PLAINS ALL AMERICAN PIPELINE, L.P.

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties) , California
Spill Response Plan

3600 Bowman Court
Bakersfield, California 93308

Developed by:

TECHNICAL RESPONSE PLANNING CORPORATION

1610 Woodstead Court, #355 • The Woodlands, Texas 77380 USA • Tel: 281-955-9600 • Fax : 281-955-0369 • info@trpcorp.com • www.emergency-response-planning.com

TABLE OF CONTENTS

TABLE OF CONTENTS, CONTINUED

TABLE OF CONTENTS, CONTINUED

TABLE OF CONTENTS, CONTINUED

TABLE OF CONTENTS, CONTINUED

TABLE OF CONTENTS, CONTINUED

TABLE OF CONTENTS, CONTINUED

RECORD OF CHANGES

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DATE OF CHANGE	DESCRIPTION OF CHANGE	PAGE NUMBER
7/12/2011	PHMSA CA SB SM | 1 - Introduction | Figure 1-4 - Pipeline System Overview Map	
7/13/2011	PHMSA CA SB SM | 6 - Sensitive Areas / Response Tactics | 6.5 Wildlife Protection and Rehabilitation | Figure 6.5-1 - Wildlife Rehabilitation Contract	
7/28/2011	PHMSA CA SB SM | 1 - Introduction | Figure 1-3 - Overview Map	
10/4/2011	PHMSA CA SB SM | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-6 - External Notifications and Telephone Numbers | External Notifications	
10/13/2011	PHMSA CA SB SM | F - Additional Information	
10/14/2011	PHMSA CA SB SM | G - Santa Barbra County Area Oil & Gas Industry ERP	
11/7/2011	PHMSA CA SB SM | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-6 - External Notifications and Telephone Numbers | External Notifications	
11/9/2011	PHMSA CA SB SM | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-6 - External Notifications and Telephone Numbers | External Notifications	
11/11/2011	PHMSA CA SB SM | 1 - Introduction | Figure 1-2 - Information Summary | Description of Zone	
11/21/2011	PHMSA CA SB SM | 1 - Introduction | 1.1 Purpose / Scope of Plan	
11/21/2011	PHMSA CA SB SM | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-6 - External Notifications and Telephone Numbers | External Notifications	
11/21/2011	PHMSA CA SB SM | 1 - Introduction | 1.5 Agency Submittal / Approval Letters	
11/28/2011	PHMSA CA SB SM | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-7 - Reporting Requirments	
12/5/2011	PHMSA CA SB SM | B - Contractor Response Equipment | B.1 Cooperatives and Contractors | B.1.1 OSRO Classification	
1/23/2012	PHMSA CA SB SM | F - Additional Information	

RECORD OF CHANGES

Changes to this Plan will be documented on this page. Plan review and modifications will be initiated and coordinated by the Business Unit Health, Safety, Security & Environmental (HSS&E) Department in conjunction with the Area Supervisor/Manager of Operations.

DATE OF CHANGE	DESCRIPTION OF CHANGE	PAGE NUMBER
1/24/2012	PHMSA CA SB SM | F - Additional Information	
3/6/2012	PHMSA CA SB SM | B - Contractor Response Equipment | B.1 Cooperatives and Contractors | B.1.1 OSRO Classification	
3/21/2012	PHMSA CA SB SM | 6 - Sensitive Areas / Response Tactics | 6.3 Sensitive Area Protection | Figure 6.3-3 - Site-Specific Environmental Protection	
3/22/2012	PHMSA CA SB SM | 1 - Introduction | Figure 1-1 - Distribution List	
3/22/2012	PHMSA CA SB SM | 1 - Introduction | Figure 1-1 - Distribution List	
3/22/2012	PHMSA CA SB SM | 1 - Introduction | Figure 1-1 - Distribution List	
3/22/2012	PHMSA CA SB SM | 1 - Introduction | Figure 1-1 - Distribution List	
4/18/2012	PHMSA CA SB SM | 1 - Introduction | Figure 1-2 - Information Summary | Line Sections	
6/6/2012	PHMSA CA SB SM | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-5 - Internal Notifications and Telephone Numbers | Company Personnel	
6/19/2012	PHMSA CA SB SM | 1 - Introduction | Figure 1-1 - Distribution List	
8/13/2012	PHMSA CA SB SM | Table of Contents | California Certificate of Financial Responsibility (COFR)	
8/16/2012	PHMSA CA SB SM | 5 - Incident Planning | 5.3 ICS Forms	
10/8/2012	PHMSA CA SB SM | 1 - Introduction | Figure 1-1 - Distribution List	
10/8/2012	PHMSA CA SB SM | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-6 - External Notifications and Telephone Numbers | External Notifications	
10/8/2012	PHMSA CA SB SM | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-6 - External Notifications and Telephone Numbers | External Notifications	

RECORD OF CHANGES

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DATE OF CHANGE	DESCRIPTION OF CHANGE	PAGE NUMBER
11/20/2012	PHMSA CA SB SM | B - Contractor Response Equipment | B.1 Cooperatives and Contractors | B.1.1 OSRO Classification	
12/4/2012	PHMSA CA SB SM | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-5 - Internal Notifications and Telephone Numbers | Emergency Response Contractors	
12/5/2012	PHMSA CA SB SM | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-6 - External Notifications and Telephone Numbers | External Notifications	
7/10/2013	PHMSA CA SB SM | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-5 - Internal Notifications and Telephone Numbers | Company Personnel	
7/10/2013	PHMSA CA SB SM | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-5 - Internal Notifications and Telephone Numbers | Company Personnel	
5/1/2013	EPA FRP | 7 - Sustained Response Actions | 7.2 External Communications During An Incident	
12/2/2013	PHMSA CA SB SM | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-6 - External Notifications and Telephone Numbers | External Notifications	
12/2/2013	PHMSA CA SB SM | B - Contractor Response Equipment | B.1 Cooperatives and Contractors | B.1.1 OSRO Classification	
12/2/2013	PHMSA CA SB SM | 1 - Introduction | Figure 1-2 - Information Summary | Line Sections	
12/2/2013	PHMSA CA SB SM | 1 - Introduction | Figure 1-2 - Information Summary | Line Sections	
12/2/2013	PHMSA CA SB SM | 1 - Introduction | Figure 1-2 - Information Summary | Line Sections	
12/2/2013	PHMSA CA SB SM | 1 - Introduction | Figure 1-2 - Information Summary | Line Sections	
12/2/2013	PHMSA CA SB SM | 1 - Introduction | Figure 1-2 - Information Summary | Line Sections	
12/2/2013	PHMSA CA SB SM | 1 - Introduction | Figure 1-2 - Information Summary | Line Sections	
12/2/2013	PHMSA CA SB SM | 1 - Introduction | Figure 1-2 - Information Summary | Line Sections	

RECORD OF CHANGES

Changes to this Plan will be documented on this page. Plan review and modifications will be initiated and coordinated by the Business Unit Health, Safety, Security & Environmental (HSS&E) Department in conjunction with the Area Supervisor/Manager of Operations.

