manufacturers, suppliers, subcontractors or others acting in the interest of the parties to this Contract, shall inure to the benefit of affiliate, as well as to COMPANY. Manufacturer's or distributor's warranties or guarantees for goods or equipment should be issued directly to COMPANY as purchaser. If not issued to COMPANY, then CONTRACTOR hereby assigns to COMPANY (if assignable), or shall enforce for the benefit of the COMPANY (if not assignable) any warranty or guarantee provided by manufacturers or sellers of goods or equipment which are sold to, or installed by CONTRACTOR in the Work or incorporated into, the Work. Such assignment shall not release or novate the manufacturer's or distributor's warranty obligations to CONTRACTOR nor shall COMPANY be entitled to a double recovery.

7.6 If there is a defect in, or failure of, the goods or equipment furnished or installed in connection with the Work, Contractor's warranty hereunder is hereby supplemented with the applicable manufacturer's or distributor's warranty.

ARTICLE 8 - INDEMNITY

8.1 CONTRACTOR AGREES, TO THE EXTENT OF ITS NEGLIGENT ACTS OR OMISSIONS OR DISREGARD FOR ITS DUTIES UNDER THIS CONTRACT OR LAW, TO RELEASE, PROTECT, INDEMNIFY, HOLD HARMLESS, AND DEFEND COMPANY, ITS SUBSIDIARIES AND AFFILIATED COMPANIES, AND ITS AND THEIR RESPECTIVE AFFILIATES, OFFICERS, DIRECTORS, EMPLOYEES, AGENTS, SERVANTS, CONTRACTORS (EXCLUDING CONTRACTOR), SUBCONTRACTORS, AND INVITEES (COLLECTIVELY THE "COMPANY GROUP"), FROM AND AGAINST ANY AND ALL DEMANDS, CLAIMS, LOSSES, COSTS, SUITS, OR CAUSES OF ACTION (INCLUDING, BUT NOT LIMITED TO, ANY JUDGMENTS, LOSSES, LIABILITIES, FINES, EXPENSES, INTEREST, LEGAL FEES, COSTS OF SUIT, AND DAMAGES, WHETHER IN LAW OR EQUITY AND WHETHER IN CONTRACT TORT OR OTHERWISE) HEREINAFTER "CLAIMS" FOR OR RELATING TO:

(I) PERSONAL OR BODILY INJURY, INCLUDING DEATH AT ANY TIME RESULTING THEREFROM,

(II) PROPERTY LOSS OR DAMAGE TO ANY PROPERTY INCLUDING LOSS OF USE THEREOF AND DOWNTIME,

(III) TO THE EXTENT SUCH INJURY, DEATH OR PROPERTY LOSS OR DAMAGE ARISES OUT OF, RESULTS FROM, OR RELATES TO, EITHER

DIRECTLY OR INDIRECTLY, THE WORK OR OTHER SERVICES PERFORMED OR PROVIDED BY CONTRACTOR PURSUANT TO THIS CONTRACT, THE UNSEAWORTHINESS OF ANY VESSEL, OR ANY OTHER THEORY OF LEGAL LIABILITY. IN THE EVENT CONTRACTOR FAILS TO DEFEND AND PROTECT COMPANY GROUP PURSUANT TO THIS CONTRACT, THEN COMPANY GROUP SHALL BE ENTITLED TO DEFEND AND PROTECT ITS INTERESTS AND CONTRACTOR SHALL BE LIABLE FOR ALL REASONABLE ATTORNEY'S FEES, COSTS, JUDGMENTS AND SETTLEMENTS, INCLUDING REASONABLE ATTORNEY'S FEES INCURRED IN ENFORCING THIS CONTRACT,

(IV) VIOLATION OF OR FAILURE TO COMPLY WITH ANY APPLICABLE LAW, ORDINANCE, REGULATION, RULE OR ORDER,

(V) A BREACH BY CONTRACTOR, ITS EMPLOYEES, AGENTS, SERVANTS, SUBCONTRACTORS, OR VENDORS, OF ANY TERM, PROVISION OR WARRANTY CONTAINED HEREIN, WHICH OCCUR, EITHER DIRECTLY OR INDIRECTLY, IN CONNECTION WITH PERFORMANCE OF THE WORK CONTEMPLATED HEREUNDER OR BY REASON OF CONTRACTOR AND ITS EMPLOYEES, WORKMEN, AGENTS, SERVANTS, SUBCONTRACTORS AND VENDORS BEING PRESENT ON COMPANY'S PREMISES, AND

(VI) INFRINGEMENT OF PATENT OR MISAPPROPRIATION OF TRADE SECRET OR PROPRIETARY RIGHTS OF ANY THIRD PARTY BY ANY DEVICE, PROCESS OR MATERIAL NOT SPECIFIED BY COMPANY.

8.2 CONTRACTOR'S AGREEMENT TO PROTECT, INDEMNIFY, HOLD HARMLESS AND DEFEND AS SET FORTH IN PARAGRAPH 8.1 ABOVE SHALL NOT BE NEGATED OR REDUCED BY VIRTUE OF CONTRACTOR'S INSURANCE CARRIER'S DENIAL OF INSURANCE COVERAGE OF THE OCCURRENCE OR EVENT WHICH IS THE SUBJECT MATTER OF THE CLAIMS AND/OR REFUSAL TO DEFEND CONTRACTOR OR COMPANY. IN ADDITION, CONTRACTOR WILL PAY ALL COSTS AND EXPENSES, INCLUDING ATTORNEY FEES AND ALL OTHER EXPENSES OF LITIGATION INCURRED BY COMPANY TO ENFORCE THE FOREGOING AGREEMENT TO PROTECT, INDEMNIFY, HOLD HARMLESS AND DEFEND COMPANY.

8.3 CONTRACTOR SHALL, TO THE EXTENT OF ITS NEGLIGENT ACTS OR OMISSIONS OR DISREGARD FOR ITS DUTIES UNDER THIS CONTRACT OR LAW, ASSUME RESPONSIBILITY FOR THE CONTROL AND REMOVAL OF, AND SHALL RELEASE, PROTECT, DEFEND, INDEMNIFY, AND HOLD COMPANY GROUP HARMLESS FROM AND AGAINST ANY AND ALL LOSS OR DAMAGE OR CLAIMS ARISING FROM POLLUTION, THREAT OF POLLUTION, OR CONTAMINATION: (I) WHICH ORIGINATES OR EMANATES FROM SPILLS OF FUELS, LUBRICANTS, MOTOR OILS, PIPE DOPE, PAINT, SOLVENTS, BALLAST, BILGE AND GARBAGE, DEBRIS OR ANY OTHER SUBSTANCES, WHOLLY IN ITS POSSESSION AND CONTROL OR ORIGINATING FROM CONTRACTOR GROUP'S VESSEL, EQUIPMENT, MATERIALS OR TRANSPORT, THE UNSEAWORTHINESS OF ANY VESSEL, OR ANY OTHER THEORY OF LEGAL LIABILITY; OR (II) WHICH OTHERWISE RESULTS FROM PERFORMANCE OF THE WORK HEREUNDER BY CONTRACTOR. NOTWITHSTANDING THE FOREGOING, THE ASSUMPTIONS OF LIABILITY BY CONTRACTOR UNDER THIS PARAGRAPH 8.3 APPLY ONLY TO THE COST OF, AND LIABILITY FOR, CONTROL AND REMOVAL OF SUCH POLLUTION AND CONTAMINATION AND SHALL, IN NO EVENT, ALTER, LESSEN OR AFFECT THE LIABILITIES OR RESPONSIBILITIES OF CONTRACTOR SPECIFIED ELSEWHERE IN THIS CONTRACT. CONTRACTOR AGREES TO ASSUME RESPONSIBILITY FOR AND TO INDEMNIFY AND HOLD COMPANY GROUP HARMLESS FROM AND AGAINST ANY FINES, PENALTIES, COSTS OR EXPENSES RESULTING FROM POLLUTION OR CONTAMINATION CAUSED BY THE NEGLIGENCE OR OTHER FAULT OF CONTRACTOR.

8.4 IN ADDITION TO THE FOREGOING, CONTRACTOR SHALL INDEMNIFY, HOLD HARMLESS, AND DEFEND COMPANY GROUP AGAINST A CLAIM FOR BODILY INJURY OR DEATH OF AN EMPLOYEE OF THE CONTRACTOR, ITS AGENT OR ITS SUBCONTRACTOR OF ANY TIER REGARDLESS OF WHETHER DUE OR ALLEGEDLY DUE TO THE NEGLIGENCE (WHETHER JOINT OR CONCURRENT), FAULT, BREACH OF DUTY, OR STRICT LIABILITY OF COMPANY GROUP.

8.5 THE INDEMNITY OBLIGATIONS IN THIS CONTRACT SHALL SURVIVE TERMINATION OF THIS CONTRACT.

ARTICLE 9 - INSURANCE

9.1 Without limiting in any way the scope of any obligations or liabilities assumed hereunder by CONTRACTOR, CONTRACTOR shall procure or cause to be procured and maintained at its expense, for the duration of this Contract, and with insurance companies acceptable to COMPANY, the insurance policies described below. CONTRACTOR acknowledges that the endorsements and the type of Insurance coverage and the limits thereof, are minimum limits which shall not be reduced without the prior written consent of COMPANY, which consent is solely in the discretion of the COMPANY:

9.1.1 Workers' Compensation and Employer's Liability Insurance, covering the employees of CONTRACTOR for all compensation and other benefits required of CONTRACTOR by the Worker's Compensation or other statutory insurance laws and requirements in the state having jurisdiction over such employees, and over the location where the Work is being performed, including Alternate Employer. Employer's Liability Insurance with limits of not less than One Million Dollars ($1,000,000) per accident or occurrence.

9.1.2 Commercial General Liability Insurance, to cover liability for bodily injury and property damage with a combined single limit of not less than One Million Dollars ($1,000,000) per occurrence, including:

A. Contractual Liability to cover liability assumed under this Contract;
B. Products Hazard Coverage for any and all products provided or furnished by or on behalf of CONTRACTOR during the course of service rendered by CONTRACTOR hereunder;
C. Completed Operations Hazard Coverage for any claim relating to defects or deficiencies in goods, products, and materials or services used or rendered by CONTRACTOR in connection with its operations;
D. Broad Form Property Damage Liability insurance;
E. Coverage for explosion, collapse, and underground hazards for work performed by CONTRACTOR involving equipment or materials of a volatile, incendiary or explosive nature or involving excavation, drilling or subsurface activity;
F. Independent Contractor's Contingent coverage;
G. Personal Injury Liability;
H. Premises Liability;
I. In Rem Endorsement;
J. Territorial extension to cover all work areas;
K. Watercraft exclusion deleted in both Contractual Liability Insurance and Contractual Liability Endorsement; and
L. Seepage and Pollution Liability, including, without limitation, cleanup on a sudden and accidental basis.

9.1.3 Business Automobile Liability Insurance, if owned, hired or non-owned automotive equipment is used in the performance of this Contract, to cover liability for bodily injury and property damage with a combined single limit of not less than One Million Dollars ($1,000,000) per occurrence.

9.1.4 Aircraft Liability, if applicable, to cover bodily injury and property damage liability with a combined single limit of not less than Five Million Dollars ($5,000,000) per occurrence.

9.1.5 Marine Liability, if applicable, involving Work to be performed on or over water including docks, wharves, etc., Worker's Compensation and Employer's Liability coverage shall also include Maritime Employer's Liability including Transportation, Wages, Maintenance and Cure, Merchant Marine Act of 1920 (the "Jones Act"), U. S. Longshore and Harbor Workers' Act, and Outer Continental Shelf Land Act with limits of not less than One Million Dollars ($1,000,000) per occurrence.

For Work involving vessels and other watercraft, Worker's Compensation and Employer's Liability coverage shall also include Maritime Employer's Liability including Transportation, Wages, Maintenance and Cure, Merchant Marine Act of 1920 (the "Jones Act"), U. S. Longshore and Harbor Workers' Act, and Outer Continental Shelf Land Act with limits of not less than One Million Dollars ($1,000,000) per occurrence. Marine liability insurance for owned or chartered watercraft shall include liability for bodily injury and property damage with a combined single limit of not less than Ten Million Dollars ($10,000,000) per occurrence. Insurance shall be endorsed to specifically include full crew coverage (unless provided under Worker's Compensation); coverage for diving operations, if applicable; liability for seepage, pollution, containment and cleanup; collision liability; and, contractual liability.

9.1.6 Professional Liability Insurance, if applicable, CONTRACTOR agrees to and shall maintain in full force and effect, at all times a policy or policies of insurance containing a minimum Five Million Dollars ($5,000,000) coverage per occurrence for errors and omissions for professional liability.

9.1.7 Excess Liability Insurance, this policy shall be written on a "following form" basis and shall provide coverage in excess of the coverage required to be provided by CONTRACTOR for employer's liability, commercial general liability insurance, business automobile liability insurance, maritime employer's liability insurance and aircraft liability insurance. The aggregate limit shall apply separately to each annual policy period, except for the products and completed operations coverage, which shall be a project aggregate.

Minimum limits:

Five Million Dollars ($5,000,000) combined single limit each occurrence;
Five Million Dollars ($5,000,000) aggregate limit, with such limits dedicated to the project.

Minimum limits for Work involving: construction or repair of a tank(s) or vessels or pipelines; an open trench six feet deep or deeper; drilling or boring; hot work; tank or vessel cleaning; confined space entry:

Ten Million Dollars ($10,000,000) combined single limit each occurrence;
Ten Million Dollars ($10,000,000) aggregate limit, with such limits dedicated to the project.

9.1.8 Special Provisions Concerning Policies Placed by CONTRACTOR, all policies (except Worker's Compensation and Employer's Liability) shall include COMPANY GROUP as additional insureds to the extent of CONTRACTOR's negligent acts or omissions or disregard for its duties under this Contract or law, including paragraph 8.4. Such insurance coverages shall specifically provide that they apply separately to each insured against which claim is made or suit is brought, except with respect to the limits of the insurer's liability. CONTRACTOR hereby waives, and shall cause its insurers to waive, all rights of subrogation against COMPANY GROUP when permitted by law. The insurance coverages required by CONTRACTOR hereunder shall be primary over any coverages maintained by COMPANY GROUP. All of CONTRACTOR's policies must include thirty (30) days written notice of cancellation to COMPANY GROUP.

The policy limits specified above are minimum requirements and not limits of liability and shall not be construed in any way as COMPANY's acceptance of responsibility for financial liabilities in excess of such limits. CONTRACTOR shall pay all deductibles and self-insured retentions, including defense costs, applicable to the insurance.

Prior to commencement of any Work, CONTRACTOR shall furnish COMPANY with Certificates of Insurance, which document that all coverages and endorsements required by this Contract have been obtained. CONTRACTOR shall obtain renewal certificates as and when necessary and copies thereof shall be forwarded to COMPANY as soon as same are available and in any event prior to the expiration of the policy so renewed. These certificates shall provide that the insurer shall give thirty (30) days written notice to COMPANY prior to change or cancellation of any policy. In no event shall COMPANY's acceptance of an insurance certificate that does not comply with this paragraph constitute a waiver of any requirement of this Article.

9.1.9 Subcontractors. CONTRACTOR shall require all its subcontractors to provide statutory Workers' Compensation insurance coverage. To the extent not provided for by the subcontractors and not covered by CONTRACTOR's insurance, deficiencies shall be the sole responsibility of CONTRACTOR.

9.1.10 THIS PARAGRAPH 9.1.10 APPLIES ONLY TO WORK PERFORMED IN THE STATE OF LOUISIANA. FOR PURPOSES OF THE LOUISIANA WORKER'S COMPENSATION LAW, La. R.S. 23:1021 *et seq.*, COMPANY AND CONTRACTOR AGREE THAT THE WORK PERFORMED BY CONTRACTOR AND ITS EMPLOYEES PURSUANT TO THIS CONTRACT ARE AN INTEGRAL PART OF AND ARE ESSENTIAL TO THE ABILITY OF COMPANY TO GENERATE COMPANY'S GOODS, PRODUCTS AND SERVICES, AND THAT CONTRACTOR'S WORK AND SERVICES SHALL BE CONSIDERED PART OF COMPANY'S TRADE, BUSINESS, AND OCCUPATION, FOR PURPOSES OF La. R.S. 23:1061(A)(1). FURTHERMORE, COMPANY AND CONTRACTOR AGREE THAT COMPANY IS THE PRINCIPAL OR STATUTORY EMPLOYER OF CONTRACTOR'S EMPLOYEES FOR PURPOSES OF La. R.S. 23:1061(A) ONLY. IRRESPECTIVE OF COMPANY'S STATUS EITHER AS THE STATUTORY EMPLOYER OR AS THE SPECIAL EMPLOYER (AS DEFINED IN La. R.S. 23:1031(C)) OF CONTRACTOR'S EMPLOYEES, AND REGARDLESS OF ANY OTHER RELATIONSHIP OR ALLEGED RELATIONSHIP BETWEEN COMPANY AND CONTRACTOR'S EMPLOYEES, CONTRACTOR SHALL BE AND REMAIN AT ALL TIMES PRIMARILY RESPONSIBLE FOR THE PAYMENT OF LOUISIANA WORKER'S COMPENSATION BENEFITS TO ITS EMPLOYEES, AND NEITHER CONTRACTOR NOR ITS UNDERWRITERS SHALL BE ENTITLED TO SEEK CONTRIBUTION FOR ANY SUCH PAYMENTS FROM COMPANY.

ARTICLE 10 – SAFETY

10.1 CONTRACTOR shall perform all Work in such manner as to cause a minimum of interference with COMPANY's operations and shall conduct its work in accordance with the then currently acceptable industry safety standards to maintain adequate protection of persons and property during CONTRACTOR's performance hereunder. CONTRACTOR will perform its duties in a safe manner and will have in effect and will enforce a set of safety and loss prevention standards which comply with all laws, and CONTRACTOR MINIMUM SAFETY REQUIREMENTS, as may be amended or modified from time-to-time, attached hereto as Exhibit C and incorporated herein. Prior to commencement of each Work, CONTRACTOR shall inspect the premises and facilities on which said work is to be performed in order to be apprised of any and all apparent risk incident thereto. Upon completion of the work, CONTRACTOR shall leave the premises clean and free of all waste materials and rubbish. CONTRACTOR agrees to limit smoking and the use of heat and/or fire implements, including welding and torch cutting tools, to such locations and occasions as are specifically authorized in writing by COMPANY.

10.2 COMPANY is a subscriber to ISNetworld. ISNetworld is responsible for monitoring contract compliance including health and safety information and current insurance certificates. CONTRACTOR shall be a subscriber to ISNetworld. If CONTRACTOR is not currently a subscriber to ISNetworld, CONTRACTOR shall become a member by contacting ISNetworld at 3001 Knox Street, Suite 200, Dallas, Texas 75205 (phone No. 214-303-4900 Web site www.isnetworld.com). CONTRACTOR subscription fees to ISNetworld are CONTRACTORS responsibility.

ARTICLE 11 – CONTROLLED SUBSTANCE ABUSE POLICY

11.1 The COMPANY maintains a drug and alcohol free workplace. CONTRACTOR acknowledges that it has been advised and agrees to advise all its employees, subcontractors, agents and business invitees of any subcontractor, agent, or business invitee, of the following safety regulations or policies concerning controlled substances (alcohol, misuse of prescription drugs and illegal drugs):

(a) It is the policy of COMPANY that the use, possession, sale, transfer, purchase, or the presence in one's system of a controlled substance on COMPANY property is prohibited;

(b) CONTRACTOR is to have in place a drug and alcohol free workplace policy;

(c) Entry onto COMPANY property constitutes consent to an inspection of the person (including, but not limited to, the taking of a urine sample) and personal effects, as well as any vehicle(s) when entering or leaving COMPANY property, and;

(d) Any person who is found in violation of the policy or who refuses to permit an inspection may be removed and barred from COMPANY's property, at the sole discretion of COMPANY.

ARTICLE 12 – ACCIDENT REPORTS

12.1 All accidents must be reported. In the event an accident involving the property, equipment, or personnel of CONTRACTOR, COMPANY, or any third party occurs on COMPANY's property, or which arises out of, results from or is in any way connected with CONTRACTOR's work or presence upon COMPANY's property or other activities pursuant to this Contract, CONTRACTOR shall immediately report such accident to COMPANY's designated representative set forth in Article 27 hereof. In addition, a written report of such accident must be prepared by CONTRACTOR and delivered to COMPANY's representative within 24 hours after CONTRACTOR becomes aware of each such accident. This report should contain factual information only and should not contain opinion, speculation, or supposition as to fault, liability, or prevention. CONTRACTOR shall also provide COMPANY with a copy of each and every report of each such accident, including statements or other investigative material or documents which CONTRACTOR completes, or is required to submit, or does submit, to any entity other than COMPANY, including without limitation, any governmental agency or body, CONTRACTOR's insurers, or others.

ARTICLE 13 - LIENS

13.1 Where required by COMPANY, progress payments and the final payment shall be substantiated by notarized lien affidavits and lien waivers evidencing that all suppliers, subcontractors and laborers have been paid in full for Work performed and materials furnished, up to and including the date(s) of such affidavits. COMPANY shall not be obligated to make any payment for Work performed until requested affidavits and lien waivers are received.

13.2 CONTRACTOR shall keep the Work free and clear of all liens. CONTRACTOR shall promptly and satisfactorily settle all claims, including lien claims of its subcontractors, for labor performed and supplies or materials furnished in connection with such Work. In the event CONTRACTOR fails or refuses to promptly and satisfactorily settle all such claims, COMPANY shall, after so notifying CONTRACTOR in writing, have the right to settle such claims on behalf of and for the account of CONTRACTOR, and deduct the amount from the contract price. Alternatively, COMPANY shall have the right to hold all sums due or to become due CONTRACTOR, without interest, until satisfactory evidence is furnished to it that all such claims and liens have been settled and released.

ARTICLE 14 - TERMINATION

14.1 COMPANY shall have the right to terminate this Contract or the Work in whole or in part, without cause, at any time by notice in writing to CONTRACTOR. Upon receipt of any such notice, CONTRACTOR shall cease all Work as provided in said notice and this Contract or the Work shall terminate effective as of the date such notice is received by CONTRACTOR. COMPANY shall assume all obligations and shall be entitled to all privileges of CONTRACTOR in connection with any Work Order(s) issued prior to the termination of this Contract, including any contract, which CONTRACTOR has entered into for the supply of services, equipment, or materials. In the event COMPANY terminates this Contract during CONTRACTOR's performance of Work under a Work Order, the total settlement price through the date of cancellation shall be valued at rates and prices consistent with the amounts applicable to the Work or, if on a cost reimbursable basis, consistent with the time and material rates under this Contract. In no event shall CONTRACTOR be entitled to anticipated profits or any damages because of such termination. CONTRACTOR will not be permitted to terminate this Contract while any Work under outstanding Work Order(s) is not complete.

14.2 In the event of a breach or default by either party to this Contract, both parties may assert any setoffs, claims, counterclaims, and credits that it is entitled to under law or in equity regardless of which party failed to perform first, breached first, or defaulted first. This clause does not relieve a defaulting party or breaching party from its obligation to perform. All rights and remedies afforded by law or in equity with respect to material breaches or defaults are expressly reserved by each party notwithstanding this provision.

ARTICLE 15 - SUSPENSION

15.1 COMPANY shall have the right to suspend all or any part of the Work at any time and for any reason not defined in Article 23 as "force majeure" by giving written notice of suspension to CONTRACTOR. Upon receipt of such notice, CONTRACTOR shall immediately take such measures as are, in the opinion of COMPANY's Representative, necessary or appropriate in order to effect such suspension and to safeguard and store the Work or part thereof during the period of suspension. In the event of suspension, COMPANY shall pay CONTRACTOR all reasonable and verifiable additional costs incurred in effecting suspension and in safeguarding and storing the Work or part thereof.

15.2 Upon termination of any such suspension, CONTRACTOR agrees to re-commence the Work under the terms and conditions of the Contract.

ARTICLE 16 - AUDIT RIGHTS AND CONTRACTOR ACCOUNTING PRINCIPLES

16.1 CONTRACTOR agrees to retain all records and accounts related to charges or CONTRACTOR invoices for a period of at least three (3) years from the completion date of any Work performed pursuant to this Contract. For purposes herein, "records and accounts" shall include books, documents, accounting procedures and practices, in the form of computer data, or in any other form.

16.2 CONTRACTOR shall permit COMPANY access to, either in the field or at the home office, for review and audit, at all reasonable times, all records and accounts relating to costs and expenses invoiced to COMPANY under this Contract, including, but not limited to, DOT and OSHA records and reports, supporting documentation, and all reimbursable costs and expenses for the Work.

16.3 CONTRACTOR shall respond in writing to COMPANY within thirty (30) days of submission by COMPANY of its audit findings. CONTRACTOR shall work diligently with COMPANY to resolve any differences with respect to the audit. Any adjustments or payments which must be made as a result of any such audit, inspection or examination of CONTRACTOR's invoices and/or records shall be made available within thirty (30) days of resolution of any adjustments to be made.

16.4 At its sole option, COMPANY may audit the CONTRACTOR'S records and accounts related to this Contract to verify and determine the propriety of charges. At the COMPANY'S option, the audit may be performed by the COMPANY'S internal auditors and/or independent auditors selected by the COMPANY.

16.5 CONTRACTOR shall provide COMPANY access to records and accounts within thirty business (30) days after receipt of written request by COMPANY. CONTRACTOR shall comply with any requests resulting from an inspection, review, or audit by COMPANY in a reasonable and timely manner.

16.6 CONTRACTOR shall abide by and maintain accounting practices for all actual or prospective costs incurred in connection with the Work in a manner that complies with generally accepted accounting principles ("GAAP") as defined by the standards for accounting set forth by the American Institute of Certified Public Accountants ("AICPA"). These accounting practices shall include, but are not limited to methods of distinguishing direct costs from indirect costs and the basis used for allocating indirect costs. Upon request by COMPANY at any time, CONTRACTOR shall disclose in detail such accounting practices that CONTRACTOR contends comply with the requirement of this paragraph 16.6.

16.7 CONTRACTOR shall not submit any invoices or requests for payment or reimbursement to COMPANY that have not been recorded in the CONTRACTOR's records and accounts using accounting practices that comply with paragraph 16.6.

16.8 CONTRACTOR shall follow consistently and without variation the accounting practices described in paragraph 16.6 that are in place at the time of execution of this Contract. A change to such accounting practices may be proposed, however, by either COMPANY or CONTRACTOR. Any such proposed changes must be agreed to in writing and signed by both CONTRACTOR and COMPANY. After the terms and conditions under which the change is to be made have been agreed to, the change must be applied prospectively to this Contract.

ARTICLE 17 - COMPANY RIGHT TO WITHHOLD OR DENY PAYMENT TO CONTRACTOR

17.1 If at any time or times, upon audit or otherwise, COMPANY shall determine that any amount paid by COMPANY or invoiced to COMPANY pursuant to this Contract is not or did not constitute an allowable cost or charge under this Contract, COMPANY shall, at its sole discretion, elect one or more of the following options listed below:

(a) disallow the improper cost or charge and withhold or deny payment as more particularly described in paragraph 17.2;

(b) offset the amount of such overpayment against any future payments or retainage due CONTRACTOR hereunder; or

(c) submit to CONTRACTOR an invoice in the amount of such overpayment which shall promptly be paid by CONTRACTOR.

17.2 COMPANY has the right to withhold or deny payment to CONTRACTOR, when COMPANY has described in writing to CONTRACTOR that:

(a) CONTRACTOR has not performed a service or failed to provide the goods identified in the invoice;

(b) CONTRACTOR has neglected, failed, or refused to furnish information or to cooperate with the inspection, review or audit of its Work and/or records and accounts;

(c) CONTRACTOR was overpaid by COMPANY as determined by inspection, review, and/or audit of its Work, and/or records and accounts; or

(d) CONTRACTOR is determined by COMPANY to be in non-compliance with generally acceptable accounting principles more particularly described in paragraph 16.6.

17.3 COMPANY may also, at its discretion, withhold monies due to CONTRACTOR or seek payment from CONTRACTOR on account of:

(a) adverse claims or liens filed or reasonable evidence indicating the probable filing of adverse claims or liens;

(b) failure of CONTRACTOR to make payment to a subcontractor or for equipment, materials or labor; or

(c) failure of CONTRACTOR to take appropriate action to correct discrepancies or deficiencies noted by COMPANY during review and inspection of the services or Work performed by CONTRACTOR.

17.4 If COMPANY determines that cause exists to withhold or deny payment to CONTRACTOR, COMPANY shall provide written notice to CONTRACTOR that COMPANY is withholding or denying payment to CONTRACTOR. Such notice shall specify the basis for COMPANY withholding payment and the amount to be withheld or denied.

ARTICLE 18 - CONFIDENTIALITY

18.1 All information obtained by the CONTRACTOR in the performance of this Contract not in the public domain shall be considered confidential by CONTRACTOR. CONTRACTOR agrees to prevent information and data which it or its employees, agents or subcontractors obtained, directly or indirectly, concerning the Work, the Work site, or any of COMPANY's property, plans or operations, from being disclosed to others without the prior written consent of COMPANY. CONTRACTOR will use the information solely for performance of the Work and for no other purpose. CONTRACTOR will not make or consent to publicity releases or announcements concerning this Contract or CONTRACTOR's participation in the Work. CONTRACTOR shall not take photographs of the Work site or any of COMPANY's property without first obtaining COMPANY's written consent. CONTRACTOR shall require each of its subcontractors and agents to agree to the same limitations and obligations provided for in this paragraph. The provisions of this paragraph shall remain binding obligations on CONTRACTOR until the earlier of the date which is five (5) years after the expiration or termination of this Contract or the date the confidential information has become part of the public domain by means other than disclosures or releases prohibited by this Contract.

18.2 Upon completion of the Work under this Contract, CONTRACTOR will (i) return all originals and copies of the confidential information to COMPANY, (ii) destroy any documents, reports, or

drawings developed by CONTRACTOR and embracing confidential information of COMPANY, and (iii) remove from computer memory all of said confidential information therein residing.

ARTICLE 19 - PROPRIETARY RIGHTS

19.1 To the extent that the "work made for hire" rule under the Copyright Act of 1976 applies, CONTRACTOR acknowledges and agrees that the product of all Work by CONTRACTOR for COMPANY is a work made for hire and, as such, all rights in the Work belong to and are assigned to COMPANY. In addition, if the "work made for hire" rule under the Copyright Act of 1976 does not apply, CONTRACTOR agrees and hereby acknowledges that all rights in such Work are assigned and belong to COMPANY, and CONTRACTOR agrees to execute all documents requested by COMPANY to effect such assignment. CONTRACTOR specifically acknowledges and agrees that all right, title and interest in and to the product of all Work, including copyright of computer software and related work, is assigned to COMPANY.

19.2 All drawings, flow diagrams, sketches, specifications, computer programs and printouts, computer data or other records, regardless of form (hereinafter collectively referred to as "Records"), prepared by CONTRACTOR under the provisions of this Contract, shall be the property of COMPANY and may be used by COMPANY for any purpose. As part of the fulfillment of this Contract, CONTRACTOR shall deliver to COMPANY physical possession of all Records upon completion of the Work, or in the event the Work is terminated for any reason, then immediately upon such termination of the Work.

ARTICLE 20 - COMPLIANCE WITH LAWS, ENVIRONMENTAL LAWS AND REGULATIONS

20.1 CONTRACTOR will fully comply with all applicable laws and regulations pertaining to working conditions including, but not limited to, workers' compensation, social security, federal, state and local income tax withholding, unemployment insurance, the Occupational Safety and Health Act, the Immigration Reform and Control Act of 1986, the Americans with Disabilities Act, and all applicable federal, state and local laws including without limitation those laws affecting employment, business opportunities, and the environment. CONTRACTOR is responsible for the timely payment of any and all employment-related taxes with respect to Work performed by CONTRACTOR. In the event that CONTRACTOR's employees or its subcontractors' employees are deemed to be COMPANY employees by any government authority, CONTRACTOR shall reimburse COMPANY for any corresponding taxes or fees paid by the COMPANY.

20.2 CONTRACTOR acknowledges receipt of, has read and understands, and shall abide by COMPANY POLICIES APPLICABLE TO CONTRACTORS, a copy of which is attached hereto as Exhibit A and incorporated herein. COMPANY may amend Exhibit A from time-to-time at its sole discretion.

20.3 CONTRACTOR acknowledges receipt of, has read and understands, and shall abide by Exhibit B, attached hereto and incorporated herein, covering certain Equal Opportunity Certifications and Agreements applicable to business and operations.

20.4 CONTRACTOR also acknowledges receipt of, and shall abide by COMPANY's Contractor Safety Rules and Procedures Manual, if applicable, while performing any Work hereunder.

20.5 CONTRACTOR expressly guarantees that for all tools, materials and equipment to be furnished and used, and for all work and labor to be performed under the terms of this Contract and in every activity connected therewith, CONTRACTOR shall comply fully with all applicable Federal, State and local laws, ordinances, rules and regulations, and shall furnish COMPANY evidence of such compliance as COMPANY may require at any time. If the services rendered under this Contract are licensed by the State in which the work is to be performed, CONTRACTOR must obtain and maintain the State license and must submit a copy to COMPANY prior to the performance of work covered by this Contract.

20.6 CONTRACTOR agrees that all products furnished or work performed shall be in compliance with all applicable Federal, State and local laws and regulations respecting the environment, including, but not limited to, the Clean Air Act, the Toxic Substance Control Act, the Safe Drinking Water Act, the Comprehensive Environmental Response, Compensation and the Liability Act, the Superfund Amendments and Reauthorization Act, the Environmental Planning and Community

Right-To-Know Act, the Oil Pollution Act of 1990, the Clean Air Act Amendments of 1990, the Migratory Bird Treaty Act, the Endangered Species Act, and the Resource Conservation and Recovery Act. The handling of any solid or hazardous waste subject to the Resource Conservation and Recovery Act shall be in compliance with EPA Regulations at Parts 260 through 265, and Parts 122 through 125 of Title 40, Code of Federal Regulations, and any other applicable regulation under the Resource Conservation and Recovery Act, CONTRACTOR agrees at all times in performance of the work hereunder, to abide by all the Federal, State, and local laws listed above as said laws or regulations may be amended from time-to-time subsequent to the effective date of this Major Service Contract and all other laws, orders, rules and regulations, prescribed by any governmental body having jurisdiction.

20.7 CONTRACTOR agrees that, to the extent the work performed pursuant to this Contract relates to the Consent Decree ("CD") dated September 20, 2010, between COMPANY and the United States Environmental Protection Agency, compliance with the relevant provisions of the CD is required and is of the essence of this Contract.

20.7.1 CONTRACTOR acknowledges receipt of the relevant portions of the CD, which are attached hereto as Exhibit D.

20.7.2 In the event of a material breach of CONTRACTOR's obligations under this Contract which result in a violation of the CD, COMPANY shall be entitled to recover from CONTRACTOR, in addition to any other relief provided by this Contract and by law, a sum of money, not to exceed two (2) times the total fees paid to CONTRACTOR pursuant to any relevant Work Order(s), or in the absence of any relevant Work Order(s), the relevant project pursuant to the Contract, to reimburse the COMPANY for any penalty paid by COMPANY on account of CONTRACTOR's actions or omissions which result in violation(s) of the CD, including court costs and reasonable attorney's fees incurred in connection with the enforcement of this provision. For the avoidance of doubt, this provision is not intended to create any right to recover attorney's fees or costs for any reason other than the enforcement of this provision regarding penalties assessed in connection with CONTRACTOR's non-compliance with the CD.

ARTICLE 21 - INDEPENDENT CONTRACTOR

21.1 CONTRACTOR is an independent contractor with the right to supervise, manage, control, and direct the manner, techniques, procedures, and methods for performing the Work. COMPANY is interested only in the results to be obtained; provided, however, the COMPANY shall be entitled to review and inspect the Work.

21.2 COMPANY shall have the right to request removal from services hereunder any employee(s) of CONTRACTOR who in COMPANY's sole opinion, has engaged in improper conduct, is not performing in a satisfactory manner or is not qualified to perform assigned work. CONTRACTOR shall promptly comply with such request.

ARTICLE 22 - CONTRACTOR DUTIES

22.1 CONTRACTOR shall inspect, prior to commencement of the Work, the premises and facilities for dangers or conditions which may result in personal injury, death or property damage and provide adequate warning to its employees, contractors, and invitees and the necessary precautions.

22.2 CONTRACTOR shall supervise and direct the Work safely, efficiently, and with its best skill and attention.

22.3 CONTRACTOR shall assure that the finished Work complies accurately with the Contract Documents.

22.4 CONTRACTOR will be responsible for initiating, maintaining, and supervising all safety precautions and programs in connection with the Work. CONTRACTOR will take all necessary precautions for the safety of, and will provide the necessary protection to prevent damage, injury, or loss to:

(a) all employees on the Work and other persons who may be affected by the Work;

(b) all the Work and all materials or equipment to be incorporated in the Work, whether in storage on or off the site; and

(c) other property at the site or adjacent to the site, including trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation, or replacement in the course of construction.

ARTICLE 23 - FORCE MAJEURE

23.1 The term "*force majeure*", as used herein, shall mean an unforeseen event or occurrence beyond the reasonable control and without the fault or negligence of the affected party including, but not limited to, earthquakes, inclement weather, fire, explosions, malicious mischief, insurrection, riot, strikes, lockouts, boycotts, picketing, labor disputes or disturbances (excluding strikes, lockouts, boycotts, pickets, labor disputes or disturbances or other industrial disputes or action involving the CONTRACTOR or CONTRACTOR's employees or its subcontractors or vendors or any of their employees), acts of the public enemy, war (declared or undeclared), compliance with any order or directive of any governmental agencies or authorities or representatives of any government acting under claim or color of authority, loss of transportation facilities ordinarily available to and used by a party in the performance of the obligations imposed by this Contract; where such event, occurrence or compliance would render the affected party's performance illegal or physically impossible.

23.2 Neither CONTRACTOR nor COMPANY shall be under any obligation or subject to any liability for failure to carry out respectively the terms and provisions of this Contract during the time and to the extent that such failure is due solely to *force majeure*. The party affected by *force majeure* must give notice stating the time of occurrence and full particulars of the *force majeure* in writing to the other party as soon as possible after the occurrence of the *force majeure*. The obligation of the party giving notice of *force majeure* shall be suspended during the continuance of the *force majeure* event. Nothing in this Article shall be construed to relieve either party of its obligation to pay monies due under the Contract.

ARTICLE 24 - SUBCONTRACTING AND ASSIGNMENTS

24.1 CONTRACTOR may subcontract any part of the Work with prior written approval of COMPANY, but CONTRACTOR shall not be relieved of or released from, any of its obligations or responsibilities under this Contract. For purposes of this Contract, Work performed by subcontractors shall be deemed to be Work performed by CONTRACTOR. If requested, CONTRACTOR shall provide COMPANY with an executed copy of each subcontract and purchase order issued by CONTRACTOR for the performance of the Work. CONTRACTOR shall ensure that the terms and conditions of any such subcontract or purchase order shall comply with and correspond to the terms and conditions of this Contract. Changes in subcontractors, nature of Work sublet, or scope of Work sublet shall also be subject to the prior written approval of COMPANY.

24.2 Neither this Contract nor any rights thereunder shall be assignable by CONTRACTOR without the prior written consent of the COMPANY and any such assignment without COMPANY's prior written consent will be void as to COMPANY.

24.3 Each subcontract for a portion of the Work or purchase order with respect to the Work which is assigned by CONTRACTOR to the COMPANY shall provide that such assignment is effective only upon (a) termination of the Contract by the COMPANY, and (b) the assumption of the subcontract or purchase order by COMPANY in writing. Each subcontract of the Work or purchase order with respect to the Work shall provide that, upon termination of the Contract by COMPANY, the COMPANY may, in its sole discretion, assume the rights and obligations of the CONTRACTOR under the subcontract or purchase order arising on or after the effective date of the COMPANY's written assumption of the subcontract or purchase order. CONTRACTOR shall include the following, or a substantially similar provision, in all subcontracts for the Work or purchase order with respect to the Work:

"Upon the termination or suspension, for any reason, of the prime contract between Plains Marketing, L.P. or its Affiliates and Contractor, Plains Marketing, L.P. or its Affiliates may assume this purchase order or this subcontract between Contractor and subcontractor, effective from and after the date of assumption. Any assumption of this purchase order or this subcontract by Plains Marketing, L.P. or its Affiliates shall be in a writing executed by Plains Marketing, L.P. or its Affiliates."

24.4 "Contract Documents" shall mean this Contract, the Exhibits to this Contract, documents listed in, and incorporated by reference in this Contract, and Modifications issued after execution of this Contract. A "Modification" is (1) a written amendment to this Contract signed by both Parties, (2) a Construction Change Order or (3) a written order for a minor change in the Work issued by or on behalf of the COMPANY. Unless specifically enumerated in the Agreement, the Contract Documents do not include Contractor's Bid Documents.