DATE OF CHANGE	DESCRIPTION OF CHANGE	PAGE NUMBER
12/2/2013	PHMSA CA SB SM | 1 - Introduction | Figure 1-2 - Information Summary | Line Sections	
12/2/2013	PHMSA CA SB SM | 1 - Introduction | Figure 1-2 - Information Summary | Line Sections	
12/2/2013	PHMSA CA SB SM | 1 - Introduction | Figure 1-2 - Information Summary | Line Sections	
12/2/2013	PHMSA CA SB SM | 1 - Introduction | Figure 1-2 - Information Summary | Line Sections	
12/2/2013	PHMSA CA SB SM | 1 - Introduction | Figure 1-2 - Information Summary | Line Sections	
12/2/2013	PHMSA CA SB SM | 1 - Introduction | Figure 1-2 - Information Summary | Line Sections	
12/2/2013	PHMSA CA SB SM | 1 - Introduction | Figure 1-2 - Information Summary | Line Sections	
12/2/2013	PHMSA CA SB SM | 1 - Introduction | Figure 1-2 - Information Summary | Line Sections	
12/2/2013	PHMSA CA SB SM | 1 - Introduction | Figure 1-2 - Information Summary | Line Sections	
12/2/2013	PHMSA CA SB SM | 1 - Introduction | Figure 1-2 - Information Summary | Line Sections	
12/2/2013	PHMSA CA SB SM | 1 - Introduction | Figure 1-3 - Overview Map	
12/2/2013	PHMSA CA SB SM | 1 - Introduction | Figure 1-4 - Pipeline System Overview Map	
12/2/2013	PHMSA CA SB SM | 1 - Introduction | Figure 1-2 - Information Summary | Description of Zone	
12/2/2013	PHMSA CA SB SM | 1 - Introduction | Figure 1-2 - Information Summary | Description of Zone	
12/2/2013	PHMSA CA SB SM | 1 - Introduction | Figure 1-2 - Information Summary | Description of Zone	

RECORD OF CHANGES

Changes to this Plan will be documented on this page. Plan review and modifications will be initiated and coordinated by the Business Unit Health, Safety, Security & Environmental (HSS&E) Department in conjunction with the Area Supervisor/Manager of Operations.

DATE OF CHANGE	DESCRIPTION OF CHANGE	PAGE NUMBER
12/2/2013	PHMSA CA SB SM | C - Hazard Evaluation and Risk Analysis | C.7 Product Characteristics and Hazards | Figure C.7-1 - Summary of Commodity Characteristics	
12/2/2013	PHMSA CA SB SM | C - Hazard Evaluation and Risk Analysis | C.7 Product Characteristics and Hazards | Figure C.7-1 - Summary of Commodity Characteristics	
12/2/2013	PHMSA CA SB SM | C - Hazard Evaluation and Risk Analysis | C.7 Product Characteristics and Hazards | Figure C.7-1 - Summary of Commodity Characteristics	
12/2/2013	PHMSA CA SB SM | 1 - Introduction | Figure 1-2 - Information Summary | Description of Zone	
12/2/2013	PHMSA CA SB SM | 1 - Introduction | Figure 1-2 - Information Summary | Description of Zone	
12/11/2013	PHMSA CA SB SM | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-7 - Reporting Requirments	
12/16/2013	PHMSA CA SB SM | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-6 - External Notifications and Telephone Numbers | USCG Classified OSRO´s / Non-Classified OSRO´s	
12/16/2013	PHMSA CA SB SM | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-6 - External Notifications and Telephone Numbers | USCG Classified OSRO´s / Non-Classified OSRO´s	
12/19/2013	PHMSA CA SB SM | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-7 - Reporting Requirments	
1/2/2014	PHMSA CA SB SM | C - Hazard Evaluation and Risk Analysis | C.5 Spill Volume Calculations | C.5.1 DOT/PHMSA Portion of the Pipeline/Facilities	
1/2/2014	PHMSA CA SB SM | C - Hazard Evaluation and Risk Analysis | C.5 Spill Volume Calculations | C.5.1 DOT/PHMSA Portion of the Pipeline/Facilities	
1/2/2014	PHMSA CA SB SM | C - Hazard Evaluation and Risk Analysis | C.5 Spill Volume Calculations | C.5.2 OSPR Pipeline Portion of the Facilities	
1/2/2014	PHMSA CA SB SM | C - Hazard Evaluation and Risk Analysis | C.5 Spill Volume Calculations | C.5.3 OSPR Response Planning Volume Calculations	
1/2/2014	PHMSA CA SB SM | C - Hazard Evaluation and Risk Analysis | C.5 Spill Volume Calculations | C.5.3 OSPR Response Planning Volume Calculations	
1/2/2014	PHMSA CA SB SM | C - Hazard Evaluation and Risk Analysis | C.5 Spill Volume Calculations | C.5.1 DOT/PHMSA Portion of the Pipeline/Facilities	