CONTRACTOR shall obtain a written contract from each of its subcontractors, which contract shall provide that:

1. the subcontractor, to the extent of the work performed by the subcontractor, is bound to the CONTRACTOR by the terms of the Contract Documents;
2. the subcontractor shall be responsible to the CONTRACTOR for all the obligations and responsibilities that the CONTRACTOR is responsible for to Plains Marketing, L.P. or its affiliates pursuant to the Contract Documents and the law;
3. the rights of Plains Marketing, L.P. or its affiliates under the Contract Documents with respect to the Work to be performed by the subcontractor are preserved and protected so that subcontracting thereof will not prejudice such rights;
4. Plains Marketing, L.P. or its affiliates shall have the same rights, remedies, redress and causes of action against the subcontractor which the CONTRACTOR has against the subcontractor pursuant to the Contract Documents and the law;
5. Plains Marketing, L.P. or its affiliates shall have the same rights, remedies, redress and causes of action against the subcontractor which Plains Marketing, L.P. or its Affiliates has against the CONTRACTOR pursuant to the Contract Documents and the law;
6. the subcontractor shall have the same rights, remedies, redress and causes of action against the Plains Marketing, L.P. or its affiliates which the CONTRACTOR has against Plains Marketing, L.P. or its affiliates pursuant to the Contract Documents and the law;
7. the subcontractor shall require each of its sub-subcontractors to enter into similar agreements; and
8. in case of any inconsistencies between the Contract Documents and the terms of the subcontract, the terms of the Contract Documents shall govern.

ARTICLE 25 – GOVERNING LAW

25.1 The validity, interpretation and performance of this Contract shall be governed and construed in accordance with the laws of the state where the COMPANY's site is located as referenced in the applicable Work Order without reference to the choice of law doctrine of such state.

ARTICLE 26 – PERMITS

26.1 Prior to commencing any activities contemplated under this Major Service Contract, CONTRACTOR warrants that it shall obtain and maintain all permits, bonds, and licenses that CONTRACTOR is required by law to obtain in connection with performance of work covered herein and CONTRACTOR shall, upon request, provide copies of said permits, bonds and licenses to COMPANY.

ARTICLE 27 – NOTICES

27.1 All statements, insurance certificates and other routine correspondence shall be sent to COMPANY by registered or certified mail, postage prepaid, return receipt requested, or delivered in person or by commercial courier or sent by facsimile to:

If to COMPANY:
Plains Marketing, L. P.
333 Clay Street, Suite 1600
Houston, Texas 77002
Attn: Contracts and Insurance
Facsimile: 713-289-7422

If to CONTRACTOR:

27.2 No legal notice required or permitted hereunder concerning a claim or breach arising hereunder or notice of termination shall be valid unless given in writing and shall be deemed to have been validly given only if delivered in person or sent by registered or certified mail, postage prepaid, return receipt requested, facsimile or commercial courier to:

If to COMPANY:
Plains Marketing, L.P.
333 Clay Street, Suite 1600
Houston, Texas 77002
Attn: Lawrence J. Dreyfuss, Vice President
Facsimile: 713-646-4216

If to CONTRACTOR:

ARTICLE 28 – ENTIRETY OF CONTRACT

28.1 This Contract, any Work Order issued hereunder and attachments to this Contract or any Work Order represent the entire understanding and agreement between the parties hereto and supersedes any and all prior contracts, whether written or oral, that may exist between the parties regarding the Work. No terms, conditions, prior course of dealings, course of performance, usage or trade, understandings, purchase orders, or contract purporting to modify, vary, supplement or explain any provision of this Contract shall be effective unless in writing and signed by representatives of both parties authorized to amend this Contract.

28.2 This Contract may be amended or modified only by written amendment signed by both parties. Any attempt by either party, through a Work Order, purchase order, invoice, or other document, to vary in any degree any of the terms of this Contract shall be deemed immaterial and shall be void, unless this provision is expressly waived in an amendment executed as specified hereinabove.

28.3 Drafts of this Contract and correspondence prior to the execution of this Contract shall not be used by either party as evidence of the intent of the parties or otherwise be admissible in evidence in interpreting this Contract.

ARTICLE 29 – SEVERABILITY

29.1 The provisions of this Contract are severable, and if any clause or provisions hereof shall be held invalid or unenforceable in whole or in part in any jurisdiction, then such invalidity or unenforceability shall affect only such clause or provision, or part thereof, in such jurisdiction and shall not in any manner affect such clause or provision in any other jurisdiction, or any other clause or provision in this Contract in any jurisdiction. Any such clause or provision held invalid or unenforceable, in whole or in part, to the extent permitted by law, shall be restricted in applicability or reformed to the minimum extent required for such clause or provision to be enforceable.

ARTICLE 30 – BINDING EFFECT

30.1 All rights conferred by this Contract shall be binding upon, inure to the benefit of, and be enforceable by or against the respective successors and permitted assigns of the parties hereto.

30.2 It is expressly understood that the provisions of this Contract do not impart enforceable rights in anyone who is not a party or a successor or permitted assign of a party hereto. No third party (including an employee or a contractor of a party) is intended to have or shall have any rights under this Contract.

ARTICLE 31 – EXHIBITS AND WORK ORDERS

31.1 Each Exhibit to this Contract and any Work Orders issued pursuant hereto are incorporated herein and made a part hereof for all purposes.

ARTICLE 32 – WAIVER

32.1 Any waiver by either party of any provision or condition of this Contract shall not be construed or deemed to be a waiver of any other provision or condition of this Contract, nor a waiver of a subsequent breach of the same provision or condition, unless such waiver is expressed in writing and signed by the parties. COMPANY's consent to delay in the performance by CONTRACTOR of any obligation shall not be applicable to any other obligation. Delay in the enforcement of any remedy in the event of a breach of any term or condition, or in the exercise by either party of any right, shall not be construed as a waiver of such remedy or right.

ARTICLE 33 – ETHICAL BUSINESS PRACTICES

33.1 No director, officer, employee or agent of CONTRACTOR shall give or receive any commission, fee, rebate, or gift, except those articles of nominal value given as sales promotion or holiday remembrances, or the value of reasonable entertainment consistent with local social and business custom, or enter into any business arrangement with any director, employee or agent of COMPANY without prior written notification thereof to COMPANY. CONTRACTOR shall promptly notify COMPANY of any violation of this paragraph and any consideration received as a result of such violation shall be paid or credited to COMPANY.

33.2 CONTRACTOR shall disclose in writing and shall assist COMPANY in identifying any financial transactions between any employee of COMPANY, including family members, and CONTRACTOR, its officers, directors, shareholders/owners and employees.

ARTICLE 34 – SURVIVAL

34.1 Except as otherwise provided herein warranties, covenants and obligations at Articles 7, 8, 13 and 14 shall survive termination or cancellation of this Contract, regardless of the reason for such termination or cancellation, and shall continue in full force and effect.

IN WITNESS WHEREOF, the parties hereto by their duly authorized representatives have executed this Contract as of the day and year first above written.

WORLEY CATASTROPHE RESPONSE

By: _____

Name: Michael A. Worley

Title: CEO

Date: 11/3/11

Taxpayer ID #: 26-2589139

PLAINS MARKETING, L. P.
By Plains Marketing GP Inc.,
Its General Partner

By: _____

Name: James L. Ferrell

Title: Vice President - Supply Chain Management

Date: 11/15/11

EXHIBIT A
COMPANY POLICIES APPLICABLE TO CONTRACTORS

I. CONTRACTOR agrees to comply as follows:

a. (No Smoking Policy). To require its employees, subcontractors, agents and representatives to adhere to COMPANY's No Smoking Policy. The Policy generally prohibits smoking in COMPANY's buildings and on COMPANY's property except as otherwise designated.

b. (Anti-Harassment Policy). To require its employees, subcontractors, agents and representatives to adhere to COMPANY's Anti-Harassment Policy while on the premises or engaged in COMPANY business. The Policy prohibits all forms of harassment, including sexual harassment, which create an intimidating, hostile or offensive working environment.

c. (Weapons Policy). To require its employees, subcontractors, agents and representatives to adhere to COMPANY's Weapons Policy. The Policy strictly prohibits the use, possession or concealing of any weapons, whether licensed or not and including all firearms and explosives, while on COMPANY's premises.

d. (Search Policy). COMPANY reserves the right to conduct personal searches at any time. COMPANY intends to use personal searches when it believes the Policy may have been violated and/or for the purpose of deterrence and assurance that there is compliance with this Policy.

e. (Safety and Security Policy). To establish, administer, and enforce safety rules and procedures and shall require its employees, subcontractors, agents and representatives to adhere to COMPANY's Safety and Security Policies.

f. (Drug and Alcohol Policy).

i. To notify its employees, subcontractors, agents and representatives of COMPANY's Drug and Alcohol Policy which prohibits CONTRACTOR's employees, subcontractors, agents, and representatives from:

1. using, possessing, distributing, purchasing or selling drugs or alcohol while on COMPANY premises or while engaged in COMPANY business, including travel to and from a particular work area or areas;
2. reporting to and/or performing work for the COMPANY with unauthorized drugs or alcohol in excess of the Policy limit (.04% B.A.C.) in their body; or
3. refusing to submit to routine searches of their person, their personal property, and COMPANY or CONTRACTOR assigned property, while entering on or leaving COMPANY premises.

ii. CONTRACTOR agrees to remove and replace, for the purposes of fulfilling its obligations to the COMPANY under this Contract, any of its employees, subcontractors, agents and representatives found to be in violation of its own anti-drug plan and/or COMPANY's Drug and Alcohol Policy, or those that the COMPANY believes to be in violation of the Drug and Alcohol Policy whose compliance with the Policy cannot be certified to by CONTRACTOR based upon laboratory testing acceptable to the COMPANY.

iii. The following paragraphs addressing contractor drug testing policies and procedures are not applicable to contractors providing non-safety sensitive activities and/or services. Contractors providing non-safety activities and/or services (including but not limited to labor, equipment and materials) under the terms and conditions of this Contract are not required to have their own drug testing policies and procedures in place. However, while performing said services for COMPANY, contractor and its employees, agents and representatives are required to comply with the COMPANY's applicable Drug and Alcohol policies, as outlined herein. COMPANY shall be solely responsible for determining whether or not any particular contract services or activities are considered safety sensitive with respect to whether or not a specific contractor must have its own drug and alcohol misuse and prevention program in place.

iv. If applicable, CONTRACTOR certifies that all of its employees, subcontractors, agents and representatives who may perform work covered by this Contract are subject to Laboratory Testing Provisions which are substantially equal to COMPANY's Policy in all respects (COMPANY's Laboratory Testing Provisions are described in paragraphs 1 through 4 listed below). CONTRACTOR agrees to permit COMPANY, or its authorized representative, access to CONTRACTOR's property and records, without prior notification, for the purposes of examining/auditing CONTRACTOR's policies, practices and procedures pertaining to this requirement. Any deficiencies, as determined by COMPANY, can result in CONTRACTOR being removed from the work and/or being required to implement specified modifications prior to proceeding with work.

v. The facilities performing the test (laboratory analysis) shall be properly licensed and fully accredited.

vi. COMPANY conducts drug and alcohol testing under the following circumstances:

1. Pre-employment Testing - All applicants for employment are required to submit to Laboratory Testing following their acceptance of a contingent job offer and prior to beginning work (drug screen only).
2. Reasonable Suspicion Testing - Undertaken when responsible officials have reasonable suspicion to believe an employee is in violation of COMPANY's Policy. For example, Laboratory Testing may be conducted in connection with a search if contraband is found in common areas and ownership cannot be determined; if an employee's performance, involvement in an accident, actions or appearance leads local management to believe there may be a violation of the Policy; or if an employee is charged with or being investigated in connection with a drug-related or alcohol-related criminal offense. The foregoing examples are not meant to be exclusive; other circumstances may arise which would constitute reasonable suspicion to request Laboratory Testing.
3. Random Testing - All employees performing work in safety sensitive positions at all COMPANY locations are subject to random drug and alcohol testing as outlined below, with the exception of employees who are covered by a D.O.T. random testing program.
   a. COMPANY defines a safety sensitive position as one in which requires that the employee perform the duties which are related to the safe operation or security of a facility or a piece of equipment and which, if not performed properly, could result in a serious safety risk or environmental hazard to employees, a facility, or the general public. All employees who have the direct responsibility of supervising employees who perform such duties are considered as occupying a safety-sensitive position.
   b. Random Testing will be conducted at an annualized rate of 25% for those who work on pipelines and associated equipment and at 50% for those who fall under FMCSA regulations.
4. Return to Work Testing - Employees who are permitted to return to work following a positive laboratory test or other Policy violation and/or rehabilitation are subject to Laboratory Testing as determined by Health Services, and as outlined in a Return to Work Agreement.
5. Aviation Department Testing - Employees in COMPANY's Aviation Department are subject to periodic unannounced testing at least once per year.
6. Government Required Testing - Employees will be required to submit to Laboratory Testing as required by the U.S. Department of Transportation or by other federal, state or local governmental agencies.

g. Definitions Contained in COMPANY's Policy

i. Company: "COMPANY" shall mean **Plains Marketing, L. P.** and any of **its affiliates** which are listed herein.

ii. Unauthorized Drugs: For the purpose of this Policy, the term "Unauthorized Drugs" shall mean any substance, other than an Authorized Substance, which is, or has the effect on the human body of being, a narcotic, depressant, stimulant, hallucinogen, or cannabinoid, their precursors, derivatives, or analogues, and includes, but is not limited to, those substances scheduled as controlled substances pursuant to the Federal Controlled Substances Act, inhalants, "designed drugs", and "look-a-likes".

iii. Authorized Substances: Substances having a physiological, psychological, or biochemical effect which are lawfully prescribed or which are available without a prescription, which are lawfully obtained by an employee and which an employee possesses and uses in the appropriate manner, in the dosages and for the purposes for which the substances were prescribed or manufactured, are considered "Authorized Substances" for the purposes of this Policy. In the case of alcohol, such is excluded from this definition to the extent its possession of consumption places an employee in violation of the "Alcohol Policy".

iv. Company Premises: "Company Premises" includes, but is not limited to, **Plains Marketing, L. P. and Its Affiliates** owned, rented, used, or leased property, including lodging furnished or paid for by the COMPANY; COMPANY work site locations, offices, and/or parking lots; or COMPANY owned, leased, or rented vehicles, aircraft, vessels, or equipment.

v. Alcohol: "Alcohol" includes, but not limited to, distilled spirits, liquor, beer, wine, malt liquor or any other intoxicants used for beverage purposes.

vi. Under the Influence of Alcohol: "Under the Influence" shall mean that an individual is affected by Alcohol in any detectable manner. Evidence of being under the influence may be established by a professional or lay person's opinion, a physiological test/analysis, or a biochemical test/analysis. An "Under the Influence" determination is not limited to nor must it consist of evidence of impairment of physical or mental ability or misconduct. An employee whose blood alcohol content is found to be equivalent to or greater than the governmentally recognized level for being under the influence shall be presumed to be Under the Influence of Alcohol.

vii. Blood Alcohol Content: Additionally, an employee whose blood alcohol level content is determined during work hours to be equivalent to or greater than .04 percent Blood Alcohol Content will be in violation of this Policy.

viii. Contraband: "Contraband" for purposes of this Policy shall mean drug paraphernalia.

ix. Laboratory Testing: "Laboratory Testing" includes, but is not limited to, a physiological test/analysis or a biochemical test/analysis, including urinalysis, breath analysis, and blood analysis.

x. Personal Search: "Personal Search" includes a search of employees' personal property located on COMPANY Premises, including but not limited to, their personal effects, lockers, baggage, desks, lunch boxes, containers, purses, billfolds, parcels; private vehicles if on COMPANY Premises and living quarters, if furnished or paid for by the COMPANY; any COMPANY property assigned to employees; and a limited search of the person.

xi. Policy Violations: COMPANY considers any of its employees who have a positive drug test result; have a blood alcohol content .04% or higher during working hours; possess prohibited materials, fail to cooperate with COMPANY requests for testing and/or searches; or who otherwise violate any provision of its Policy are subject to severe disciplinary action up to and including discharge for the first violation.

h. Resource Listing

i.	American Council for Drug Education	800-488-drug
ii.	Compliance Services	318-457-2443
iii.	DISA Contractors Consortium	800-752-6432
iv.	Drug Regulations Compliance, Inc.	318-868-7569

v.	Institute for a Drug Free Workplace	202-842-7400
vi.	National Clearinghouse for Alcohol & Drug Information Workplace Helpline	800-843-4971
vii.	National Institute on Drug Abuse	301-443-6245
viii.	Pipeline Testing Consortium, Inc. DOT 49CFR, Parts 192, 195 & 199	316-669-8800

EXHIBIT B

I. EQUAL OPPORTUNITY

(applicable to all contracts and purchase orders in excess of $10,000)

During the performance of this contract, the contractor agrees as follows:

(1) The contractor will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin. The contractor will take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, sex, or national origin. Such action shall include, but not be limited to the following: Employment, upgrading, demotion, or transfer, recruitment or recruitment advertising; layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices to be provided by the contracting officer setting forth the provisions of this nondiscrimination clause.

(2) The contractor will, in all solicitations or advertisements for employees placed by or on behalf of the contractor, state that all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, or national origin.

(3) The contractor will send to each labor union or representative of workers with which he has a collective bargaining agreement or other contract or understanding, a notice to be provided by the agency contracting officer, advising the labor union or workers' representative of the contractor's commitments under section 202 of Executive Order 11246 of September 24, 1965, and shall post copies of the notice in conspicuous places available to employees and applicants for employment.

(4) The contractor will comply with all provisions of Executive Order 11246 of September 24, 1965, and of the rules, regulations, and relevant orders of the Secretary of Labor.

(5) The contractor will furnish all information and reports required by Executive Order 11246 of September 24, 1965, and by the rules, regulations, and orders of the Secretary of Labor, or pursuant thereto, and will permit access to his books, records, and accounts by the contracting agency and the Secretary of Labor for purposes of investigation to ascertain compliance with such rules, regulations, and orders.

(6) In the event of the contractor's noncompliance with the nondiscrimination clauses of this contract or with any of such rules, regulations, or orders, this contract may be canceled, terminated or suspended in whole or in part and the contractor may be declared ineligible for further Government contracts in accordance with procedures authorized in Executive Order 11246 of September 24, 1965, and such other sanctions may be imposed and remedies invoked as provided in Executive Order 11246 of September 24, 1965, or by rule, regulation, or order of the Secretary of Labor, or as otherwise provided by law.

(7) The contractor will include the provisions of paragraphs (1) through (7) in every subcontract or purchase order unless exempted by rules, regulations, or orders of the Secretary of Labor issued pursuant to section 204 of Executive Order 11246 of September 24, 1965, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as may be directed by the Secretary of Labor as a means of enforcing such provisions including sanctions for noncompliance: *Provided, however*, that in the event the contractor becomes involved in, or is threatened with, litigation with a subcontractor or vendor as a result of such direction, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

II. EQUAL OPPORTUNITY FOR WORKERS WITH DISABILITIES

(applicable to all contracts and purchase orders in excess of $10,000)

(1) The contractor will not discriminate against any employee or applicant for employment because of physical or mental disability in regard to any position for which the employee or applicant for employment is qualified. The contractor agrees to take affirmative action to employ, advance in employment and otherwise treat qualified individuals with disabilities without discrimination based on their physical or mental disability in all employment practices, including the following:

(i) Recruitment, advertising, and job application procedures;
(ii) Hiring, upgrading, promotion, award of tenure, demotion, transfer, layoff, termination, right of return from layoff and rehiring;
(iii) Rates of pay or any other form of compensation and changes in compensation;
(iv) Job assignments, job classifications, organizational structures, position descriptions, lines of progression, and seniority lists;
(v) Leaves of absence, sick leave, or any other leave;
(vi) Fringe benefits available by virtue of employment, whether or not administered by the contractor;
(vii) Selection and financial support for training, including apprenticeship, professional meetings, conferences, and other related activities, and selection for leaves of absence to pursue training;
(viii) Activities sponsored by the contractor including social or recreational programs; and
(ix) Any other term, condition, or privilege of employment.

(2) The contractor agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the act.

(3) In the event of the contractor's noncompliance with the requirements of this clause, actions for noncompliance may be taken in accordance with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the act.

(4) The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices in a form to be prescribed by the Deputy Assistant Secretary for Federal Contract Compliance Programs, provided by or through the contracting officer. Such notices shall state the rights of applicants and employees as well as the contractor's obligation under the law to take affirmative action to employ and advance in employment qualified employees and applicants with disabilities. The contractor must ensure that applicants and employees with disabilities are informed of the contents of the notice (e.g., the contractor may have the notice read to a visually disabled individual, or may lower the posted notice so that it might be read by a person in a wheelchair).

(5) The contractor will notify each labor organization or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the contractor is bound by the terms of section 503 of the Rehabilitation Act of 1973, as amended, and is committed to take affirmative action to employ and advance in employment individuals with physical or mental disabilities.

(6) The contractor will include the provisions of this clause in every subcontract or purchase order in excess of $10,000, unless exempted by the rules, regulations, or orders of the Secretary issued pursuant to section 503 of the act, as amended, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the Deputy Assistant Secretary for Federal Contract Compliance Programs may direct to enforce such provisions, including action for noncompliance.