RECORD OF CHANGES

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DATE OF CHANGE	DESCRIPTION OF CHANGE	PAGE NUMBER
1/2/2014	PHMSA CA SB SM | C - Hazard Evaluation and Risk Analysis | C.5 Spill Volume Calculations | C.5.2 OSPR Pipeline Portion of the Facilities	
1/2/2014	PHMSA CA SB SM | C - Hazard Evaluation and Risk Analysis | C.5 Spill Volume Calculations | C.5.3 OSPR Response Planning Volume Calculations	
1/2/2014	PHMSA CA SB SM | C - Hazard Evaluation and Risk Analysis | C.5 Spill Volume Calculations | C.5.3 OSPR Response Planning Volume Calculations	
1/7/2014	PHMSA CA SB SM | 6 - Sensitive Areas / Response Tactics | 6.13 Sensitivity Maps	
1/8/2014	PHMSA CA SB SM | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-7 - Reporting Requirments	
1/31/2014	PHMSA CA SB SM | 6 - Sensitive Areas / Response Tactics | 6.13 Sensitivity Maps	
1/31/2014	PHMSA CA SB SM | 6 - Sensitive Areas / Response Tactics | 6.13 Sensitivity Maps	
2/3/2014	PHMSA CA SB SM | C - Hazard Evaluation and Risk Analysis | C.1 Risk and Hazard Analysis | C.1.10 Documentation	
2/3/2014	PHMSA CA SB SM | 1 - Introduction | Figure 1-1 - Distribution List	
2/3/2014	PHMSA CA SB SM | 1 - Introduction | Figure 1-1 - Distribution List	
2/3/2014	PHMSA CA SB SM | 1 - Introduction | 1.3 Certification of Adequate Resources	
2/3/2014	PHMSA CA SB SM | 1 - Introduction | 1.3 Certification of Adequate Resources	
2/3/2014	PHMSA CA SB SM | 1 - Introduction | 1.4 California Certification of Feasibility and Executability	
2/3/2014	PHMSA CA SB SM | 1 - Introduction | 1.4 California Certification of Feasibility and Executability	
2/3/2014	PHMSA CA SB SM | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-5 - Internal Notifications and Telephone Numbers | Company Personnel	

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DATE OF CHANGE	DESCRIPTION OF CHANGE	PAGE NUMBER
2/3/2014	PHMSA CA SB SM | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-5 - Internal Notifications and Telephone Numbers | Company Personnel	
2/6/2014	PHMSA CA SB SM | 1 - Introduction | Figure 1-2 - Information Summary | Description of Zone	
2/11/2014	PHMSA CA SB SM | 1 - Introduction | Figure 1-2 - Information Summary | Description of Zone	
2/27/2014	PHMSA CA SB SM | 1 - Introduction | 1.5 Agency Submittal / Approval Letters	
4/2/2014	PHMSA CA SB SM | 1 - Introduction | Figure 1-1 - Distribution List	
4/8/2014	PHMSA CA SB SM | 1 - Introduction | Figure 1-1 - Distribution List	
4/8/2014	PHMSA CA SB SM | 1 - Introduction | Figure 1-1 - Distribution List	
4/8/2014	PHMSA CA SB SM | 1 - Introduction | Figure 1-1 - Distribution List	
4/8/2014	PHMSA CA SB SM | 1 - Introduction | Figure 1-1 - Distribution List	
4/8/2014	PHMSA CA SB SM | 1 - Introduction | Figure 1-1 - Distribution List	
6/18/2014	PHMSA CA SB SM | B - Contractor Response Equipment | B.1 Cooperatives and Contractors | B.1.1 OSRO Classification	
6/18/2014	PHMSA CA SB SM | 1 - Introduction | 1.5 Agency Submittal / Approval Letters	
6/19/2014	PHMSA CA SB SM | 1 - Introduction | Figure 1-1 - Distribution List	
6/19/2014	PHMSA CA SB SM | 1 - Introduction | Figure 1-1 - Distribution List	
6/19/2014	PHMSA CA SB SM | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-5 - Internal Notifications and Telephone Numbers | Emergency Response Contractors	

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6/19/2014	PHMSA CA SB SM | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-6 - External Notifications and Telephone Numbers | USCG Classified OSRO´s / Non-Classified OSRO´s	
6/19/2014	PHMSA CA SB SM | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-6 - External Notifications and Telephone Numbers | USCG Classified OSRO´s / Non-Classified OSRO´s	
6/19/2014	PHMSA CA SB SM | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-6 - External Notifications and Telephone Numbers | External Notifications	
6/19/2014	PHMSA CA SB SM | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-6 - External Notifications and Telephone Numbers | External Notifications	
6/19/2014	PHMSA CA SB SM | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-6 - External Notifications and Telephone Numbers | External Notifications	
6/25/2014	PHMSA CA SB SM | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-5 - Internal Notifications and Telephone Numbers | Emergency Response Contractors	

CALIFORNIA CERTIFICATE OF FINANCIAL RESPONSIBILITY (COFR)

As required, the Company has applied for, and received, Certificates of Financial Responsibility from the California Department of Fish and Wildlife - Division of Oil Spill Prevention and Response for covered Santa Barbara County facilities as follows:

Click here for COFR 20539-02-001

CALIFORNIA CERTIFICATE OF FINANCIAL RESPONSIBILITY (CA COFR)

OWNER OR OPERATOR:
PLAINS PIPELINE, L.P.
meets the financial responsibility requirements set forth in the Government Code Sections 8670.37.53 as it applies to the operation of

NAME:
SEGMENTS OF ON SHORE CRUDE OIL TRANSPORTATION PIPELINE

LOCATION:
GAVIOTA PUMP STATION TO 0.5 MI S.W. OF GAVIOTA CREEK UNDERCROSSING

CERTIFICATE: 2-0539-02-001 **CONTROL #:** FA725

ISSUED DATE: September 01, 2012 **EXPIRATION DATE:** August 31, 2014

The holder of this document named above is subject to the provisions of California Code of Regulations, Title 14, Sections 791-797, implementing the financial responsibility requirements set forth in the Lempert-Keene-Seastrand Oil Spill Prevention and Response Act (Act). This certificate holder has provided the necessary evidence of financial responsibility mandated by these requirements.

For the purpose of determining liability pursuant to the Act, this Certificate of Financial Responsibility is conclusive evidence that the person or entity holding the certificate is the party responsible for the specific Marine Facility.

No alterations of this certificate are permitted after issuance by the Administrator of OSPR. If there is a change in the name or ownership of the Marine Facility, the certificate holder must notify the Office of Spill Prevention and Response (OSPR) immediately. If the certificate expires, a new certificate will be required.

This certificate remains valid as long as the current method for demonstrating financial responsibility is maintained (eg. insurance). Any changes in this status must be reported to OSPR immediately.

It is the owner or operator's responsibility to ensure that this certificate number is also included in the owner or operator's marine oil spill contingency plan, which must be submitted to this office for approval, before operating in a location where a spill could impact California marine waters.