III. AFFIRMATIVE ACTION FOR DISABLED AND VIETNAM ERA VETERANS

(applicable to contracts and purchase orders in excess of $10,000)

(a) The contractor will not discriminate against any employee or applicant for employment because he or she is a disabled veteran or veteran of the Vietnam era in regard to any position for which the employee or applicant for employment is qualified. The contractor agrees to take affirmative action to employ, advance in employment and otherwise treat qualified disabled veterans and veterans of the Vietnam era without discrimination based upon their disability or veterans status in all employment practices such as the following: Employment, upgrading, demotion or transfer, recruitment, advertising, layoff or termination, rates of pay or other forms of compensation, and selection for training, including apprenticeship.

(b) The contractor agrees to list all employment openings which exist at the time of the execution of this contract and those which occur during the performance of this contract, including those not generated by this contract and including those occurring at an establishment of the contractor other than the one wherein the contract is being performed, but excluding those of independently operated corporate affiliates, at an appropriate local office of the State employment service system wherein the opening occurs. The contractor further agrees to provide such reports to such local office regarding employment openings and hires as may be required. State and local government agencies holding Federal contracts of $10,000 or more shall also list all their employment openings with the appropriate office of the State employment service, but are not required to provide those reports set forth in paragraphs (d) and (e).

(c) Listing of employment openings with the employment service system pursuant to this clause shall be made at least concurrently with the use of any other recruitment source or effort and shall involve the normal obligations which attach to the placing of a bona fide job order, including the acceptance of referrals of veterans and nonveterans. The listing of employment openings does not require the hiring of any particular job applicant or from any particular group of job applicants, and nothing herein is intended to relieve the contractor from any requirements in Executive orders or regulations regarding nondiscrimination in employment.

(d) The reports required in paragraph (b) of this clause shall include, but not be limited to, periodic reports which shall be filed at least quarterly with the appropriate local office or, where the contractor has more than one hiring location in a State, with the central office of that State employment service. Such reports shall indicate for each hiring location (1) the number of individuals hired during the reporting period, (2) the number of non-disabled veterans of the Vietnam era hired, (3) the number of disabled veterans of the Vietnam era hired, and (4) the total number of disabled veterans hired. The reports should include covered veterans hired for on-the-job training under 38 U.S.C. 1787. The contractor shall submit a report within 30 days after the end of each reporting period wherein any performance is made on this contract identifying data for each hiring location. The contractor shall maintain at each hiring location copies of the reports submitted until the expiration of one year after final payment under the contract, during which time these reports and related documentation shall be made available, upon request, for examination by any authorized representatives of the contracting officer or of the Secretary of Labor. Documentation would include personnel records respecting job openings, recruitment and placement.

(e) Whenever the contractor becomes contractually bound to the listing provisions of this clause, it shall advise the employment service system in each State where it has establishments of the name and location of each hiring location in the State. As long as the contractor is contractually bound to these provisions and has so advised the State system, there is no need to advise the State system of subsequent contracts. The contractor may advise the State system when it is no longer bound by this contract clause.

(f) This clause does not apply to the listing of employment openings which occur and are filled outside of the 50 States, the District of Columbia, Puerto Rico, Guam, and the Virgin Islands.

(g) The provisions of paragraphs (b), (c), (d), and (e) of this clause do not apply to openings which the contractor proposes to fill from within his own organization. This exclusion does not apply to a particular opening once an employer decides to consider applicants outside his own organization for that opening.

(h) As used in this clause:

(1) "All employment openings" includes all positions except executive and top management, those positions that will be filled from within the contractor's organization, and positions lasting three days or less. This term includes full-time employment, temporary employment of more than three days' duration, and part-time employment.

(2) "Appropriate office of the state employment service system" means the local office of the Federal-state national system of public employment offices with assigned responsibility for serving the area where the employment opening is to be filled, including the District of Columbia, Guam, the Commonwealth of Puerto Rico, and the Virgin Islands.

(3) "Positions that will be filled from within the contractor's organization" means employment openings for which no consideration will be given to persons outside the contractor's organization (including any affiliates, subsidiaries, and parent companies) and includes any openings which the contractor proposes to fill from regularly established "recall" lists. The exception does not apply to a particular opening once an employer decides to consider applicants outside of his or her own organization.

(i) The contractor agrees to comply with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the Act.

(j) In the event of a contractor's noncompliance with the requirements of this clause, actions for noncompliance may be taken in accordance with the rules, regulations, and relevant orders of the Secretary of Labor issued pursuant to the Act.

(k) The contractor agrees to post in conspicuous places, available to employees and applicants for employment, notices in a form to be prescribed by the Director, provided by or through the contracting officer. Such notice shall state the contractor's obligation under the law to take affirmative action to employ and advance in employment qualified disabled veterans and veterans of the Vietnam era for employment, and the rights of applicants and employees.

(l) The contractor will notify each labor union or representative of workers with which it has a collective bargaining agreement or other contract understanding, that the contractor is bound by the terms of the Vietnam Era Veterans Readjustment Assistance Act, and is committed to take affirmative action to employ and advance in employment qualified disabled veterans and veterans of the Vietnam era.

(m) The contractor will include the provisions of this clause in every subcontract or purchase order of $10,000 or more unless exempted by rules, regulations, or orders of the Secretary issued pursuant to the Act, so that such provisions will be binding upon each subcontractor or vendor. The contractor will take such action with respect to any subcontract or purchase order as the Director of the Office of Federal Contract Compliance Programs may direct to enforce such provisions, including action for noncompliance.

IV. EMPLOYMENT REPORTS ON DISABLED VETERANS AND VETERANS OF THE VIETNAM ERA

(applicable to all contracts containing the clause "Affirmative Action for Disabled and Vietnam Era Veterans")

(a) The contractor shall report at least annually, as required by the Secretary of Labor, on:

(1) The number of special disabled veterans and the number of veterans of the Vietnam era in the workplace of the contractor by job category and hiring location; and

(2) The total number of new employees hired during the period covered by the report, and of that total, the number of special disabled veterans, and the number of veterans of the Vietnam era.

(b) The above items shall be reported by completing the form entitled *Federal Contractor Veterans' Employment Report VETS-100.*

(c) Reports shall be submitted no later than September 30 of each year.

(d) The employment activity report required by paragraph (a)(2) of this clause shall reflect total hires during the most recent 12-month period as of the ending date selected for the employment profile report required by paragraph (a)(1) of this clause. Contractors may select an ending date: (1) As of the end of any pay period during the period July 1 through September 1 of the year the report is due, or (2) as of December 31, if the contractor has previous written approval from the Equal Employment Opportunity Commission to do so for purposes of submitting the Employer Information Report EEO-1 (Standard Form 100).

(e) The count of veterans reported according to paragraph (a) of this clause shall be based on voluntary disclosure. Each contractor subject to the reporting requirements at 38 U.S.C. 2012(d) shall invite all special disabled veterans and veterans of the Vietnam era who wish to benefit under the affirmative action program at 38 U.S.C. 2012 to identify themselves to the contractor. The invitation shall state that the information is voluntarily provided, that the information will be kept confidential, that disclosure or refusal to provide the information will not subject the applicant or employee to any adverse treatment and that the information will be used only in accordance with the regulations promulgated under 38 U.S.C. 2012.

(f) *Subcontracts.* The Contractor shall include the terms of this clause in every subcontract or purchase order of $10,000 or more unless exempted by rules, regulations, or orders of the Secretary.

V. UTILIZATION OF SMALL, SMALL DISADVANTAGED AND WOMEN-OWNED SMALL BUSINESS SUBCONTRACTING PLAN

(applicable to contracts in excess of $500,000)

Where required by the Contracting Officer and applicable regulations, the subcontractor shall agree to submit and negotiate a subcontracting plan which separately addresses subcontracting with small business concerns, with small disadvantaged business concerns and with women-owned small business concerns. The plan shall be included in and made a part of the resultant contract. The subcontracting plan shall be negotiated within the time specified by the Contracting Officer. Failure to submit and negotiate the subcontracting plan shall make the offeror ineligible for award of a contract.

VI. DRUG-FREE WORKPLACE

(applicable to contracts of any dollar value if the contract is with an individual, otherwise applicable to contracts in excess of $100,000, except contracts for the acquisition of commercial items)

(a) Definitions. As used in this clause---

Controlled substance means a controlled substance in schedules I through V of section 202 of the Controlled Substances Act (21 U.S.C. 812) and as further defined in regulation at 21 CFR 1308.11-1308.15.

Conviction means a finding of guilt (including a plea of nolo contendere) or imposition of sentence, or both, by any judicial body charged with the responsibility to determine violations of the Federal or State criminal drug statutes.

Criminal drug statue means a Federal or non-Federal criminal statute involving the manufacture, distribution, dispensing, possession or use of any controlled substance.

Drug-free workplace means the site(s) for the performance of work done by the Contractor in connection with a specific contract at which employees of the Contractor are prohibited from engaging in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance.

Employee means an employee of a Contractor directly engaged in the performance of work under a Government contract. *Directly engaged* is defined to include all direct cost employees and any other Contractor employee who has other than a minimal impact or involvement in contract performance.

Individual means an offeror/contractor that has no more than one employee including the offeror/contractor.

(b) The Contractor, if other than an individual, shall--within 30 days after award (unless a longer period is agreed to in writing for contracts of 30 days or more performance duration); or as soon as possible for contracts of less than 30 days performance duration--

(1) Publish a statement notifying its employees that the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance is prohibited in the contractor's workplace and specifying the actions that will be taken against employees for violations of such prohibition;

(2) Establish an ongoing drug-free awareness program to inform such employees about--
(i) The dangers of drug abuse in the workplace;
(ii) The contractor's policy of maintaining a drug-free workplace;
(iii) Any available drug counseling, rehabilitation, and employee assistance programs; and
(iv)The penalties that may be imposed upon employees for drug abuse violations occurring in the workplace.

(3) Provide all employees engaged in performance of the contract with a copy of the statement required by subparagraph (b) (1) of this clause;

(4) Notify such employees in writing in the statement required by subparagraph (b) (1) of this clause that, as a condition of continued employment on this contract, the employee will--
(i) Abide by the terms of the statement; and
(ii) Notify the employer in writing of the employee's conviction under a criminal drug statute for a violation occurring in the workplace no later than 5 days after such conviction.
(5) Notify the Contracting Officer in writing within 10 days after receiving notice under subdivision (b)(4)(ii) of this clause, from an employee or otherwise receiving actual

notice of such conviction. The notice shall include the position title of the employee;

(5) Within 30 days after receiving notice under subdivision (b) (4) (ii) of this clause of a conviction, take one of the following actions with respect to any employee who is convicted of a drug abuse violation occurring in the workplace:
(i) Taking appropriate personnel action against such employee, up to and including termination; or
(ii) Require such employee to satisfactorily participate in a drug abuse assistance or rehabilitation program approved for such purposes by a Federal, State, or local health, law enforcement, or other appropriate agency; and

(6) Make a good faith effort to maintain a drug-free workplace through implementation of subparagraphs
(b) (1) through (b) (5) of this clause
(c)The Contractor, if an individual, agrees by award of the contract or acceptance of a purchase order, not to engage in the unlawful manufacture, distribution, dispensing, possession, or use of a controlled substance while performing this contract.
(d)In addition to other remedies available to the Government, the Contractor's failure to comply with the requirements of paragraph (b) or (c) of this clause may, pursuant to FAR 23.506, render the Contractor subject to suspension of contract payments, termination of the contract for default, and suspension or debarment.

EXHIBIT C

CONTRACTOR MINIMUM SAFETY REQUIREMENTS

NOTE: The following information is intended to set forth the minimum safety requirements expected by Company from its Contractors (including their subcontractors) in the performance of their obligations hereunder. Each Contractor shall be responsible for ensuring that its subcontractors comply with all of the following requirements. It is at all times the responsibility of each Contractor to implement and enforce any additional safety practices that may be necessary for the safe performance of operations by Contractor personnel and its sub-contractors. Additional job or site specific requirements may be specified by Company Management in its sole discretion as necessary to assure the safety of all persons involved with such operations.

A. PRE-JOB MEETING

Complete understanding of the safety and health requirements of the job are critical to the overall success of the project. After awarding of bids, Contractor(s) may be required to attend a pre-job meeting to discuss Contractor and subcontractor safety requirements and job site safety/hazard information. Contractor shall, at each work location, assign one of its employees, agents or subcontractor's as the "Person in Charge" for the purposes herein identified and stipulated.

B. REPORTING TO WORK:

All Contractor personnel shall report to the appropriate Company representative upon arrival at a work location. Contractor Management shall assure that Contractor personnel are given safety orientations for familiarization with potential job site hazards and emergency procedures specific to the current work location.

C. ACCIDENT. INJURY AND ILLNESS REPORTING PROCEDURES:

All work-related accidents, injuries and illnesses shall be reported immediately, or as soon as is safely possible, to the appropriate Company representative. It is the responsibility of the Contractor's designated person-in-charge to ensure that all accidents on the property or leases of Company involving death, personal injury or illness, fire and/or explosions, property damage, hazardous material spills and vehicles are reported both to Company and to all applicable Federal, State and local governmental bodies and agencies having jurisdiction thereof. Contractor shall provide to the Company, upon request, a list of any recordable injuries (as defined by 29 CFR 1904) that occurred on Company property.

D. CONTRACTOR RESPONSIBILITIES:

1. Contractor shall designate a person-in-charge for administration of these requirements. For contracts involving twenty-five (25) or more contract workers on work location, Contractor shall designate or provide a full-time Site Safety Representative to enforce Company and Contractor's safety requirements.

2. Contractor is to assure that all Contractor personnel are qualified and trained to perform contracted services.

3. Contractor is to provide its personnel with proper and well-maintained equipment, tools and personal protective equipment necessary for the particular job being performed, unless otherwise specified by Contract language.

4. Contractor is to adhere to all applicable Federal, State and local regulations pertaining to a particular operation for which its services are contracted.

5. Contractor is responsible for ensuring that all operations are conducted in a safe manner, and for promptly correcting and reporting to Company and Contractor's employees and subcontractors all known or suspected hazards or unsafe conditions.

6. Contractor is to instruct its personnel to report any known or suspected hazards or unsafe conditions to his/her immediate supervisor.

7. Contractor shall immediately notify the appropriate Company representative if known or suspected hazards or unsafe conditions involve Contractor or Company equipment/personnel.

8. Contractor shall provide to the Company, upon request, a copy of the Contractor's written Injury and Illness Prevention Plan (IIPP) or other written safety program and policy, if required, under Federal, State, or local regulatory agency.

9. Contractor is to assure the work area is maintained in a clean and orderly fashion.

E. PERSONAL PROTECTIVE EQUIPMENT:

This section lists general personal protective equipment requirements for Contractors and Subcontractors working at Company field or plant locations. Company Operations Management may require additional job-specific or site-specific personal protective equipment as necessary to assure the safety of all persons involved with such operations. Always refer to the Company's Personal Protective Equipment Plan for additional requirements at specific field or plant locations.

1. HEAD PROTECTION

It is the policy of the Company that, as a condition of employment, all contractors and visitors while on Company property shall wear hard hats except when in vehicles, in office buildings, or on the parking lots. All visitors shall be provided with a hard hat for temporary use while in the field.

All hard hats must meet ANSI Z89.1-1986 Class B or ANSI Z89.1-1997 Class E requirements for personal Protection – Protective Headwear for Industrial Workers. Metal hard hats are prohibited. The inside of the hard hat should have a label that indicates the following:

Manufacturer's Name	or	Manufacturer's Name
ANSI Z89-1986		ANSI Z89.1-1997
Class B		Class E

2. FOOT PROTECTION

It is the policy of the Company that, as a condition of employment, all contract and temporary employees working in designated work areas and/or job assignments are required to wear ANSI Z41-1991 Personal Protection – Protective Footwear ® approved safety (steel toe) shoes to help prevent foot injuries, ankle injuries, slips, and falls.

All ANSI Z41 approved safety footwear is acceptable. A low heel is recommended for any worker required to climb ladders. Soles are to be slip, chemical, and oil resistant. A puncture resistant foot bed is recommended. Electrical workers should use safety footwear approved for electrical use. Since leather boots and shoes can absorb chemicals and other irritant substances,

rubber boots should be worn when handling chemicals and other materials, which require protection from absorption.

3. EYE/FACE PROTECTION

It is the policy of the Company that as a condition of employment, all contract and temporary employees working in designated work and/or job assignments are required to wear ANSI Z87.1-1989, American National Standard Practice for Occupational and Educational Eye and Face Protection, approved safety glasses (with side shields), goggles, and/or face shields to help prevent eye and face injuries including those resulting from flying particles, molten metal, liquid chemicals, acids or caustic liquids, chemical gases or vapors, or light radiation. All ANSI Z-87 approved eye protection will have AZ-87 stamped on the frames and AZ-87 or the manufacturer's code stamped on the lens. Face shields are never to be worn alone. When the activity requires the use of a face shield, approved safety glasses or goggles will be worn also.

4. HEARING PROTECTION

It is the policy of the Company that as a condition of employment, all contract and temporary employees working in posted work areas or any area where the noise level exceeds 90 dBA are required to wear appropriate hearing protection.

Hearing protection should be worn in areas that are not posted if either of the following applies:

a) There is a potential for temporary elevated noise level such as when high-pressure gases are released.
b) If it is necessary to raise one's voice in order to talk to others at a distance of three (3) feet or less.

5. PROTECTIVE CLOTHING

It is the policy of the Company that as a condition of employment, all contract and temporary employees working in designated work areas and/or job assignments are required to wear clothing suited to the work, weather and environment in which they work. Cotton or wool clothing is preferable due to its natural resistance to fire and static electricity. The hazards present in the office are not the same as those found in the field. Office personnel should utilize good judgment when selecting work apparel.

Shirts shall be worn on the job. They shall be buttoned up the front and at the cuffs. Shirttails shall be tucked into the trousers. Shirtsleeves may be short or rolled up. Tank tops, short tops and sleeveless shirts are not permitted. Full-length pants are required. Shorts or cut-off jeans are not permitted. Loose, ragged, or defective clothing or shoes shall not be worn.

When working around moving or rotating machinery, DO NOT wear any of the following:

- Neckties
- Neck chains
- Gauntlet gloves or gloves that fasten around the wrist
- Loose or ragged clothes
- Handkerchiefs or rags tied in such a way that prevents their movement by one quick, easy pull.

Wearing jewelry such as earrings, rings, wristwatches, or neck chains on the job is discouraged and in some cases, not permitted because they can contribute to accidents or injuries.

Special protective clothing should be used where potential job hazards include:

- Exposure to hazardous chemicals
- Cuts from materials handled
- Other hazards that may be produced by special operations such as short-term exposure to heat or cold

Examples of activities in pipeline operation and maintenance activities that may require special protective clothing include:

- Welding operations
- Electrical work
- Hazardous material handling

(Note: When handling chemicals, follow the protective equipment requirements specified in the MSDS. Contact the Safety Department if you need assistance selecting protective equipment.)

6. HAND PROTECTION

It is the policy of the Company that as a condition of employment, all contract and temporary employees working in designated work areas and/or job assignments are required to wear gloves to help prevent hand injuries including cuts, burns, and chemical exposure, for example.

Rings shall be removed while at work in the field. Rings and wristwatches shall always be removed when working around energized electrical equipment and circuits or around moving or rotating equipment. Do not wear gauntlets or gloves that fasten around the wrist when working around moving or rotating equipment. Caution should be exercised when using other styles of gloves that might cause the hand to be pulled into a dangerous area.

Employees in the following designated work areas are required to wear protective gloves:

- Electricians
- Line Men
- Welders
- Welders' helpers
- Pipe fitters
- Pipe wrappers
- Chemical handling
- Those working around steam or hot equipment

7. FALL PROTECTION

It is the policy of the Company that as a condition of employment, all contract and temporary employees exposed to unprotected work heights over six (6) feet shall use appropriate fall protection. Climbing and fall protection is provided in the workplace to minimize the risk of falls. Protection may be accomplished through the design of the facility and/or provision of personal safety gear. Fall protection equipment may include:

- Full body safety harnesses with appropriate lanyard(s)
- Safety climbs

- Personnel lifts
- Safety nets

8. RESPIRATORY PROTECTION EQUIPMENT

It is the policy of the Company that as a condition of employment, all contract and temporary employees exposed to atmospheres that are oxygen deficient (less than 19.5% O_2), contains asphyxiates (e.g., N_2 or CO_2), contains harmful concentrations of toxic contaminants (e.g., H_2S, NH_3, C_{12}, SO_2 or CO) or contain particulate contaminants (e.g., dust, fumes, chemical mist, smoke, etc.) shall use the appropriate respiratory protective equipment. Respiratory protective equipment and use will meet NIOSH and ANSI Z88.1 requirements.

Contractor Supervisors shall provide approved respiratory protective equipment for all exposed company employees. The correct type of respiratory shall be specified for each job. Contractor Supervisors shall ensure employees are properly trained in the use of the respiratory protective equipment. Contractors required to use respiratory protective equipment will have a written Respiratory Protection Policy in compliance with 29 CFR 1910.134.