If you have any questions, please contact
Farina A. Khan
916-327-9937

Sincerely,
Farina A. Khan

Financial Analyst
Office of Spill Prevention and Response
cacofr-facilities@ospr.dfg.ca.gov

CALIFORNIA CERTIFICATE OF FINANCIAL RESPONSIBILITY (COFR), CONTINUED

Click here for COFR 20539-02-002

CALIFORNIA CERTIFICATE OF FINANCIAL RESPONSIBILITY (CA COFR)

OWNER OR OPERATOR:
PLAINS PIPELINE, L.P.
meets the financial responsibility requirements set forth in the Government Code Sections 8670.37.53 as it applies to the operation of

NAME:
LOS FLORES CANYON PUMP STATION AND 24-INCH CRUDE OIL PIPELINE

LOCATION:
LOS FLORES CANYON PUMP STATION TO AAPL GAVIOTA PUMP STATION

CERTIFICATE: 2-0539-02-002 **CONTROL #:** FA726

ISSUED DATE: September 01, 2012 **EXPIRATION DATE:** August 31, 2014

The holder of this document named above is subject to the provisions of California Code of Regulations, Title 14, Sections 791-797, implementing the financial responsibility requirements set forth in the Lempert-Keene-Seastrand Oil Spill Prevention and Response Act (Act). This certificate holder has provided the necessary evidence of financial responsibility mandated by these requirements.

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If you have any questions, please contact
Farina A. Khan
916-327-9937

Sincerely,
Farina A. Khan

Financial Analyst
Office of Spill Prevention and Response
cacofr-facilities@ospr.dfg.ca.gov

SECTION 1
INTRODUCTION

Last revised: June 19, 2014

FIGURE 1-1 - DISTRIBUTION LIST

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Long Beach Office, Attn: Steve Caddell, Division Operations Manager	5900 Cherry Avenue Long Beach, CA 90805	1		0	
Long Beach Office, Attn: Ngiabi Gicuhi, Western Division Environmental & R/C Director	5900 Cherry Ave. Long Beach, CA 90805	1		1	
Kathy Randall, Operations Supervisor Santa Maria	2230 S. Depot St., Suite A Santa Maria, CA 93455	1		0	
Juan Martinez, Maintenance Supervisor	3600 Bowman Court Bakersfield, CA 93308	0		1	
Jeremy Wiggins, E&R/C Specialist	3600 Bowman Court Bakersfield, CA 93308	1		1	

FIGURE 1-1 - DISTRIBUTION LIST

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Operations Control Center Attn: Billy Welch	PO Box 4648 Houston, TX 77210-4648	0		1	
Randy Fordham, Sr. Division Safety Manager	3600 Bowman Court Bakersfield, CA 93308	1		0	
California State Lands Commission, Marine Facilities Division, Attn: Response Plan Coordinator	200 Oceangate, Suite 900 Long Beach, CA 90802	0		1	
U.S. Coast Guard Los Angeles-Long Beach	1001 S. Seaside Avenue, Bldg 20 San Pedro, CA 90731-0208	0		1	
California Coastal Commission	45 Fremont St. Ste 2000 San Francisco, CA 94105-2219	0		1	
Santa Barbara County Planning and Development Department – Energy Division Attn: Dean Dusette	123 East Anapamu St. Santa Barbara, CA 93101	1		0	
California State Fire Marshall, Attn: Bob Gorham	3950 Paramount Blvd., Suite 210 Lakewood, CA 90712	0		1	
California Department of Fish and Wildlife, Office of Spill Prevention & Response, Attn: Jim Kiatos, Oil Spill Prevention Specialist	4665 Lampson Ste C Los Alamitos, CA 90720	0		2	

FIGURE 1-1 - DISTRIBUTION LIST

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Santa Barbara County Office of Emergency Management Attn: Elsa Arndt	4408 Cathedral Oaks Road Santa Barbara, CA 93110	1		0	
Office of Pipeline Safety, Attn: John Hess	1200 New Jersey Avenue, S.E., Room E22-210 Washington, DC 20590	0		2	
Kern County Environmental Health Division, Attn: Vicky Furnish, CalARP/Hazardous Materials Specialist	Public Health Services Department, 2700 M Street, Suite 300 Bakersfield, CA 93301	0		1	

FIGURE 1-2 - INFORMATION SUMMARY

Owner:	Plains Pipeline, L.P. 333 Clay Street Houston, TX 77002 (800) 708-5071* or (713) 646-4100
Operator:	Plains Pipeline, L.P. 3600 Bowman Court Bakersfield, CA 93308 1-800-322-7473 (24-hour emergency phone)
Operator:	Plains Pipeline, L.P. 2230 S. Depot Street, Suite A Santa Maria, CA 93455 (805) 922-9897 (Office)
Zone Name:	Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)
Zone Mailing Address:	3600 Bowman Court Bakersfield, California 93308
Zone Telephone/Fax:	(805) 922-9897 or (661) 336-7906 / (805) 922-4667 or (661) 336-7920
Person To Whom Correspondence Should Be Sent:	Ngiabi Gicuhi, Plains All American Pipeline, LP 5900 Cherry Avenue, Long Beach CA 90805 Phone: (562) 728-2358 / Fax: (562) 728-2350
Agent For Service Of Process:	Corporation Service Company 2730 Gateway Oaks Drive, Ste 100 Sacramento, CA 95833 Phone: (916) 641-5100 / Fax:
Qualified Individuals:	

	Work
Steve Caddell Western Division Operations Manager Public Information Officer (562) 728-2895 (Office) (b) (6) [redacted]	5900 Cherry Avenue Long Beach, CA 90805
Audie Cantrell P/L Operator (661) 332-0105 (Office) (b) (6) [redacted]	3600 Bowman Ct Bakersfield, CA 93308
Sr. Division Safety Manager Safety Officer (661) 327-3788 (Office)	3600 Bowman Court Bakersfield, CA 93308
Ngiabi Gicuhi Western Division Dir., Environmental & R/C Compliance, Liaison (562) 728-2358 (Office) (b) (6) [redacted]	5900 Cherry Ave. Long Beach, CA 90805
Richard Hartig Western Division Assistant Operations Manager Planning Section (b) (6) [redacted]	5900 Cherry Avenue Long Beach, CA 90805