Only an air-supplied respirator with an egress bottle shall be used in atmospheres immediately dangerous to life and health – 1DLH (containing harmful concentrations of toxic contaminants such as H_2S, NH_3, C_{12}, SO_2 or CO) or are oxygen deficient (areas that contain less than 19.5% oxygen). Air purifying respirators are not allowed for this kind of environment.

Inspections of all respiratory protective equipment shall be completed before each use including a check of the tightness of connections and the condition of the face piece, valves, connecting tubes and headbands. Cylinders are to be refilled with breathing air certified as Grade AD, or better. Never use pure oxygen in an industrial respirator. Rubber or other elastic parts shall be inspected for pliability and signs of deterioration.

9. PERSONAL FLOTATION DEVICES

Contractor's personnel working or traveling over water shall have access to an U.S.A Coast Guard-approved personal floatation device (PFD).

A personal flotation device (PFD) must be available when riding in a boat. The PFD must be worn when riding anywhere other than inside the cab of the boat. When riding or working in a small open boat, a PFD must be worn at all times.

When working within a platform guardrail, a PFD need not be worn. If the work is being done outside of the guardrail, or if there is no guardrail, each employee must be wearing a personal flotation device.

10. OTHER PERSONAL PROTECTIVE EQUIPMENT

In addition to the protective equipment described above, special situations may require the use of additional personal protective equipment. Each Contractor shall be solely responsible for recognizing when such equipment is required and shall be responsible to provide such equipment. Company Operations Management, at its sole discretion, may also specify additional personal protective equipment requirements.

F. CONTRACTOR PERSONNEL SAFE WORK PRACTICES

This section lists basic safe work practice requirements for Company field or plant locations. Company Operations Management at its sole discretion may require additional

job-specific safe work practices as necessary to assure the safety of all persons involved with such operations.

1. SAFETY MEETINGS

Contractors and subcontractors are encouraged to conduct daily tailgate safety meetings to discuss the day's work assignments and proper safety precautions. Contractor personnel may attend Company on-the-job safety meetings when held at Company locations, at the discretion of the appropriate Company representative. Prior to beginning an unfamiliar, hazardous or major project, Contractor personnel will conduct a safety meeting to discuss safe procedures and work practices.

2. SMOKING

Smoking is absolutely prohibited at all facilities except in designated smoking areas.

3. SIGNS

Contractor personnel shall be familiar with and comply with signs posted throughout Company facilities.

4. LOCK-OUT/TAG-OUT

All Contractors are required to be familiar with and comply with Company site-specific lock-out/tag-out procedures while working on powered equipment, when performing confined space entry operations, breaking open lines or closed systems, or other operations where the control of potential hazardous energy releases is necessary for personnel safety. Said procedures shall be made available by Company representative as necessary and required.

5. CONFINED SPACE ENTRY

All Contractors performing work involving Confined Space Entry as defined by pertinent OSHA regulations shall be familiar and comply with Company site-specific confined space entry permit procedures. Confined space entry permits shall be issued by Company personnel ONLY, unless otherwise specified by Company Operations Management. All contract personnel involved in Confined Space Entry shall, if requested, demonstrate that they have completed a Confined Space Entry training program meeting 29 CFR 1910.145, or applicable State regulation, prior to performing any Confined Space Entry operations.

6. HOT WORK/OTHER HAZARDOUS WORK

All Contractors conducting Hot Work (including without limitation welding, cutting, grinding) or other Hazardous Work as defined by Company Operations Management are required to be familiar with and comply with Company site-specific Hot Work / Hazardous Work Permit Procedures. ONLY Company personnel shall issue Hot Work / Hazardous Work permits unless otherwise specified by Company Operations Management.

7. HAZARD COMMUNICATION

a. Contractor shall be familiar with and comply with Company site-specific Hazard Communication Program requirements and procedures.

b. Company will provide to Contractor, upon request, an appropriate Material Safety Data Sheet (MSDS) for hazardous chemicals or

materials maintained on a specific site or sites by Company. Such hazardous materials or chemicals will be properly stored and marked in accordance with OSHA Hazard Communications Regulations (29 CRF 1910.1200).

c. Contractor shall provide to Company, upon request, an appropriate MSDS for any hazardous material or chemical, which Contractor brings on site. Such hazardous materials or chemicals will be properly stored and marked in accordance with OSHA Hazard Communication Regulations (29 CRF 1910.1200).

d. Contractor shall provide to Company, upon request, a copy of the contractor's written Hazardous-Communication Program, in compliance with 29 CFR 1910.1200 and/or local state OSHA regulations.

8. PROCESS SAFETY MANAGEMENT

All contractors performing work on or near a Company facility governed by the Process Safety Management regulations (29 CFR 1910.119) will document that they have completed Process Safety Management training prior to performing any work at that facility. Company Operations Management will provide guidelines to the Contractor for this training, if necessary.

9. DEPARTMENT OF TRANSPORTATION

All contractors performing work on or near a Company facility governed by the Department of Transportation regulations (49 CFR Parts 190-199 and/or 49 CFR Part 382) shall have in effect a Drug and Alcohol Prevention Plan which, at a minimum, meets the requirements of those regulations. In addition, if the Contractor provides services that are governed by these regulations, the Contractor must have in effect a current Drug and Alcohol Prevention Plan that meets the requirements of those regulations. Contractor shall provide to the Company, upon request, a copy of the Contractor's written Drug and Alcohol Prevention Plan for review. Contractors providing services governed by these regulations must provide proof of training for Qualified Individuals under their Drug and Alcohol Prevention Plan.

10. HAZWOPER

All Contractors performing work regulated by OSHA HAZWOPER regulations (29 CFR 1910.120) or D.O.T. Hazardous Material regulations (49 CFR Parts 171-181) shall demonstrate that its assigned personnel have completed a training program at or above the level required for the work performed.

11. TRAINING

Contractors are solely responsible for ensuring that their employees are trained in accordance with applicable Federal. State, or local safety and health regulations, and that such training is documented. Such documentation may be subject to review by Company at any time prior to, during, or after the completion of the work throughout the term of this Master Service Contract.

EXHIBIT D

CONSENT DECREE

FOR THE SOUTHERN DISTRICT OF TEXAS

UNITED STATES OF AMERICA Plaintiff, v. PLAINS ALL AMERICAN PIPELINE, L.P.; PLAINS PIPELINE, L.P.; PLAINS MARKETING GP INC.; and PLAINS MARKETING, L.P., Defendants.	)	Civil Action No.

CONSENT DECREE

Plaintiff, United States of America, on behalf of the United States Environmental Protection Agency ("EPA"), has filed a Complaint in this action concurrently with the lodging of this Consent Decree, alleging that the Defendants, Plains All American Pipeline, L.P.; Plains Pipeline, L.P.; Plains Marketing GP Inc.; and Plains Marketing, L.P. (hereinafter collectively referred to as "Plains"), are liable for civil penalties and injunctive relief to the United States pursuant to the Clean Water Act ("CWA" or the "Act"), 33 U.S.C. § 1251 et seq., as amended.

****

Plains neither admits nor denies any liability to the United States arising out of the transactions or occurrences alleged in the Complaint.

The Parties recognize, and the Court by entering this Consent Decree finds, that this Consent Decree has been negotiated by the Parties in good faith and will avoid litigation between the Parties and that this Consent Decree is fair, reasonable, and in the public interest.

NOW, THEREFORE, before the taking of any testimony, without the adjudication or admission of any issue of fact or law except as provided in Section I of this Consent Decree (Jurisdiction and Venue), and with the consent of the Parties, **IT IS HEREBY ADJUDGED, ORDERED, AND DECREED** as follows:

I. JURISDICTION AND VENUE

1. This Court has jurisdiction over the subject matter of this action, pursuant to 28 U.S.C. §§ 1331, 1345, and 1355, and Section(s) 309(b), 309(d), 311(b), and 311(n) of the CWA,

33 U.S.C. §§ 1319(b), 1319(d), 1321(b), and 1321(n). This Court has personal jurisdiction over the Parties to this Consent Decree. Venue is appropriate in this District pursuant to 33 U.S.C. § 1319(b) and 28 U.S.C. §§ 1391(b) and (c), and § 1395(a), because Plains resides, is located, and otherwise may be found in this judicial district, and Plains conducts business in this judicial district. For purposes of this Consent Decree, or any action to enforce this Consent Decree, Plains consents to this Court's jurisdiction and to venue in this judicial district.

2. For purposes of this Consent Decree only, Plains agrees that the Complaint states claims upon which relief may be granted pursuant to CWA Section(s) 309 and 311, 33 U.S.C. §§ 1319 and 1321.

****

II. APPLICABILITY

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7. Plains shall provide a copy of this Consent Decree to all officers and supervisory employees whose duties include compliance with any provision of this Consent Decree. Plains shall provide a copy of Sections V, VI, X, and any other relevant portion of this Consent Decree to any other employee or agent whose duties include compliance with any provision of this Consent Decree, as well as to any contractor retained to perform work required under this Consent Decree. Plains shall condition any such contract upon performance of the work in conformity with the terms of this Consent Decree.

8. In any action to enforce this Consent Decree, Plains shall not raise as a defense the failure by any of its officers, directors, employees, agents, or contractors to take any actions necessary to comply with the provisions of this Consent Decree.

III. DEFINITIONS

9. Terms used in this Consent Decree that are defined in the CWA or in regulations promulgated pursuant to the CWA shall have the same meanings assigned to them in the CWA or such regulations, unless otherwise provided in this Consent Decree. Whenever the terms set forth below are used in this Consent Decree, the following definitions shall apply:

A. "Category I Pipeline(s)" shall mean Pipelines that are regulated pursuant to the Safety Regulations and are not Category II, Category III, or Category IV Pipelines;

B. "Category II Pipeline(s)" shall mean Pipelines that are regulated pursuant to the Safety Regulations and are either Category II-A (Gathering) Pipelines or Category II-B (Low-Stress) Pipelines;

i. "Category II-A (Gathering) Pipeline(s)" shall mean any section of Category II Pipeline that meets all of the following criteria:

a. Has a nominal diameter from 6 5/8 inches (168 mm) to 8 5/8 inches (219.1 mm);

b. Is located in or within one-quarter mile (.4 km) of any Unusually Sensitive Area; and

c. Operates at a maximum pressure established under 49 C.F.R. § 195.406 corresponding to:

1. A stress level greater than 20-percent of the specified minimum yield strength of the Pipeline; or

2. If the stress level is unknown or the Pipeline is not constructed with steel pipe, a pressure of more than 125 psi (861 kPa) gage.

ii. "Category II-B (Low-Stress) Pipeline(s)" shall mean any section of Category II Pipeline that meets all of the following criteria:

a. Has a nominal diameter of 8 5/8 inches (219.1 mm) or more;

b. Is located in or within one-half mile (.8 km) of any Unusually Sensitive Area; and

c. Operates at a maximum pressure established under 49 C.F.R. § 195.406 corresponding to:

1. A stress level equal to or less than 20-percent of the specified minimum yield strength of the Pipeline; or

2. If the stress level is unknown or the Pipeline is not constructed with steel pipe, a pressure equal to or less than 125 psi (861 kPa) gage.

C. "Category III Pipeline(s)" shall mean Pipelines that are not regulated pursuant to the Safety Regulations and are either Category III-A (Gathering) Pipelines or Category III-B (Low-Stress) Pipelines;

i. "Category III-A (Gathering) Pipeline(s)" shall mean any section of Category III Pipeline that meets all of the following criteria:

a. Has a nominal diameter from 6 5/8 inches (168 mm) to 8 5/8 inches (219.1 mm);

b. Is located in or within one-quarter mile (.4 km) of any High Consequence Area; and

c. Operates at a maximum pressure established under 49 C.F.R. § 195.406 corresponding to:

1. A stress level greater than 20-percent of the specified minimum yield strength of the Pipeline; or

2. If the stress level is unknown or the Pipeline is not constructed with steel pipe, a pressure of more than 125 psi (861 kPa) gage.

ii. "Category III-B (Low-Stress) Pipeline(s)" shall mean any section of Category III Pipeline that meets all of the following criteria:

a. Has a nominal diameter of 8 5/8 inches (219.1 mm) or more;

b. Is located in or within one-half mile (.8 km) of any High Consequence Area; and.

c. Operates at a maximum pressure established under 49 C.F.R. § 195.406 corresponding to:

1. A stress level equal to or less than 20-percent of the specified minimum yield strength of the Pipeline; or

2. If the stress level is unknown or the Pipeline is not constructed with steel pipe, a pressure equal to or less than 125 psi (861 kPa) gage.

D. "Category IV Pipeline(s)" shall mean all Pipeline other than Category I Pipeline(s), Category II Pipeline(s), or Category III Pipeline(s);

E. "Centerline Verification" shall mean the process of validating the accuracy of the Pipeline centerline in the Geographic Information System ("GIS")

spatial database to its true global location so as to comply with the National Pipeline Mapping System ("NPMS") quality rating of "G" (good) or better;

F. "Complaint" shall mean the complaint filed by the United States in this action;

G. "Consent Decree" shall mean this Consent Decree and all appendices attached hereto;

H. "Day" shall mean a calendar day unless expressly stated to be a business day. In computing any period of time under this Consent Decree, where the last day would fall on a Saturday, Sunday, or federal holiday, the period shall run until the close of business of the next business day;

I. "Defendants" shall mean Plains All American Pipeline, L.P.; Plains Pipeline, L.P.; Plains Marketing GP Inc.; and Plains Marketing, L.P. (collectively referred to herein as "Plains");

J. "EPA" shall mean the United States Environmental Protection Agency and any of its successor departments or agencies;

K. "Effective Date" shall have the definition provided in Section XIV of this Consent Decree;

L. "High Consequence Area(s)" or "HCA(s)" shall have the same meaning as described in 49 C.F.R § 195.450;

M. "Listed Discharges" shall mean the discharges of crude oil from Plains' Pipelines and Replacement and/or Substitute Breakout Tanks into the environment that are listed in Appendix A to this Consent Decree;

N. "Paragraph" shall mean a portion of this Consent Decree identified by an Arabic numeral;

O. "Parties" shall mean the United States and Defendants;

P. "PHMSA" shall mean the Pipeline and Hazardous Materials Safety Administration, currently an agency of the United States Department of Transportation, and any of its successor departments or agencies;

Q. "Pipeline" shall mean any pipe operated by Plains in the United States used for crude oil service, other than intra-facility flowlines, intra-facility

gathering lines, or Pipeline permanently removed from service (emptied of crude oil and purged); provided that, if any Pipeline removed from service is subsequently put back into crude oil service, the Pipeline shall be subject to all applicable requirements of this Consent Decree;

R. "Plaintiff" shall mean the United States;

S. "Replacement and/or Substitute Breakout Tank(s)" shall mean any aboveground crude oil tank owned and/or operated by Plains that is used as a replacement and/or substitute (regardless of whether it is a permanent, temporary, or stand-by replacement or substitute) for an existing breakout tank used to relieve surges in Pipelines, including but not limited to relief tanks.

T. "Safety Regulations" shall mean the PHMSA regulations promulgated at 49 C.F.R. Part 195, as in effect on the Effective Date;

U. "Section" shall mean a portion of this Consent Decree identified by a roman numeral;

V. "Segment" shall mean a discrete section of a Pipeline that is bounded and defined by instrumentation, such as meters, or by physical features, such as valves;

W. "Slack-Line Operations" shall mean Pipeline operating conditions during which a given Segment of Pipeline is not entirely filled with oil or is partly void;

X. "United States" shall mean the United States of America, acting on behalf of EPA; and

Y. "Unusually Sensitive Area(s)" or "USA(s)" shall have the same meaning as described in 49 C.F.R § 195.6.

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V. COMPLIANCE REQUIREMENTS

14. Until termination of this Consent Decree, Plains shall implement or continue to implement the measures contained in this Section with the objective of preventing future unauthorized discharges of crude oil from Plains' Pipelines and Replacement and/or Substitute Breakout Tanks.

15. **Enhanced Integrity Management and Corrosion Control**.

A. IMP Requirements for Category I, Category II-B, and Category III-B Pipelines. Plains shall assess, operate, and maintain all Category I, Category II-B, and Category III-B Pipelines in accordance with the requirements of Plains' IMP, subject to the requirements of sub-paragraph 15.G.

B. RSP Screening of Category II-A, Category III-A, and Category IV Pipelines. Plains shall assess, operate, and maintain all Category II-A, Category III-A, and Category IV Pipelines in accordance with the requirements of Plains' RSP, subject to the requirements of sub-paragraph 15.G. Plains shall develop and implement action plans detailing risk mitigation actions to address the risks or other anomalies found during the RSP in accordance with the risk category schedule set forth in Section 7 of Plains' RSP (or the corresponding section(s) of any updated versions of Plains' RSP).

C. Integrity Management of Category II and Category III Pipelines.

i. Category II-A and Category III-A (Gathering) Pipelines. For all Category II-A and Category III-A Pipelines as of the Effective Date of this Consent Decree, Plains shall operate and maintain such Pipelines in conformity with the safety requirements for rural gathering pipelines established in 49 C.F.R. 195.11(b); provided, however, that with respect to the specific provisions listed below, Plains shall also meet the following accelerated schedules:

a. By no later than the Effective Date, Plains shall identify all Segments of Pipeline meeting the definition of either a Category II-A or Category III-A Pipeline; and

b. By no later than the Effective Date, Plains shall develop and implement a continuing public education program as described in 49 C.F.R. § 195.440; and

c. By no later than July 3, 2010, Plains shall develop and implement a corrosion control program as described in 49 C.F.R. Part 195, subpart H.

ii. Category II-B and Category III-B (Low-Stress) Pipelines. In addition to the requirements of sub-paragraph 15 .A, for all Category II-B and

Category III-B Pipelines as of the Effective Date of this Consent Decree, Plains shall:

a. By no later than the Effective Date, identify all Segments of Pipeline meeting the definition of either a Category II-B or Category III-B Pipeline; and

b. By no later than July 3, 2013, Plains shall complete baseline assessments of all Category II-B and III-B Pipelines in conformity with 49 C.F.R. § 195.452(c). By no later than January 3, 2011, Plains shall complete at least 50-percent of these baseline assessments (based on the total mileage of Category II-B and III-B Pipeline to be assessed), beginning with the highest risk pipe; and

c. By no later than July 3, 2010, Plains shall develop and implement a corrosion control program as described in 49 C.F.R. Part 195, subpart H.

D. New Pipeline Acquisitions.

i. Initial Screening. Plains shall complete initial screening of all Category II-A, Category III-A, and Category IV Pipeline(s) purchased or otherwise acquired by Plains after July 1, 2009, in accordance with Plains' RSP, pursuant to the following schedule:

a. Provided that digital maps with Centerline Verification of the Pipeline(s) purchased or otherwise acquired are available to Plains, Plains shall complete initial screening of no less than 1,000 miles of Pipeline per twelve-month period from the date of each purchase or acquisition until all such newly purchased or acquired Pipeline is screened; or

b. If digital maps with Centerline Verification are not available for any portion of the Pipeline(s) purchased or otherwise acquired, Plains shall complete initial screening of all Pipeline(s) with digital maps and Centerline Verification at a rate of no less than 1,000 miles of Pipeline per twelve-month period from the date of each purchase or acquisition until all such newly purchased or acquired Pipeline is screened. After completing initial screening of all such Pipeline(s) with digital mapping and Centerline Verification, Plains shall complete GIS digital mapping, Centerline Verification, and initial screening of no less than 500 miles of Pipeline without digital mapping and Centerline Verification per twelve-month period from the date initial screening of the Pipeline(s) with digital mapping and Centerline Verification is complete until all such purchased or acquired Pipeline(s) is digitally mapped, Centerline-Verified and screened.

c. For purposes of determining the rate and deadline for completing initial screening under this sub-paragraph 15. D., the availability of digital maps with Centerline Verification shall be determined individually for each separate purchase or acquisition of Pipeline. If Plains makes additional purchases or acquisitions of Pipeline

before completing initial screening of an earlier purchase or acquisition covered by this sub-paragraph 1 5.D., Plains shall complete initial screening of all Pipelines purchased or otherwise acquired at an overall rate of no less than 1,000 miles of Pipeline per twelve-month period until only one set of Pipeline(s) purchased or acquired remains to be initially screened, in which case Plains shall complete initial screening of the remaining set of Pipeline(s) in accordance with sub-paragraph 15.D.i.a or 15.D.i.b., as applicable.

ii. Integrity Management of Newly Purchased or Acquired Category II and Category III Pipelines. Plains shall determine the proper Category for newly purchased or acquired Pipeline(s) at the time of purchase or acquisition, and based on mapping available at that time. For any Category II or Category III Pipelines purchased or otherwise acquired after the Effective Date of this Consent Decree, Plains shall also comply with the requirements of sub-paragraph 15.C. by the specified deadlines if the deadline for a particular requirement will not pass within six months from the date of purchase or acquisition. If a deadline specified in sub¬paragraph 15.C. has already passed or will pass within six months from the date of purchase or acquisition, Plains shall comply with the requirements of sub-paragraph 15.C., as well as sub-paragraph 15.A for Category II-B and III-B Pipeline(s), within six months from the date of purchase or acquisition. If subsequent centerline verification requires that a newly purchased or acquired Pipeline be designated under a different Category, Plains shall have six months from the date of such re-categorization to comply with the requirements of this Paragraph.

E. Geographic Information Systems ("GIS") Mapping. By no later than July 1, 2010, Plains shall complete initial digital GIS mapping and Centerline Verification of all Pipelines operated by Plains as of May 1, 2010. For any Pipeline(s) purchased or acquired by Plains after May 1, 2010, Plains shall complete initial digital GIS mapping and Centerline Verification of all such Pipelines in accordance with the schedules and requirements provided in sub-paragraph 15 .D.i.b.

F. Anode Beds, Internal Corrosion Control, and Close Interval Surveys. Plains shall spend no less than a total of $6,000,000 during the two-year period including calendar years 2010 and 2011 on the following activities to mitigate threats posed by corrosion of Plains' Pipeline(s): (i) replacement or installation of no fewer than 120 anode beds and/or rectifiers; (ii) installation of equipment to inject corrosion inhibitor and biocides for internal corrosion control, and (iii) performance of close interval surveys on no fewer than 2400 miles of Pipeline.

G. Subsequent Revisions to Plains' IMP or RSP.

i. From the Effective Date until the termination of this Consent Decree, Plains shall not implement any material changes to Plains' IMP or RSP

that are less protective of navigable waters and/or adjoining shorelines, as those terms are defined in 33 U.S.C. § 1362 and any implementing regulations, without prior written approval from EPA. For the purpose of this Consent Decree, "material changes" shall mean any change that:

a. removes the designation of any Segment of Pipeline that, as of the Effective Date, Plains has designated as one that "could affect a HCA," or removes this designation from any Segment of Pipeline that Plains is required to so designate pursuant to the requirements of this Consent Decree, except with respect to a Pipeline or Segment of Pipeline that is permanently removed from service after the Effective Date by emptying it of all crude oil and purging it; or

b. reduces the stringency of the Pipeline risk assessment, evaluation, and repair procedures, methods, and criteria established in Plains' IMP and/or RSP such as:

1. baseline assessment or risk screening procedures and methods;

2. requirements for implementing and/or re-assessing RSP Action Plans, as well as the underlying Pipeline preventative and mitigative measures; or

3. extends the required timeframes for performing any of the actions described in this sub-paragraph 15.i.b.

ii. Within 90 Days after receiving notice from EPA that Plains has made a material change to its IMP or RSP in a manner that EPA has determined to be less protective of navigable waters, or within such other time as agreed to by EPA, Plains shall implement its former IMP or RSP, or shall implement modifications that EPA determines are equivalent to the former provisions of Plains' IMP or RSP.

16. **Enhanced Pipeline Leak Detection**.

A. Weekly Aerial Patrols. Plains shall conduct weekly aerial patrols (weather permitting) of all Category I Pipeline(s), Category, II-A Pipeline(s), Category II-B Pipeline(s), and Category III-B Pipeline(s), including any such Pipeline purchased or otherwise acquired after the Effective Date of this Consent Decree to identify indications of a leak or spill of oil. Plains shall also conduct weekly aerial patrols (weather permitting) of all Pipeline Segments in the systems from which the discharges listed in Appendix A occurred. At its option, Plains may conduct the weekly patrols (weather permitting) on foot or by motorized vehicle, provided that, in such instances, Plains shall visually inspect surface conditions over the entire Pipeline right-of-way that would otherwise be flown in order to identify indications of a leak or spill of oil.

B. Implementation of API 1130 Compliant CPM Leak Detection. Plains will comply with the performance standards for Computational Pipeline Monitoring ("CPM") Leak Detection described in API 1130 on the Segments of Pipeline identified in "Appendix B," for so long as those Segments of Pipeline are in service. By no later than December 31, 2011, Plains shall install CPM equipment on an additional 30 Segments of Pipeline and operate such Segments of Pipeline and CPM equipment in accordance with API1130.

C. Enhancement of API 1130 Compliant CPM Leak Detection and Minimization of Slack-Line Operations.

i. Investigation. By no later than December 31, 2011, Plains shall complete and document an investigation of the Pipeline Segments listed on Appendix B (and any Segments added to CPM pursuant to sub-paragraph 1 6.B) that is designed to identify potential enhancements to Plains' leak detection capabilities and measures to minimize Slack-Line Operations and/or mitigate the effects of Slack-Line Operations on the CPM leak detection systems on those Pipeline Segments. This investigation shall incorporate, but is not limited to, an evaluation of the following elements:

a. Reviewing both the migration of the CPM Pipeline Segments listed on Appendix B to, and the implementation of the additional 30 new CPM Pipeline Segments referenced in sub-paragraph 1 6.B in, the Telvent OASySTM DNA Pipeline Monitoring (PLM) CPM application used in Plains' Midland, TX Operational Control Center;

b. Examining Slack-Line Operations on all Pipeline Segments subject to this sub-paragraph 16.C, including an analysis of whether reduction or elimination of Slack-Line Operation is practicable, and the effect of such reduction or elimination on leak detection capability. The examination of Slack-Line Operations shall include, but is not limited to, an evaluation of:

1. Slack-Line Operations during "shut-in" and flowing Pipeline operating conditions, including by reviewing recent and relevant over/short measurements;

2. The amount of slack volume during "shut-in" and flowing Pipeline operating conditions;

3. The amount of time required to refill the Pipeline(s) during "start-up" operations;

4. The ability of the CPM systems to adhere to API 1130 considering the effect of Plains' Slack-Line Operations and over/short

measurement capabilities on CPM leak detection capabilities; and

5. Measures to minimize Slack-Line Operations and/or mitigate the effects of Slack-Line Operations on the CPM leak detection systems. Such measures may include, but are not limited to, consideration and implementation of one or more of the following for each Segment of Pipeline:

    A. No action required, provided that current CPM leak detection system tolerances are adequate to detect leaks and/or spills given the Pipeline's Slack-Line Operations or Slack-Line Operations are not present;
    B. Revision of operating procedures for the applicable Segment of Pipeline, including the "start-up" and "shut-in" procedures;
    C. Installation of valves or pressure control devices to provide additional back-pressure, taking into consideration the limitations of the Segment of Pipeline and connecting facilities to safely contain such pressure; and
    D. Adjusting the CPM alarm limits to account for the expected refilling of the slack volumes so that leaks or spills are detected, but false indicators are avoided.

c. Historical SCADA data or other available data to identify and examine uncertainties and/or variability in measured Pipeline flow rates, operating pressures, temperatures, tank levels, and/or Pipeline operations in order to: (i) determine Plains' CPM leak detection capability and (ii) determine achievable Pipeline Segment alarm limits that do not result in excessive nuisance alarms.

ii. Action Plans. Based on the findings of the investigation described above, Plains shall develop action plans as the investigation progresses. Such action plans shall include one or more of the measures identified in sub-paragraph 16.C.i.b.5. and any other actions that Plains may also take to improve the leak detection system and/or minimize Slack-Line Operations. Plains shall complete the development of all action plans by no later than March 31, 2012. Plains shall complete implementation of all enhancements to the CPM leak-detection capabilities and/or Slack- Line Operations identified in the action plans prior to Plains submitting a request for termination of this Consent Decree.

17. **Requirements for Replacement and/or Substitute Breakout Tanks**.

A. By no later than the Effective Date of the Consent Decree, Plains' Replacement and/or Substitute Breakout Tanks must meet the following requirements:

i. Requirement for "Sufficient Capacity": All Replacement and/or Substitute Breakout Tanks must meet the design capacity requirements specifically needed to receive and safely contain oil from surges, pressure relief events, operational upsets, or other abnormal events in the associated pipeline system, as well as any applicable design capacity requirements necessary to comply with good engineering practice.

ii. Requirement for "Secondary Containment":

a. "Secondary Containment" for Replacement and/or Substitute Breakout Tanks shall mean secondary containment and/or other diversionary structures sufficient to contain the entire capacity of the Replacement and/or Substitute Breakout Tank and sufficient freeboard to contain precipitation. In all cases, the entire system for Secondary Containment, including walls and floor, must be sufficiently impervious so as to contain oil, and must be constructed so that any discharge from the primary containment system will not escape the system for Secondary Containment before cleanup occurs; and

b. All Replacement and/or Substitute Breakout Tanks must be properly located within Secondary Containment areas until the tank is permanently closed. The Secondary Containment requirement shall apply regardless of whether the Replacement and/or Substitute Breakout Tank is being used for supplemental storage capacity during an abnormal event and existing Secondary Containment is not available. In such circumstances, Secondary Containment must be constructed and the Replacement and/or Substitute Breakout Tank must be properly located within such Secondary Containment areas until the Replacement and/or Substitute Breakout Tank is permanently closed.

18. **Personnel and Training**.

A. Plains will preserve and staff the following employee positions until at least July 31, 2011:

i. PHMSA/IMP Records Coordinator and five records specialists;

a. Pipeline Integrity Coordinator for Non-PHMSA Regulated Pipelines;

ii. Pipeline Integrity Coordinator for Internal Inspection;

iii. Senior Measurement and Quality Control Manager;

iv. Pipeline Control Center Training Supervisor;

v. Control Center Shift and Console Supervisors;

vi. One Call Administrator; and

vii. Two Leak Detection Engineers.

B. If an employee filling any of the positions listed above in sub-paragraph 18.A is not able to perform his/her duties for an extended period of time, is terminated, or leaves his/her employment with Plains, Plains shall designate an alternate employee as soon as possible who is capable of performing all duties, responsibilities, and authorities required by the position until the original employee is able to resume his/her position or a new full-time replacement is employed by Plains.

C. Plains shall train all employees assigned to operate and maintain Category III-A and Category IV Pipelines in conformity with the Operator Qualification requirements of 49 C.F.R. 195, subpart G. Plains shall also conduct mandatory pre-screening testing for all new pipeline controller applicants using a computer simulator- based console operator assessment.

19. Plains shall train field personnel performing Pipeline maintenance on proper Pipeline cleaning techniques and procedures.

20. Permits. Where any compliance obligation under this Section requires Plains to obtain a federal, state, or local permit or approval, Plains shall submit timely and complete applications and take all other actions necessary to obtain all such permits or approvals. Plains may seek relief under the provisions of Section VIII of this Consent Decree (Force Majeure) for any delay in the performance of any such obligation resulting from a failure to obtain, or a delay in obtaining, any permit or approval required to fulfill such obligation, if Plains has submitted timely and complete applications and has taken all other actions necessary to obtain such permit or approval.

VI. REPORTING REQUIREMENTS

21. Plains shall submit the following reports to the persons designated in Section XIII of this Consent Decree (Notices):

A. By no later than six months after the Effective Date, and every sixth months thereafter until this Consent Decree terminates pursuant to Section XVII of this

Consent Decree (Termination), Plains shall submit a semi-annual report to EPA that shall discuss, for the preceding six months: (i) the status of the compliance measures required under Section V of this Consent Decree; (ii) a detailed listing of the specific items for which expenditures required under sub-paragraph 15.F. were made; (iii) Plains' progress regarding the completion of any required milestones under this Consent Decree, including, but not limited to summaries of the RSP Action Plans required pursuant to sub-paragraph 15.B. and a description of actions taken pursuant to the RSP Action Plans during the preceding six months; (iv) summaries of each action plan developed pursuant to sub-paragraph 16.C.ii. and a description of actions taken to implement the action plans during the preceding six months; (v) any problems encountered or anticipated in complying with this Consent Decree, as well as implemented or proposed solutions; (vi) the status of any necessary permit applications; (vii) a listing and description of any material changes Plains has made to its IMP or RSP (including a copy of any amendments thereto); and (viii) the total miles of Pipeline purchased, acquired, or sold during the preceding six months, if any.

B. The reports required under this Section shall also include a description of any non-compliance with the requirements of this Consent Decree and an explanation of the violation's likely cause and of the remedial steps taken, or to be taken, to prevent or minimize such violation. If the cause of a violation cannot be fully explained at the time the report is due, Plains shall so state in the report. Plains shall investigate the cause of the violation and shall then submit an amendment to the report, including a full explanation of the cause of the violation, within 30 Days of the Day Plains becomes aware of the cause of the violation. Nothing in this Paragraph or the following Paragraph relieves Plains of its obligation to provide the notice required by Section VIII of this Consent Decree (Force Majeure).

22. Each report submitted by Plains under this Section shall be signed by an official of the submitting party and shall include the following certification:

> I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on any personal knowledge I may have and my

inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

23. The reporting requirements of this Consent Decree do not relieve Plains of any reporting obligations required by the CWA or implementing regulations, or by any other federal, state, or local law, regulation, permit, or other requirement.

24. Any information provided pursuant to this Consent Decree may be used by the United States in any proceeding to enforce the provisions of this Consent Decree and as otherwise permitted by law.

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X. INFORMATION COLLECTION AND RETENTION

44. The United States and its representatives, including attorneys, contractors, and consultants, shall have the right of entry with respect to Plains' Pipeline and/or Replacement and/or Substitute Breakout Tanks or any other facility covered by this Consent Decree, at all reasonable times, upon presentation of credentials, to:

1. monitor the progress of activities required under this Consent Decree;
2. verify any data or information submitted to the United States in accordance with the terms of this Consent Decree;
3. obtain samples and, upon request, splits of any samples taken by Plains or its representatives, contractors, or consultants;
4. obtain evidence, including documents, photographs, and other data; and
5. assess Plains' compliance with this Consent Decree.

45. Upon request, Plains shall provide EPA or its authorized representatives splits of any samples taken by Plains. Upon request, EPA shall provide Plains splits of any samples taken by EPA.

46. Notwithstanding the provisions of Section XVII of this Consent Decree (Termination), until five years after the termination of this Consent Decree, Plains shall retain, and shall instruct its contractors and agents to preserve, all documents, records, or other information

(including documents, records, or other information in electronic form) in its or its contractors' or agents' possession or control, or that come into its or its contractors' or agents' possession or control, and that are generated in connection with or as part of Plains' performance of its obligations under this Consent Decree. This information-retention requirement shall apply regardless of any contrary corporate or institutional policies or procedures. At any time during this information-retention period, upon request by the United States, Plains shall provide copies of any documents, records, or other information required to be maintained under this Paragraph, subject to the assertion of privilege as described in Paragraph 47.

47. At the conclusion of the information-retention period provided in the preceding Paragraph, Plains shall notify the United States at least 90 Days prior to the destruction of any documents, records, or other information subject to the requirements of the preceding Paragraph and, upon request by the United States, Plains shall deliver any such documents, records, or other information to EPA within 30 days of the United States' request. Plains may assert that certain documents, records, or other information are privileged under the attorney-client privilege or any other privilege recognized by federal law. If Plains asserts such a privilege, it shall provide the following: (1) the title of the document, record, or information; (2) the date of the document, record, or information; (3) the name and title (if the title is available) of each author of the document, record, or information; (4) the name and title (if the title is available) of each addressee and recipient; (5) a description of the subject of the document, record, or information; and (6) the privilege asserted by Plains. However, any underlying documents, records, or other information from which Plains has compiled the semi-annual reports required under Section VI of this Consent Decree (Reporting Requirements) or any other submission required by this Consent Decree shall not be withheld on grounds of privilege.

48. Plains may also assert that information required to be provided under this Section is protected as Confidential Business Information ("CBI") under 40 C.F.R. Part 2. As to any information that Plains seeks to protect as CBI, Plains shall follow the procedures set forth in 40 C.F.R. Part 2.

49. This Consent Decree in no way limits or affects any right of entry and inspection, or any right to obtain information, held by the United States pursuant to applicable federal laws,

regulations, or permits, nor does it limit or affect any duty or obligation of Plains to maintain documents, records, or other information imposed by applicable federal or state laws, regulations, or permits.

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XVII. TERMINATION

66. By no earlier than July 31, 2013, and after Plains has completed performance of its obligations required by this Consent Decree, including Section IV (Civil Penalty), Section V (Compliance Requirements), Section VI (Reporting Requirements), and the payment of any accrued stipulated penalties, Plains may submit to the United States a written Request for Termination, stating that Plains has satisfied those requirements, together with all necessary supporting documentation.

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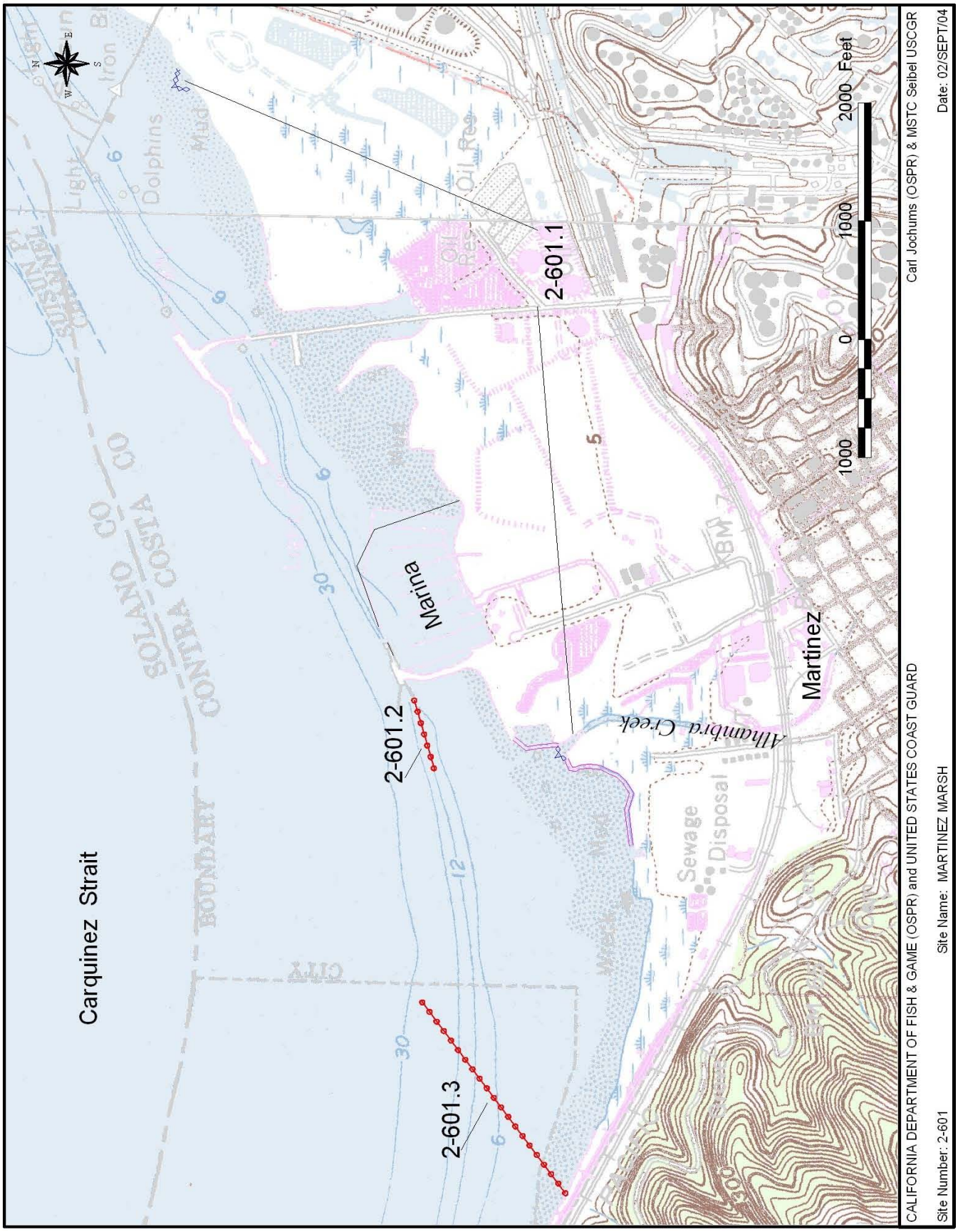
ERAP