FIGURE 1-2 - INFORMATION SUMMARY

Qualified Individuals:		Work
	Juan Martinez Construction Supervisor, Group Supervisor Pipeline Repair Team Operations Section (661) 336-7905 (Office) (b) (6)	3600 Bowman Court Bakersfield, CA 93308
	Bob Osborne Maintenance Supervisor Logistics Section (661) 336-7907 (Office) (b) (6)	3600 Bowman Court Bakersfield, CA 93308
	Darren Palmer District Manager Incident Commander (661) 336-7908 (Office) (b) (6)	3600 Bowman Court Bakersfield, CA 93308
	Kathy Randall Operations Supervisor Operations Section (805) 922-9897 (Office) (b) (6)	2230 S. Depot St. “A” Santa Maria, CA 93455
	Rick Taylor Division Safety Manager Safety Officer (562) 728-2353 (Office) (b) (6)	5900 Cherry Ave. Long Beach, CA 90805

FIGURE 1-2 - INFORMATION SUMMARY, CONTINUED

Line Sections/ Products Handled: (Refer to Product Characteristic and Hazards, FIGURE C.7-1)	LINE SECTION #	MILE POST	BEGINNING LOCATION	MILE POST	ENDING LOCATION
	901 (24", 10.62 miles)	(b) (7)(F), (b) (3)			
	01				
	02				
	903 (30", 127.95)				
	03				
	04				
	05				
	06				
	07				
	08				
	09				
	10				
	11				
	904 (16", 45.39 miles)				
	12				
	13				
	14				
	15				
	921 - Propane - 01				

FIGURE 1-2 - INFORMATION SUMMARY, CONTINUED

Line Sections/ Products Handled: (Refer to Product Characteristic and Hazards, FIGURE C.7-1)

LINE SECTION #	MILE POST	BEGINNING LOCATION	MILE POST	ENDING LOCATION
921 - Propane - 02	(b) (7)(F), (b) (3)	[redacted]		
921 - Propane - 03				
921 - Propane - 04				
921 - Propane - 05				
922 - Butane - 01				
922 - Butane - 02				
922 - Butane - 03				
922 - Butane - 04				
922 - Butane - 05				
923 - NGL - 01				
923 - NGL - 02				
923 - NGL - 03				
923 - NGL - 04				
923 - NGL - 05				

FIGURE 1-2 - INFORMATION SUMMARY, CONTINUED

Description of Zone:	The pipeline carries Crude Oil, Propane, NGL's, Butane in the areas shown in **FIGURE 1-3** and **FIGURE 1-4** .
Response Zone Consists of the Following Counties:	Santa Barbara, San Luis Obispo and Kern Counties
Alignment Maps (Piping, Plan Profiles):	Maintained at: Bakersfield office on Bowman Court
Worst Case Discharge:	(b) (7)(F), (b) (3) [redacted]
Spill Detection and Mitigation Procedures:	Refer to **SECTION 2** and **APPENDIX D**.
Statement of Significant and Substantial Harm:	The Company's facilities have been placed in this category due to their proximity to public drinking water intakes and/or proximity to Environmentally Sensitive Area(s).
PHMSA #:	107 & 108 & PSBI
Date Prepared:	

FIGURE 1-2 - INFORMATION SUMMARY, CONTINUED

Areas for Potential for Significant and Substantial Harm:	LINE SECTION #	REPORTABLE RELEASES (Date/Volume)	WITHIN 5-MILE RADIUS OF PUBLIC WATER INTAKE?	WITHIN 1-MILE RADIUS OF ENVIRONMENTAL SENSITIVE AREA?
	01	One, 10-1-97; 7.5 BBLS (Las Flores Pump Station Site - Fully Contained)	No	Coastal Zone
	02	None	No	Coastal Zone
	03	None	No	Coastal Zone
	04	None	No	Gaviota State Park
	05	None	(b) (7)(F), (b) (3)	Santa Ynez River Area
	06	None		Sisquoc River Area
	07	(Sisquoc Pump Station Site - Fully Contained): Five, 1-31-95 -3 BBLS; 8/14/96 - 3.5 BBLS; 8/26/97 - 0.25 BBLS; 9/6/98 - 0.25 BBLS; 3/28/2000 - 29 BBLS		Las Padres National Forest
	08	None		Cuyama River Area
	09	None		Cuyama River Area
	11	None		None
	12	07/01/2008 - 2,284 BBL's		None

FIGURE 1-2 - INFORMATION SUMMARY, CONTINUED

DESCRIPTION OF ZONE
The Santa Barbara County portion of the pipeline system is operated by Plains Pipeline, L.P. (PPLP). It is part of the larger Plains All American Pipeline System that stretches from the California coast to the Emidio Station, southwest of Bakersfield, California. This response extends from the coast of California in Las Flores by Mile Post 0 to the Emidio Pump Station which is southwest of Bakersfield, California at (b) (7)(F), . For response planning purposes, this zone includes the 16" Plains Marketing Gathering System pipeline that runs through Kern County. This 16" gathering pipeline is a proprietary intrastate pipeline owned by Plains Marketing, L.P. and is operated by Plains All American Pipeline, L.P. pursuant to a contract between the two companies. The Westside Pipeline System is owned by Plains Midstream Canada and operated by Plains All American L.P. (PAALP) as part of the larger Plains All American Pipeline System. This Reponse extends from North coles Levee near Tupman at (b) (7)(F), to the Lonestar facility in Shafter (b) (7)(F), . for reponse planning purposes this zone includes the 6" Propane, 6" butane and 4" Natural Gas Liquids lines. This emergency reponse plan has been developed for the 4" and 6" pipelines. the product is delivered to the pipeline under pressure from Oxy. The 6" nad 4" pipelines have wall thicknesses of 0.280 and 0.237 respectively. Teh maximum operating pressure for each of these lines is 1440 psig. The pipelines are FBE epoxy coated carbon steel below ground and epoxy-epoxy-urethane coated above ground. Exra heavy wall pipe is installed at the Horizontal Directional Drill locations for the 6" (0.432") and 4" (0.337") lines and is coated with dual FBE/abrasion resistant coating. the pipelines are cathodic protected with sacrificial anode system. This Emergency Response Plan has been developed for Plains All American Pipeline, L.P. (PAALP) onshore crude oil 24 and 30-inch pipelines, with Las Flores, Gaviota and Sisquoc pump stations in Santa Barbara County and Belridge and Pentland pump stations in Kern County, California. Facilities within Santa Barbara consist of 62 miles of the 30-inch diameter insulated crude oil pipeline and three crude oil mainline pump stations at Las Flores, Gaviota and Sisquoc. Each pump station employs electric driven centrifugal pumps which will have a combined maximum station rating of 17,500 horsepower (Las Flores 5,000 horsepower; Gaviota 3,750 horsepower and Sisquoc 8,700 horsepower). Each of these pump stations have remote-controlled switching center. The 30-inch diameter pipeline continues on for another 66 miles through San Luis Obispo County, and Kern County passing through the Belridge and Pentland Stations to the Emidio connection in Mettler, California. Specifically, these facilities include: a 30-inch diameter pipeline system extending from Gaviota to the Cuyama River crossing on the Rinconada Ranch in the western end of the Cuyama Valley and then on through San Luis Obispo County and Kern County ending in the Bakersfield area; a 10.5 mile 24-inch diameter pipeline extending between Las Flores Canyon and Gaviota; pump stations are located at Las Flores Canyon, Gaviota, Sisquoc, Belridge, and Pentland. The PAALP pump station at Las Flores has four (4) electric driven centrifugal pumps capable of producing a combined maximum rating of 5,000 horsepower.

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.

An "Oil Spill" is any uncontrolled release of oil that may endanger the safety of the public or pollute the environment. When an oil spill occurs, the Company Oil Spill Response Plan must be activated. For emergencies and spills occurring in Santa Barbara County, the emergency and oil spill response plans approved by the Office of Emergency Management, County Fire Department and Planning & Development – Energy Division of Santa Barbara County must be activated.

An "NGL release" is an uncontrolled release of natural gas liquids that may endanger the safety of the public or pollute the environment. When an oil spill occurs, the company oil spill response plan must be activated. For emergencies and spills occurring in Kern County, the emergency and NGL response plans approved by the office of emergency management, County Fire Department and Planning and Development - Energy Division of Kern county must be activated.

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

FIGURE 1-2 - INFORMATION SUMMARY, CONTINUED

DESCRIPTION OF ZONE, CONTINUED
The 30-inch and 24-inch outside diameter pipelines (Mainline and Coastal Pipeline) have wall thicknesses ranging from 0.281 to 0.750 inches. The maximum operating pressures for the above referenced pipelines range from 275 to 1,360 pounds per square inch of gauge pressure (psig). The entire buried pipeline with the exception of factory bends on the Coastal Pipeline in Santa Barbara County is insulated within 1.5 inches of polyurethane foam with a vinyl outer jacket and is under cathodic protection. Combined pump ratings in bar
All Pump Stations Refer to **SECTION 6.8** for for information regarding pumping station and valve facility locations. It is possible that sparks, engines, hot surfaces on vehicles, smokers, etc. could ignite the curde oil during clean-up operations. Extreme caution should be used. As required by Final Development Plan Condition P-9, the Company's Pump Station Fire Protection Plan will be in full effect at all pump stations. In the event of a spill outside the pump station boundaries, all on-site personnel will be instructed to use extreme caution relative to ignition sources. The pumps at these five (5) facilities are equipped with remote monitoring systems (e.g. bearing temperature, vibration) to provide advance warning of impending equipment failures and fire detectors monitor each site. Control logic circuitry automatically shuts down the station and sends an alarm to the Operations Control Center in Midland, Texas if pumping equipment malfunctions or fires are detected in the pumping area at any of these facilities. Electrical power is supplied through existing public utilities. The pump stations consist of: a. Electrically driven centrifugal pumps b. Electrical motor operated facility and pump isolation valves c. Individual valves for each pump d. Pig receiver and launcher (Las Flores has launcher only) e. Associated piping and valves f. Prover and positive displacement meters (Gaviota and Las Flores only) g. 2,000 gallon underground sump tank with pump, high level alarm monitoring and leak detection systems h. Power centers approximately 30 by 12 Feet i. Electrical substation (Sisquoc only) j. Transformers k. Uninterruptible Power Supply (UPS) l. Underground pipelines The power centers contain all power equipment, supervisory and sequence control equipment, communications equipment and an Uninterruptible Power Supply (UPS). The sites are lighted and fenced as necessary and required. Perimeter facility fencing is not required at the Las Flores pump station. The pipeline system is designed to protect itself by detecting unsafe conditions that may result from temperature, pressure and flow variations. Instrumentation will initiate automatic shutdowns when present limits of the monitoring control are exceeded.

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An "Oil Spill" is any uncontrolled release of oil that may endanger the safety of the public or pollute the environment. When an oil spill occurs, the Company Oil Spill Response Plan must be activated. For emergencies and spills occurring in Santa Barbara County, the emergency and oil spill response plans approved by the Office of Emergency Management, County Fire Department and Planning & Development – Energy Division of Santa Barbara County must be activated.

An "NGL release" is an uncontrolled release of natural gas liquids that may endanger the safety of the public or pollute the environment. When an oil spill occurs, the company oil spill response plan must be activated. For emergencies and spills occurring in Kern County, the emergency and NGL response plans approved by the office of emergency management, County Fire Department and Planning and Development - Energy Division of Kern county must be activated.

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

FIGURE 1-2 - INFORMATION SUMMARY, CONTINUED

DESCRIPTION OF ZONE, CONTINUED
Access Roadways: The access roadway to each unmanned pump station is a minimum or 12 feet in width and each has an "all weather" paved surface capable of supporting a 20-ton fire truck from any of the county fire departments. The maximum road grade does not exceed 15 percent. Provisions for turning fire apparatus around will be provided consistent with the county fire department requirements.
Emergency Shutdown Isolation Features and Valves: An important design feature for unmanned pump station oil spill protection is automatic shutdown and isolation of the facility from the pipeline, along with containment of released crude oil. Isolation is accomplished on site by automatic operation of station valves and pump valves if any one of the following occurs: a. Fire detection b. Emergency manual shutdown c. High sump level The following items will cause a pump unit to automatically shut down: a. High bearing temperature at pumps and motors b. High motor winding temperature c. Pump seal failure d. Power failure e. Vibration f. High pump case temperature g. Incomplete control sequence h. High discharge and low suction pressure (all pumps) All process valves in the pump station are power-operated. The station discharge pressure control valves are electrically actuated. The discharge pressure control valve is arranged to "fail safe" whether or not the commercial power supply is operable.

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

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.