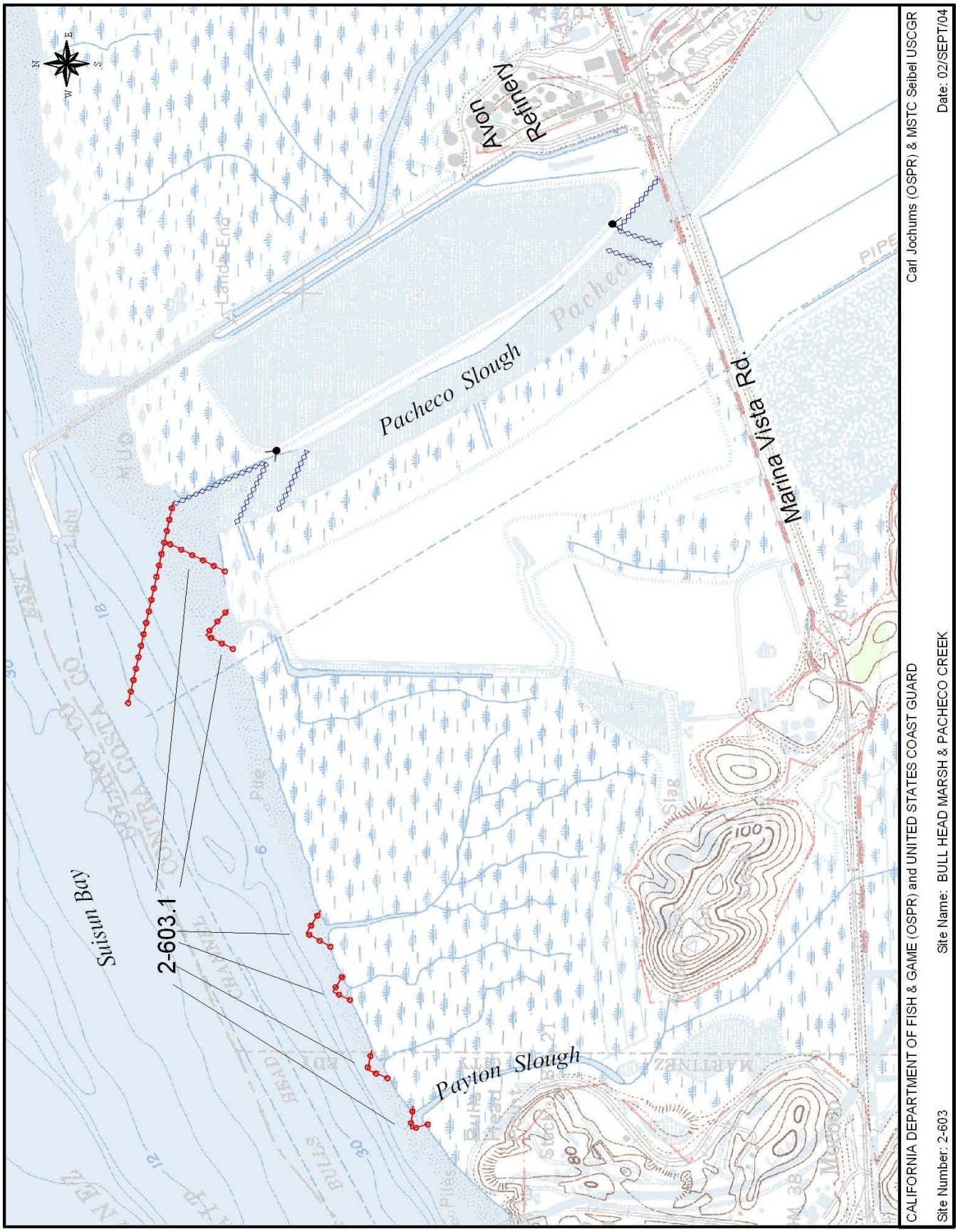
LINK FILES

2-601 -A Strategy Diagram- Martinez Marsh 2-601 -A



Harbor / Curtain Boom
Swamp / River Boom
all other boom types
Sorbent boom
Berm, Dam, or Dike
Filter fence
Boom tow
SSS - Shoreside Skimming System
SFS - Stationary Floating Skimmer
SPS - Self Propelled Skimmer
TSA - Towed Skimming Array

2-603 -A Strategy Diagram- Bulls Head Marsh and Pacheco Creek 2-603 -A



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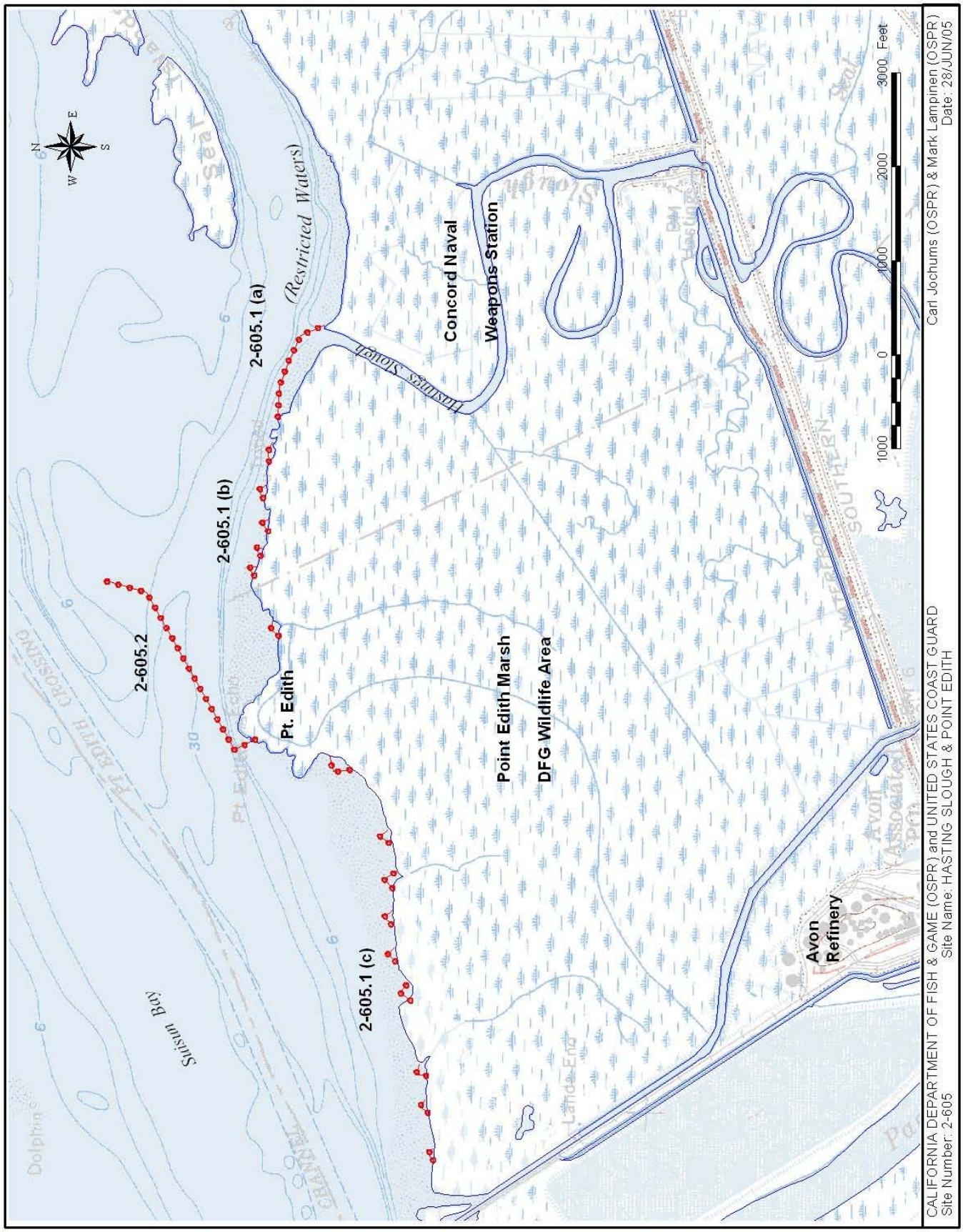
2-605 -A Strategy Diagram- Hastings Slough & Point Edith Marshes 2-605 -A



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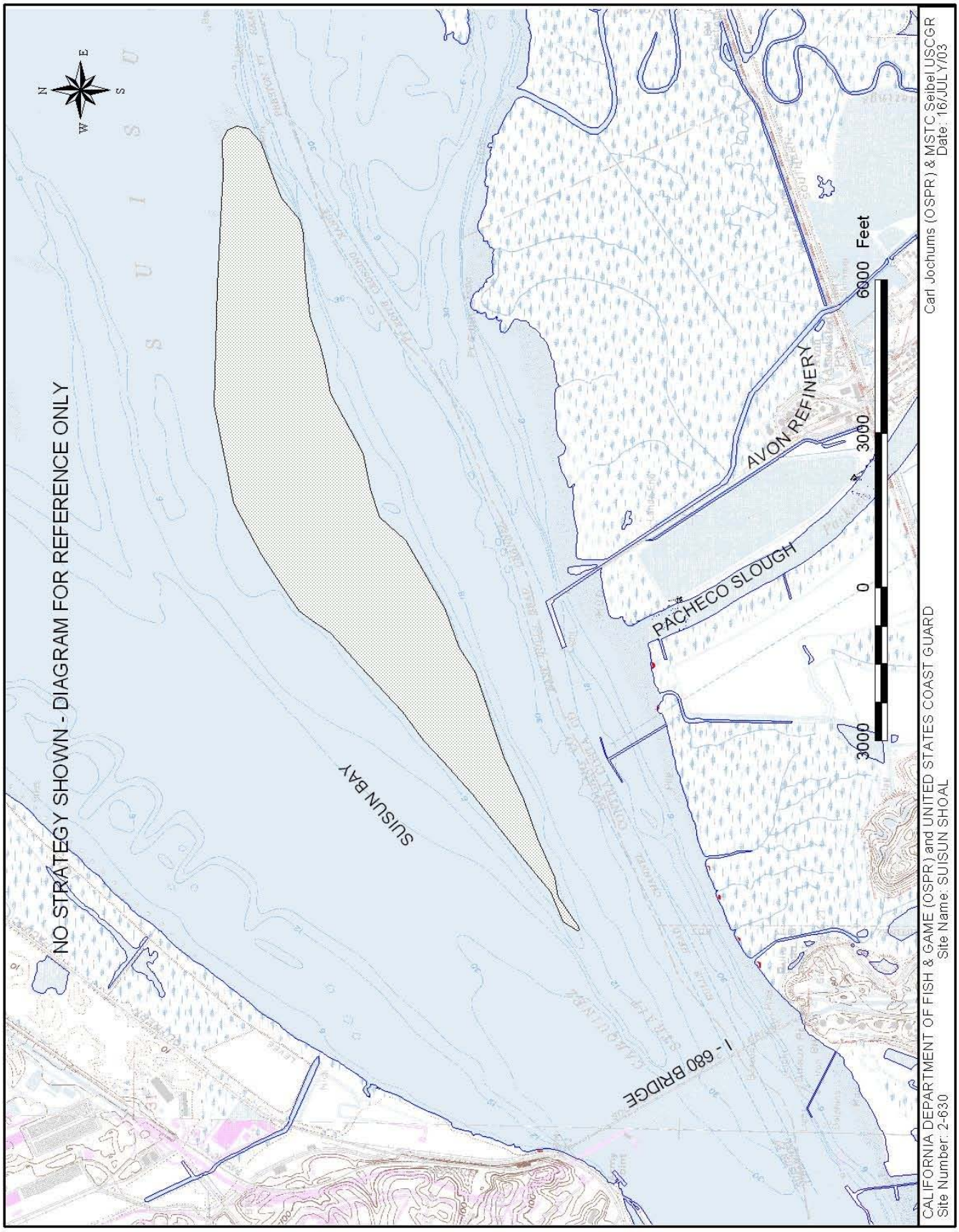
TSA - Towed Skimming Array

2-630 -B/C Strategy Diagram- Suisun Shoal

2-630 -B/C



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SPS - Self Propelled Skimmer
TSA - Towed Skimming Array

2-601 -A Site Summary- Martinez Marsh 2-601 -A

County:	Contra Costa	Thomas Guide Location	Latitude N	Longitude W
USGS Quad:	Benicia	NOAA Chart: 18656 Suisun Bay	(b) [redacted]	[redacted]

Last Page Update : 1/1/2000

SITE DESCRIPTION:

This site includes the marshes and waterfront from the Benicia-Martinez Bridge to the Ozol pier. This site has pickleweed saltmarshes on both the east and west side of the Martinez marina. The marshes are prograding with emergent species along the very shallow margins. The marsh to the east behind the Shell Oil terminal has some diked impoundments and has a small channel leading back into the marsh. West of the Marina, Alhambra Creek opens to the marsh and has marshy vegetation along some of its length upstream. The shoreline vegetation from Alhambra Creek to Ozol Terminal grades from marsh to riprap. The marsh around the mouth of Alhambra Creek is East Bay Regional Parks shoreline.

SEASONAL and SPECIAL RESOURCE CONCERN

Marshes are A-priority at all times. Threatened and endangered species may be present throughout this site.

RESOURCES OF PRIMARY CONCERN

Pickleweed marshes with emergent marsh margins are on both sides of the marina. Shelter tidal flats in front of the marshes provide habitat for infauna and foraging for birds and fish. The riprap at the western edge along the railroad tracks has low sensitivity.

Marshes provide habitat for marsh birds, ducks, shorebirds, and in winter migratory waterfowl. Clapper rail and black rails may use these marshes occasionally.

Both the endangered salt marsh harvest mouse and endangered salt marsh wandering shrew are found here.

Two rare plants are found here: soft bird's beak and Delta tule pea.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
B	Peter Baye, Ph.D. Coastal Plant Ecologist		(415) 310-5109
	Joseph Didonato Stewardship Manager	East Bay Regional Park District	(510) 544-2346
	EBRP Dispatch EBRP	East Bay Regional Park District	(510) 881-1833
B	Mike Josselyn	NOAA, National Marine Fisheries Service	(415) 454-8868
B	Jerry Karr	Audubon Society, Solano County Chapter	(707) 643-7089
B	Jan Knight	US Fish and Wildlife Service	(916) 978-4866
B	Niall F. McCarten, Ph.D.	Jones & Stokes Associates, Inc.	(916) 737-3000
B,O	Bill Nichols	East Bay Regional Park District	(925) 228-0112
	Mark Ragatz Shoreline Parks Manager	East Bay Regional Park District	(510) 715-7784

ADDITIONAL SITE SUMMARY COMMENTS:

2-601 -A Site Strategy - Martinez Marsh 2-601 -A

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Contra Costa	18656 Suisun Bay	(b)	(b)

Last Page Update : 10/1/2005

CONCERNS and ADVICE to RESPONDERS:

Primary concerns are oiling of marsh east and west, intrusion of oil up Alhambra Creek in the west side marsh, and intrusion up the tidal channel in the east side marsh. Exclude oil from both channels and divert oil away from marshes to catchments or to main channel. Avoid trampling marsh vegetation: rare plants and small endangered mammals are present. Avoid trampling oil into muds. Protect marsh frontage from oil as directed.

HAZARDS and RESTRICTIONS:

Air - Martinez Bridge power lines; Boats - shallow water & currents; ground traffic - railroad tracks, soft substrate

SITE STRATEGIES

Waters west and inshore from Martinez Marina are an eddy and have low current. This slow velocity water extends past OZAL pier. Currents from marina out are very stong. Near shore on both sides of Marina, particularly close to creek mouths is very shallow.

Strategy 2-601.1 Objective: Primary: on the flood tide, exclusion booming mouth Alhambra Creek, other tidal channels, and protect nearby shoreline

a) Exclusion booming Alhambra Creek: 200' of swamp boom in a chevron configuration backed by sorbent boom at the inlet to .
b) Protection booming: Deploy 1100' of sorbent boom along the marsh to the west of Martinez Marina (both sides of creek but mostly on the west side.)
c) Exclude oil from entering the small tidal inlet to the marsh east of the marina with boom and sorbent (50' 4X4+). Tidal inlet mouth is located between Shell and Amoco Terminals/Shore Terminal wharf at bridge.

Strategy 2-601.2 Objective: Deflection for the ebb tide, deflect oil away from and past Alhambra Creek & marsh with boom from old ferry slip

Deploy 600' of deflection boom extending west from inside the old ferry slip at Ferry Point (the pier), Martinez Marina. Set deflection angle into the current as may be possible under prevailing conditions.

Strategy 2-601.3 Objective: Deflection for the Flood Tide: deflect away from Martinez shore

Deflect oil away from shoreline with 2000' 8X8+ Hboom. From the shoreline about a half mile west of treatment plant, deploy boom at a diagonal to the 15' depth contour.

Strategy 2-601.4 Objective: Protection Shoreline Booming: If there is threat of heavy oiling and saturation of the marsh front, deploy protective boom coverage, when resource use will not preclude defending other sites against SO 5 and 6 impacts.

Deploy exclusion boom along the marsh front from the Benicia Bridge to the marina and from Alhambra Creek to the riprap to the west.

Deploy 5200' of protective boom (4X4+) be deployed between Suisun Point and the Martinez Marina seawall, and deploy 3300' of protective boom (9X9+ or 4X4+ depending on presence of wind and chop) from Ferry Point at Martinez Marina to 1000 yards west where marsh ends and riprap begins. Deploy close to shore where shallows will aid with wind chop spillover problems; if there are wind chop conditions, boom layers will need to be backed with a second layer of 4X4+ boom. Because the water is so shallow, very shallow boom boats and skiffs will be required due to grounding and stranding hazards. (A similar strategy for deployment of exclusion boom is illustrated in "Potential Oil Spill Protection Strategies for San Francisco Bay, California" (Hayes and Montello, 1994).)

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No	Special Equipment and kinds	staff deploy	Staff tend
2-601.1	0	250		1300	1	1/12#+/ anchor & stakes	0	1				boat capable of shallow grounding	2	
2-601.2	600				1	1/22+/danforth + 20' chain	1	0					3	
2-601.3	2000				4	4/22+/danforths	3	1					11	
2-601.4	0	8500			9	9/12/danforths & stakes	3	3				bboats - very shallow, strandable.	15	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Proceed on Hwy 680 toward Martinez and exit on Marina Vista just south of the Benicia-Martinez toll bridge and drive west to city center. Turn right and drive across the railroad tracks to Martinez Marina. Marshes are on both sides of the Marina and park. There are access points at the Marina Vista Park (contact East Bay Regional Parks Dispatch). There is also unimproved shoreline access along the Souther Pacific Rail Road tracks on the west side of Alhambra Creek (contact SP Rail Road). This site includes the marshes and waterfront from the Benicia-Martinez Bridge to the Ozol pier.

LAND ACCESS: Thorough land access to west. Foot only to east.

WATER LOGISTICS: Limitations: depth, obstruction — Very shallow near shore. Some obstructions on west half.

Launching, Loading, Docking and Services Available: Launching and full boat services available at Martinez Marina on-site. Most boat services are also available across the river at Benicia.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:
Best for this site is Martinez Marina, but Benicia has good staging facilities. Vallero Wharf also has good staging capacity.

COMMUNICATIONS PROBLEMS: none known

ADDITIONAL OPERATIONAL COMMENTS:

2-603 -A Site Summary- Bulls Head Marsh and Pacheco Creek 2-603 -A

County: Contra Costa
USGS Quad: Vine Hill

Thomas Guide Location

NOAA Chart: 18656 Suisun Bay

Latitude N (b) [redacted] **Longitude W** [redacted]

Last Page Update : 1/1/2000

SITE DESCRIPTION:

Site extends from Benicia-Martinez Bridge to the Avon Wharf and includes the tidal marshes tributary to Suisun Bay and Pacheco Creek (also called Walnut Creek and Avon Slough) landward to Hwy 4. There are two extensive marshes south of Waterfront Road (Marina Vista Rd): Shell Marsh (tributary to Peyton Slough and owned by East Bay Regional Parks) and an unnamed marsh tributary to Pacheco Creek. The marshes north of Waterfront Rd between Hwy I-680 and Pacheco Creek are connected to the south shore of Suisun Bay by several small waterways. The marshes south of Waterfront Rd are mostly pickleweed-tule-saltgrass marshes with emergent growths along the edges of waterways and occasional patches of cattail marshes, whereas marshes to the north are dominated by tules and sedges, particularly near the water front and slough margins. Pacheco Creek is very fresh in its more upstream reaches, particularly during high rainfall periods. Salmon and Steelhead are common in Pacheco Creek but do not spawn in the system. There are various dikes and flood control channels throughout the marsh. Pacheco Creek is extremely shallow, has an even shallower bar across its mouth, and has marsh encroaching along its length. The other marsh channels tend to be deep. Regardless, the entire marshfront is mudflats at very low tides. There are three refineries, a chemical plant, and several tank farms adjacent to and tributary to this site.

SEASONAL and SPECIAL RESOURCE CONCERN

The marshes are an "A" priority all year

RESOURCES OF PRIMARY CONCERN

The marshes have a rich flora and range from high pickleweed-spartina marsh to cattail to emergent tule marsh on prograding shorelines and channel margins. Much of the marsh has been manipulated with dike and mosquito abatement channels. Much of the marsh beyond the tidal channels is flood only on high tides and during the rainy season.

A variety of wading and marsh birds use this area year-round and it provides winter habitat for migratory birds and ducks. The endangered California clapper rail uses this habitat.