An "Oil Spill" is any uncontrolled release of oil that may endanger the safety of the public or pollute the environment. When an oil spill occurs, the Company Oil Spill Response Plan must be activated. For emergencies and spills occurring in Santa Barbara County, the emergency and oil spill response plans approved by the Office of Emergency Management, County Fire Department and Planning & Development – Energy Division of Santa Barbara County must be activated.

An "NGL release" is an uncontrolled release of natural gas liquids that may endanger the safety of the public or pollute the environment. When an oil spill occurs, the company oil spill response plan must be activated. For emergencies and spills occurring in Kern County, the emergency and NGL response plans approved by the office of emergency management, County Fire Department and Planning and Development - Energy Division of Kern county must be activated.

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

FIGURE 1-2 - INFORMATION SUMMARY, CONTINUED

DESCRIPTION OF ZONE, CONTINUED

Dikes & Drainage: Containment diking is provided at each Pump Station facility. A spill or leak occurring within a pump station will be contained within the diked area of the facility and then removed by vacuum truck. The dikes will prevent the flow of any crude oil off site into other facilities or properties. Each site has been sloped to cause liquids within the pad area to drain toward an oil separator and catch basin. This drainage system routes liquids away from the power center, access road, substation, and unclassified areas.

Containment capability at each of the four Pump Stations, in barrels is:

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

Plans showing actual size, location, and design of the earthen dikes were submitted to Santa Barbara County and approved prior to construction of the Las Flores, Gaviota and Sisquoc pump stations.

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

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An "Oil Spill" is any uncontrolled release of oil that may endanger the safety of the public or pollute the environment. When an oil spill occurs, the Company Oil Spill Response Plan must be activated. For emergencies and spills occurring in Santa Barbara County, the emergency and oil spill response plans approved by the Office of Emergency Management, County Fire Department and Planning & Development – Energy Division of Santa Barbara County must be activated.

An "NGL release" is an uncontrolled release of natural gas liquids that may endanger the safety of the public or pollute the environment. When an oil spill occurs, the company oil spill response plan must be activated. For emergencies and spills occurring in Kern County, the emergency and NGL response plans approved by the office of emergency management, County Fire Department and Planning and Development - Energy Division of Kern county must be activated.

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

FIGURE 1-2 - INFORMATION SUMMARY, CONTINUED

DESCRIPTION OF ZONE, CONTINUED
Protection for Piping and Valves: Protection for Piping and ValvesDriving around piping, pumps, valves, and other equipment is limited to the minimum necessary for service and maintenance. Critical equipment components are protection from impact by yellow painted barrier posts.
(b) (7)(F), (b) (3) [redacted]
Product and Equipment Identification: Emergency shutdown switches are clearly labeled and valves are readily distinguishable as to whether they are in an open or closed position.
Pressure Relief Provisions: Pressure Relief ProvisionsElectrical driven centrifugal pumps are utilized. An increase in the pump station discharge pressure above the preset limit will shut down the pumps and initiate an alarm to the Oil Movements Control Center. Once the pumps are shut down the flow will stop. Safety devices are provided to prevent over-pressuring of pumping equipment, including auxiliary pumping equipment within the pump station. Thermal relief valves are provided for all above-ground piping as required by code. These valves are "pop-off" type which relieve excessive pressures that build up in a section of a blocked-in pipe (valves shut on both ends) when subjected to temperature increases. Station control valve and pressure switches also serve as pressure limiting devices. The scraper launchers and receivers are equipped with pressure indication devices and appropriate relief devices that are capable of relieving excessive pressures.

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.

An "Oil Spill" is any uncontrolled release of oil that may endanger the safety of the public or pollute the environment. When an oil spill occurs, the Company Oil Spill Response Plan must be activated. For emergencies and spills occurring in Santa Barbara County, the emergency and oil spill response plans approved by the Office of Emergency Management, County Fire Department and Planning & Development – Energy Division of Santa Barbara County must be activated.

An "NGL release" is an uncontrolled release of natural gas liquids that may endanger the safety of the public or pollute the environment. When an oil spill occurs, the company oil spill response plan must be activated. For emergencies and spills occurring in Kern County, the emergency and NGL response plans approved by the office of emergency management, County Fire Department and Planning and Development - Energy Division of Kern county must be activated.

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

FIGURE 1-2 - INFORMATION SUMMARY, CONTINUED

DESCRIPTION OF ZONE, CONTINUED

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

[redacted]

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.

An "Oil Spill" is any uncontrolled release of oil that may endanger the safety of the public or pollute the environment. When an oil spill occurs, the Company Oil Spill Response Plan must be activated. For emergencies and spills occurring in Santa Barbara County, the emergency and oil spill response plans approved by the Office of Emergency Management, County Fire Department and Planning & Development – Energy Division of Santa Barbara County must be activated.

An "NGL release" is an uncontrolled release of natural gas liquids that may endanger the safety of the public or pollute the environment. When an oil spill occurs, the company oil spill response plan must be activated. For emergencies and spills occurring in Kern County, the emergency and NGL response plans approved by the office of emergency management, County Fire Department and Planning and Development - Energy Division of Kern county must be activated.

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 - Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties) OVERVIEW MAP

Click here to view - San Joaquin Valley System

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

[redacted]

FIGURE 1-3 - Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties) OVERVIEW MAP

Click here to view - Belridge Station

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

FIGURE 1-3 - Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties) OVERVIEW MAP

Click here to view - Pentland Station

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

FIGURE 1-3 - Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties) OVERVIEW MAP

Click here to view - Las Flores Pump Station

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

FIGURE 1-3 - Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties) OVERVIEW MAP

Click here to view - Gaviota Pump Station

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

[redacted]

FIGURE 1-3 - Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties) OVERVIEW MAP

Click here to view - Sisquoc Pump Station

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

[redacted]

FIGURE 1-3 - Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties) OVERVIEW MAP

Click here to view - Crude Oil Flowpath Diagram from Las Flores and Gaviota Origin