This is also habitat for the endangered saltmarsh harvest mouse and the saltmarsh ornate shrew.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
B	Peter Baye, Ph.D. Coastal Plant Ecologist		(415) 310-5109
B T	Baylands Nature Preserve Office	Baylands Nature Preserve	(650) 329-2506
B	Brenda Grewell Restoration Ecologist	US Dept. of Agriculture	(530) 752-6260
B	Mike Josselyn	NOAA, National Marine Fisheries Service	(415) 454-8868
B	Jerry Karr	Audubon Society, Solano County Chapter	(707) 643-7089
B T	Jan Knight	US Fish and Wildlife Service	(916) 978-4866
B	Niall F. McCarten, Ph.D.	Jones & Stokes Associates, Inc.	(916) 737-3000

ADDITIONAL SITE SUMMARY COMMENTS:

2-603 -A Site Strategy - Bulls Head Marsh and Pacheco Creek 2-603 -A

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Contra Costa	18656 Suisun Bay	(b)	[redacted]
		Last Page Update :	10/1/2005

CONCERNS and ADVICE to RESPONDERS:

Prime concern is oil being carried into the interior marsh via tidal channels and oiling of marsh margins. So, the first priority is to exclude oil from tidal channels and openings. Secondarily, there is a plan to collect oil at the Pacheco Creek shoreline to prevent its free spread and movement. As time and priority allow, the entire marsh shoreline may be protectively boomed. Avoid trampling the marsh vegetation and be aware that small endangered mammals are present. Avoid trampling oil into the mud.

HAZARDS and RESTRICTIONS:

This area is very shallow and exposed mudflats at low tide.

SITE STRATEGIES

Strategy 2-603.1 Objective: Exclude oil from entering Pacheco Creek, Peyton Slough and four other tidal channels on flood currents Rv 011305

Deploy exclusion booms in a chevron configuration in front of each tidal slough, securing boom ends well up and downstream from the openings to avoid entrainment and short-circuiting. Anchors will be necessary to keep chevron formation. Boom ends may be anchored at shore with stakes.
a) 1000' 8X8+ harbor boom at the mouth of Pacheco Slough with 22# anchors
b) At Peyton Slough and the other four tidal inlets west of Pacheco Slough, use 4X4+ in lengths of 50' and 100'. Back with sorbent boom.
c) If boat passage into launch ramp in Pacheco Creek for response activities, it may be necessary to have boom tending or cascades.

Strategy 2-603.2 Objective: For flood tides, deflect oil to collection site in Pacheco Creek on Avon refinery shoreline to prevent oil spread to other marsh sites, to collect it, and prevent its free movement.

Create a collection site at the northerly most exteme of the levee road on refinery treatment pond east of Pacheco Creek.
a) First, deploy two diagonal barriers of swamp (river) boom (700' 4X4+) to direct the oil from the mouth of the Creek to the collection site. Use stakes to anchor and maintain shape. (If response boat passage into Pacheco Creek is necessary, boom tending may be required.)
b) Then line the marsh along the east bank with swamp (river) boom (1100') and tie the boom into the exclusion boom at the mouth. Use stakes to anchor and maintain shape.
c) After the collection pocket boom is in place (a & b above), deploy a deflection boom (2700' 8X8+ harbor boom total) from the Shore Terminals Wharf to the east side of Pacheco Slough mouth to funnel the oil into collection on the flood tide. Usually exclusion strategy (2-603.1) will have been deployed first, and 1000' of boom will already be at the mouth and must be repositioned as part of the deflection (so the amount of boom needed will be 1000 ft more if that boom is not already onsite.) Use multiple anchors with heavy chain to hold the boom in position in the currents.
d) Improve the shoreside collection site as necessary. Consider excavating a pocket and seek approval from IC. Place plywood or other walking sureface at work site to prevent oil being trampled into muds.

Strategy 2-603.3 Objective: Marsh front protective booming: If there is threat of heavy oiling and saturation of the marsh front, and when such use will not preclude defending other sites with Strategic Objectives 5 and 6 action (seek concurrence of the trustee strategist).

Deploy protective boom along the marsh front from the Benicia Bridge to the Pacheco Slough, using 9,000 ft of harbor boom. If there are high energy wave conditions, a second layer of swamp boom may be required. (A strategy for the deployment of exclusion boom at this site is illustrated in Potential Oil-Spill Protection Strategies for San Francisco Bay, CA (Hayes and Montello, 1994).)

Strategy 2-603.4 Objective: Collection/ containment of upstream threats: If oil is moving down Pacheco Slough from an inland spill, deploy a containment collection as in strategy 2-603.2

Create a collection site at the southerly most convenient site on the windward shore, such as the Waterfront Road Pacheco Creek bridge or launch ramp. Most convenient deployment of boom from shore using skiffs, due to shallows.
a) First, deploy two diagonal barriers of swamp (river) boom (600' 4X4+) to direct the oil in the Creek to the collection site. Use stakes to anchor and maintain shape. (To permit boat passage into Pacheco Creek, it may be necessary to have boom tending.)
b) Line the marsh along the east bank with swamp (river) boom (1000'). Use stakes to anchor and maintain shape.
c) Improve the shore side collection site as necessary. Consider excavating a pocket and seek approval from IC. Place plywood or other walking sureface at work site to prevent oil beng trampled into muds.

Strategy 2-603.5 Objective: Back-up for .1 exclusion in case of over-wash threat

Deploy second layer of exclusion booms in a chevron configuration in front of each tidal slough just behind first layer. As with primary exclusion, secure boom ends well up and downstream from the openings to avoid entrainment and short-circuiting.
a) 1000' 4x4+ swamp (curtin) boom will be needed at the mouth of Pacheco Slough;
b) At Peyton Slough and the other four tidal inlets use 4X4+ in lengths of 50' and 100'.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No	Special Equipment and kinds	staff deploy	Staff tend
2-603.1	1100	400		1000	19	22+ & 5/12+/danforths + chain 10 stak	1	2				bboat: strandable shallow water stakes	7	
2-603.2	1700	2500		300	5	5/22+/danforth + chain	2	2	1	SSS		stakes, bboat: strandable, shallow water	8	
2-603.3	9000				14		3	1					11	
2-603.4	0	1600			6	6/12+ and stakes		1	1	SSS			3	
2-603.5	0	1400	0	0	0		0	0	0		0			

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

Exit Hwy I-680 to Marina Visa / Waterfront Road at Martinez (exit just south of Benicia Martinez Bridge) and proceed east. There is access to the shoreline from Shore Terminal's wharf, from the Tosco Avon Refinery, and at the Bridge over Pacheco Creek. By boat, proceed east from the Martinez Marina about a mile to the area east of the Martinez-Benicia Bridge. Site extends from Benicia-Martinez Bridge to the Avon Wharf and includes the tidal marshes tributary to Suisun Bay and Pacheco Creek (also called Walnut Creek and Avon Slough) landward to Hwy 4.

LAND ACCESS: only at Tosco and Shore Terminal wharf; otherwise foot only

WATER LOGISTICS:
Limitations: depth, obstruction — exceedingly shallow - mud at low tide

Launching, Loading, Docking and Services Available: — launch at Tosco to Pacheco Creek during higher tides only, otherwise Martinez Marina and Benicia Marina. Full service at Martinez and Benicia.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:
Best staging is at Martinez because of the amount of services available. Benicia is also a good staging site. Locally, equipment may be staged at Tosco at Pacheco Creek or at Shore Terminal wharf.

COMMUNICATIONS PROBLEMS: none known

ADDITIONAL OPERATIONAL COMMENTS:

2-605 -A Site Summary- Hastings Slough & Point Edith Marshes 2-605 -A

County: Contra Costa
USGS Quad: Vine Hill

Thomas Guide Location

NOAA Chart: 18656 Suisun Bay

Latitude N (b) [redacted]
Longitude W [redacted]

Last Page Update : 7/1/2005

SITE DESCRIPTION:
Site extends from the Tosco Avon terminal wharf west to Hastings Slough and includes all the marshes tributary to Hastings Slough including those south of Waterfront Road. Marshes from Pt Edith to the Avon Wharf are property of Department of Fish and Game (700+ acres), but the marshs around Hastings Slough and much of the tributary marshland (2000+ acres) is military property and entry is prohibited without prior clearance. This marshes have a large tidal exchange volume, particularly Hastings Slough marshes. The DFG marshes drain directly to the bay via 10 tidal sloughs. Hastings Slough is very sinuous and has many tributary channels including Mt. Diablo Creek. Ttroughout the marsh there is an extensive network of mosquito abatement channels which connect the freshwater and brackish marshes between. Most of the marsh is pickleweed, but there are large stands of tules and standing ponds. Portions of the property south of Waterfront Rd and just east of the Avon refinery are refinery property.

SEASONAL and SPECIAL RESOURCE CONCERN
The marshes are an "A"-priority all year. The area is important to migratory birds in the spring and fall. Endangered species are present year-round.

RESOURCES OF PRIMARY CONCERN
Emergent and tidal channel marshes are of highest concern because of immediate vulnerability to spills and opportunity to spread oil extensively though the marsh because of large tidal prism. Some of the internal marshes are connected by flood control structures and can be closed to exclude oil conveyance to interior marsh. Marsh types include emergent, high saltgrass, pickleweed, tule, brackish ponds, and pockets of freshwater marsh.

The endangered California clapper rail, threatened California black rail, saltmarsh common yellowthroat, and Suisun song sparrow are found here.

The marshes are inhabited by the endangered salt marsh harvest mouse.

Several rare plants occur in this site. Mason's lilaeopsis is found in the splash zone along the marsh front. The marshes also contain the rare plant species soft bird's beak, and Delta tule pea occurs on the Seal Islands.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES
Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
B	Peter Baye, Ph.D. Coastal Plant Ecologist		(415) 310-5109
B	Brenda Grewell Restoration Ecologist	US Dept. of Agriculture	(530) 752-6260
B	Mike Josselyn	NOAA, National Marine Fisheries Service	(415) 454-8868
B	Jerry Karr	Audubon Society, Solano County Chapter	(707) 643-7089
B	Jan Knight	US Fish and Wildlife Service	(916) 978-4866
B	Niall F. McCarten, Ph.D.	Jones & Stokes Associates, Inc.	(916) 737-3000
BLO	Staff Office	Suisun Resource Conservation District	

ADDITIONAL SITE SUMMARY COMMENTS:

2-605 -A Site Strategy - Hastings Slough & Point Edith Marshes 2-605 -A

County and Thomas Guide Location	NOAA CHART	Latitude N	Longitude W
Contra Costa	18656 Suisun Bay	(b) [redacted]	[redacted]
		Last Page Update :	10/1/2005

CONCERNS and ADVICE to RESPONDERS:

The prime concerns are oil penetrating the marsh up tidal sloughs on tidal currents, particularly Hastings Slough, and oil saturating marsh vegetation on exposed marsh fronts and margins. Exclusion is first priority: to Hastings Slough and small channels. Next priority is to deflect oil away from these inaccessible marshy shores. During response be aware that there are very small rare plants and mammals at the shoreline. So, minimize foot traffic. Avoid trampling vegetation and avoid trampling oil into muds.

HAZARDS and RESTRICTIONS:

Some of the waterfront has very shallow mudflats. There are submerged obstructions in Hastings Slough for about 50 yds south of bridge overcrossing.

SITE STRATEGIES

Flood currents in tidal channels are too great to exclude oil once it has entered the channels. Exclusions must be set to keep oil from being pulled into the mouths of channels using chevron exclusions anchored well away (both to each side and in front) from channel openings. Waters are very shallow throughout except at Point Edith and within tidal channels.

Strategy 2-605.1 Objective: Exclude oil from Hastings Slough and tidal channels to prevent oil from being carried into marsh on flood tides. Revised 011305.

Exclude oil from entering all tidal sloughs using chevron booming configurations, including center anchors, and anchor boom ends well outside channel mouths to avoid entrainment and short circuiting around boom ends.
a) Hastings Slough: 1100' 8X8+ deployed in a modified chevron beginning well to the west (200'+) of the mouth. Back with sorbent boom. 3/22+/danforths.
b) The 2 sloughs just east of and one at Pt Edith: (400' 9X9+ and 1/22+ & 2/12+ danforths total.) Back with sorbent boom.
c) The ten tidal openings west of Pt Edith: 100' 4X4+ for each opening except #7 (from west) requires 200' (1100' total). Back each with sorbent.

Strategy 2-605.2 Objective: Deflect oil away from shoreline for sites 2-605 and 2-607 on flood tide.

Deploy 2400' deflection boom from just west of Pt Edith past channel marker R2 and into channel toward chanel marker G3.

Strategy 2-605.3 Objective: Back-up of Exclusion booming of .1 strategy for wave conditions: if waves or chop is likely to wash oil over boom.

a) Hastings Slough: deploy a second layer of boom (800' 4X4+) close behind to catch and exclude over wash. 3/12+/danforths.
b) The 2 sloughs just east of and one at Pt Edith: (400' 4X4+ and 2/12+ danforths total.) Back with sorbent boom.
c) The ten tidal openings west of Pt Edith: 100' 4X4+ for each opening except #7 (from west) requires 200' (1100' total). Back each with sorbent.

Strategy 2-605.4 Objective: Marsh front protective booming: If there is threat of heavy oiling and saturation of the marsh front, and when such deployment will not preclude defending other sites with Strategic Objectives 5 and 6 (seek concurrence of the trustee stratigist).

Deploy protective boom along the marsh front from the Tosco Wharf to the US Navy piers and linking with existing boom deployments as convenient: an additional 7,000 ft of harbor boom and ten additional anchors will be required in combination with boom already deployed in strategies .1 and .2. (A similar strategy for the deployment of exclusion boom at this site is illustrated in Potential Oil-Spill Protection Strategies for San Francisco Bay, CA (Hayes and Montello, 1994).)

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No	Special Equipment and kinds	staff deploy	Staff tend
2-605.1	1500	1100		2300	38	5/22+ & 11/12+ danforth, 22 stakes	2	6				bboat: shallow, strandable. Stakes	18	
2-605.2	2400				6	5/22+/danforths + 20'chain	3	0					9	
2-605.3	0	2300	1000	0	5	12+/danforths	0	0	0		0			
2-605.4	7000				10	10/22+/danforths	4	2				bboats: very shallow, groundable.	14	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

By boat, the site is east of the Benicia Bridge from the Avon Refinery wharf to the Navey Piers. By vehicle exit Hwy I-680 at Marina Vista (first exit south of Benicia Bridge - Waterfront Rd) and proceed west to Avon Refinery gate; request access and proceed east: Marina Vista (Waterfront) Road is blocked at the Hastings Slough Bridge by a Weapons Station locked gate. Important: Permission to enter eastern portion of the area must be obtained from the U.S. Naval Weapons Station Concord. By arrangement with Weapons Station Security only, access from Highway 4 to CNWS exit north on Port Chicago Highway to Base Gate to request entry: Contact USCG Watch 415-399-3546 or 3547. Site extends from the Tosco Avon terminal wharf west to Hastings Slough and includes all the marshes tributary to Hastings Slough including those south of

Waterfront Road. Marshes from Pt Edith to the Avon Wharf are property of Department of Fish and Game (700+ acres), but the marshs around Hastings Slough and much of the tributary marshland (2000+ acres) is military property and entry is prohibited without prior clearance.

LAND ACCESS: All types to Waterfront Road. Otherwise foot only.

WATER LOGISTICS: Very shallow water. Exposed mud at low tide.
Limitations: depth, obstruction

Launching, Loading, Docking and Services Available: very poor launch at CNWS tug wharf. Commercial Launching at Martinez, Benicia, and McAvoy's in Bay Point, all have complete services. Tosco launch is at Pacheco Slough.

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:
Martinez and McAvoy-Harris's are two primary staging areas depending on zone of spill impacts. Both have wide variety of services and access, potential for security control.

COMMUNICATIONS PROBLEMS: none known

ADDITIONAL OPERATIONAL COMMENTS:

2-630 -B/C Site Summary- Suisun Shoal

2-630 -B/C

County:	Solano	Thomas Guide Location	Latitude N (b)	Longitude W [redacted]
USGS Quad:	Benicia/Vine Hill	NOAA Chart: SUISUN BAY 18657/18652		

Last Page Update : 9/4/1997

SITE DESCRIPTION:

This site is the shallow mud bar which begins a half mile east of the Benicia Bridge and continues to Roe Island. The shoal is an extensive mud-sand bar about a mile wide at its widest and over three miles long. Generally the sediments are firm and will support pedestrian activity. During high tides it is a navigational obstruction to all but shallow draft vessels, but during low tides extensive portions are exposed. Intertidal life here is variable depending on local salinity conditions. Waterfowl and shorebirds frequent this shoal to feed and loaf.

SEASONAL and SPECIAL RESOURCE CONCERN

This mudflat has B-level sensitivity when birds are using it for resting and foraging. Otherwise protection is C-level.

RESOURCES OF PRIMARY CONCERN

This is a firm sediment mud-sand bar which is habitat for eurihaline species of invertebrates. It is feeding habitat for fish and when exposed, is resting and feeding for waterbirds and shorebirds.

Waterfowl and shorebirds here are daily transients because it is covered with water for part of each day.

CULTURAL, HISTORIC, and ARCHEOLOGICAL SENSITIVITIES

Contact the California Dept of Parks and Recreation - Office of Historic Preservation (Eric Allison -(916) 653-9125), and the Northwest Information Center, (Leigh Jordan, Sonoma State College ((707) 664-0880)) for specific information on historic or cultural resources in this area.

KEY CONTACTS: Trustee (T); Entry/Owner/Access (E); Cultural (C); or Other Assistance (O)

Type	Name / Title	Organization	Phone
TB	Laurie Briden	CA Dept of Fish & Game, Bay/Delta	(209) 955-7800
T	Brenda Grewell Restoration Ecologist	US Dept. of Agriculture	(530) 752-6260
	Kent Nelson	CA Dept. of Water Resources	(916) 227-7581

ADDITIONAL SITE SUMMARY COMMENTS:

2-630 -B/C Site Strategy - Suisun Shoal

County and Thomas Guide Location
Solano

NOAA CHART
SUISUN BAY 18657/18652

Latitude N (b) [redacted] **Longitude W** (b) [redacted]

Last Page Update :

CONCERNS and ADVICE to RESPONDERS:

Primary concern is oiling birds which rest and feed on this bar during low tide. Execution of the strategy is at the recommendation of the Wildlife Operations Branch Chief only.

HAZARDS and RESTRICTIONS:

The mudflat is very shallow and should be approached with caution, particularly on a falling tide.

SITE STRATEGIES

Strategy 2-630.1 Objective: Haze birds off exposed bar: Only at direction of Wildlife Branch Chief

This strategy may be executed at the direction of the Wildlife Branch Chief only. Stake and anchor 4 sonic devices along the bar. Attend regularly. Access at other than high tide may requirevery shallow draft vessel or airboat.

Table of Response Resources

strategy number	harbor boom	swamp boom	Other boom type	sorb boom	Anchoring no	Anchoring type and gear	Boom boat	Skiffs punts	Skimmers No	Skimmers Type	Special Equipment No	Special Equipment and kinds	staff deploy	Staff tend
2-630.1	0							1			4	hazinf devicies on flosting platforms	2	

LOGISTICS

DIRECTIONS: to site (by land and/or by water, to nearest launch ramp and are access permits required.)

There is no land access. Water access is one mile east from Benicia or Martinez marinas. This site is the shallow mud bar which begins a half mile east of the Benicia Bridge and continues to Roe Island.

LAND ACCESS: after arrival by boat, you can walk on bar.

WATER LOGISTICS: EXTREME SHALLOW DRAFT AT LOWER TIDES
Limitations: depth, obstruction

Launching, Loading, Docking and Services Available: Benicia and Martinez Marinas (1 mi. W).

FACLITIES, STAGING AREAS, POSSIBLE FIELD POSTS AND EQUIPMENT AVAILABLE:

Deploy from Martinez Marina, Benicia Marina or Benicia wharf.

COMMUNICATIONS PROBLEMS: none known

ADDITIONAL OPERATIONAL COMMENTS:

(b) (7)(F)

[redacted]

TITLE OF REFERENCE DRAWING	DRAWING NO.

OPERATIONS NAME	OPERATIONS DATE	ENGINEERING NAME	ENGINEERING DATE	DRAFTING NAME	DRAFTING DATE	REV. NO.	REVISION	DATE
		JPN	05/10	JM	05/10	4	UPDATED PER COMMENTS	05/17/10
		JPN	07/09	JM	07/09	3	UPDATED PER COMMENTS	07/13/09
		JPN	02/08	JM	02/08	2	UPDATED PER COMMENTS	02/12/08
		JPN	01/08	JM	01/08	1	UPDATED TANK NUMBERS	01/28/08
		GLH	06/06	JM	06/06	0	ISSUED FOR INFORMATION	06/12/06

PACIFIC ATLANTIC TERMINALS LLC

EXHIBIT C
SITE MAP
MARTINEZ TERMINAL

DRAWN JM	CHECKED JM	DRFT. APPV.
DATE 06/12/06	SCALE AS NOTED	ENGR. APPV.

MA-6-D-C-0201

(b) (7)(F)

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