Crude Oil Flowpath Diagram From
Las Flores and Gaviota Origin, Receipt Locations

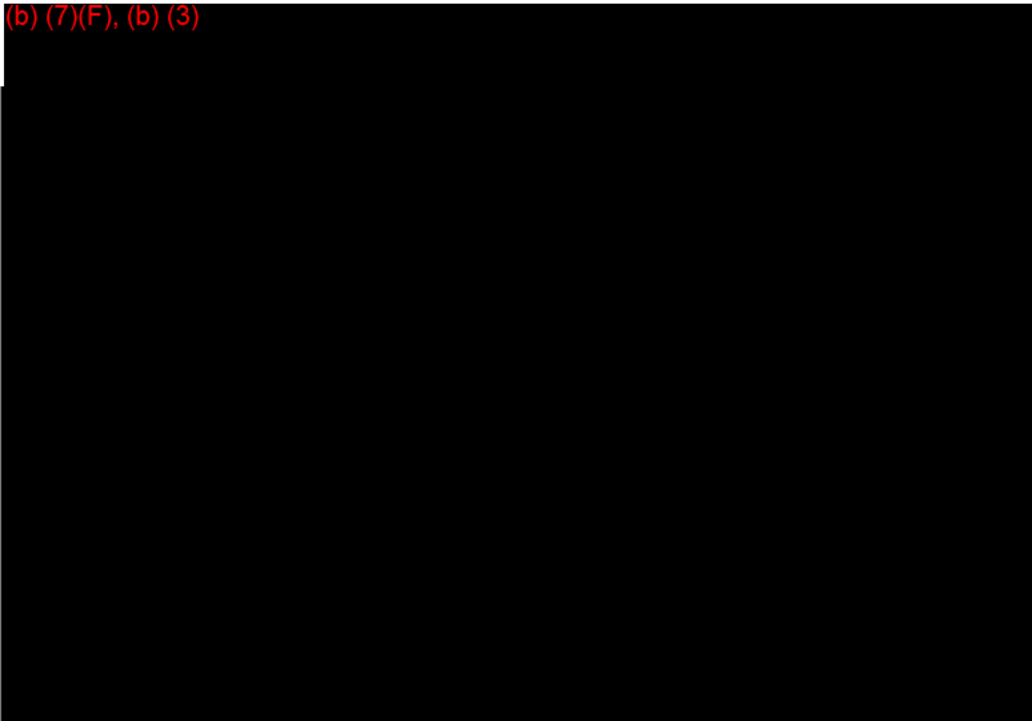


FIGURE 1-3 - Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties) OVERVIEW MAP

Click here to view - Overview Map

(b) (7)(E). (b) (8)

FIGURE 1-3 - Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties) OVERVIEW MAP

Click here to view - Westside Pipeline Overview Map

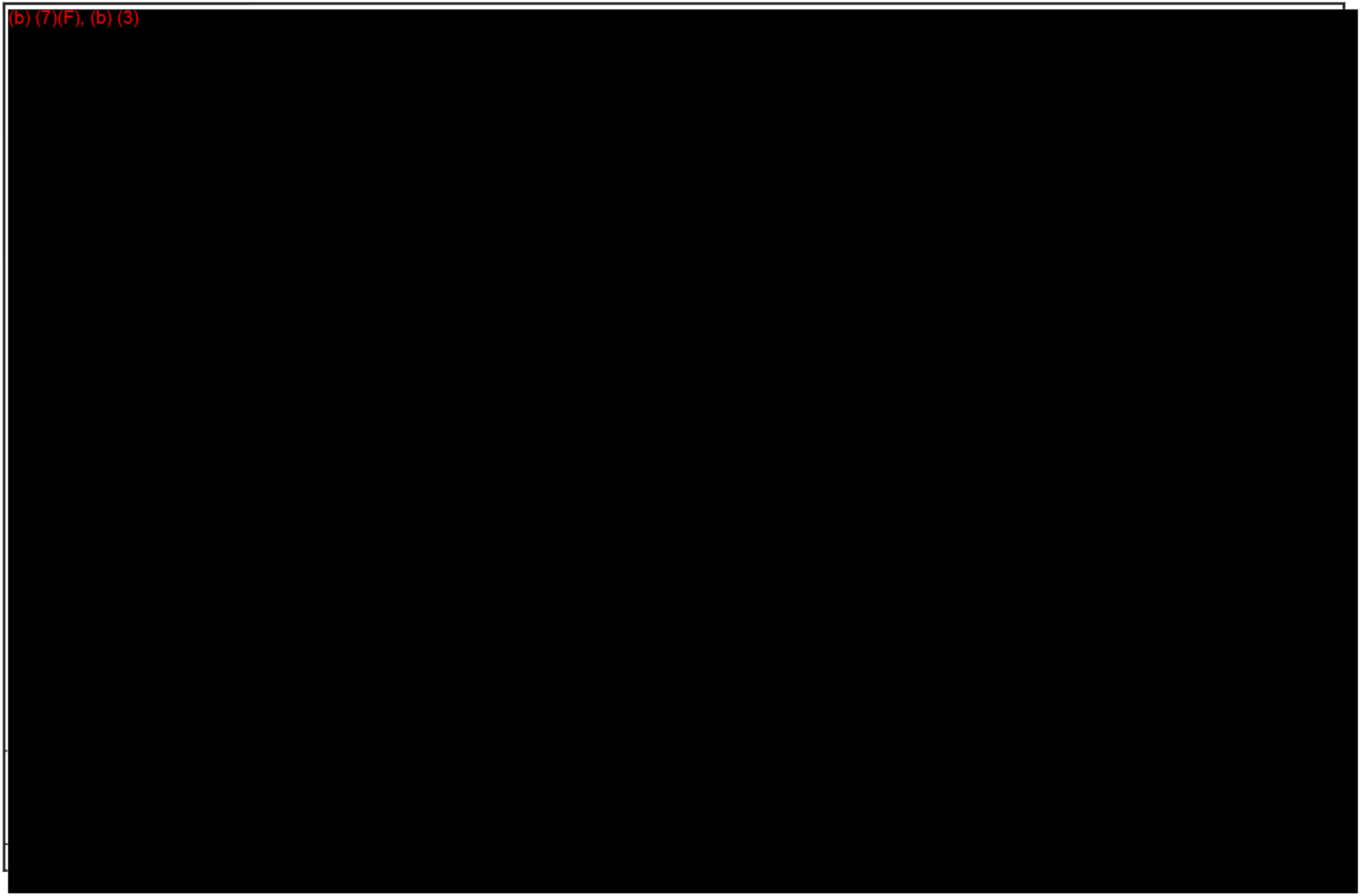

(b) (7)(F), (b) (3)

FIGURE 1-4 - PIPELINE SYSTEM OVERVIEW MAP

Click here to view - Santa Barbara County Pipeline Route

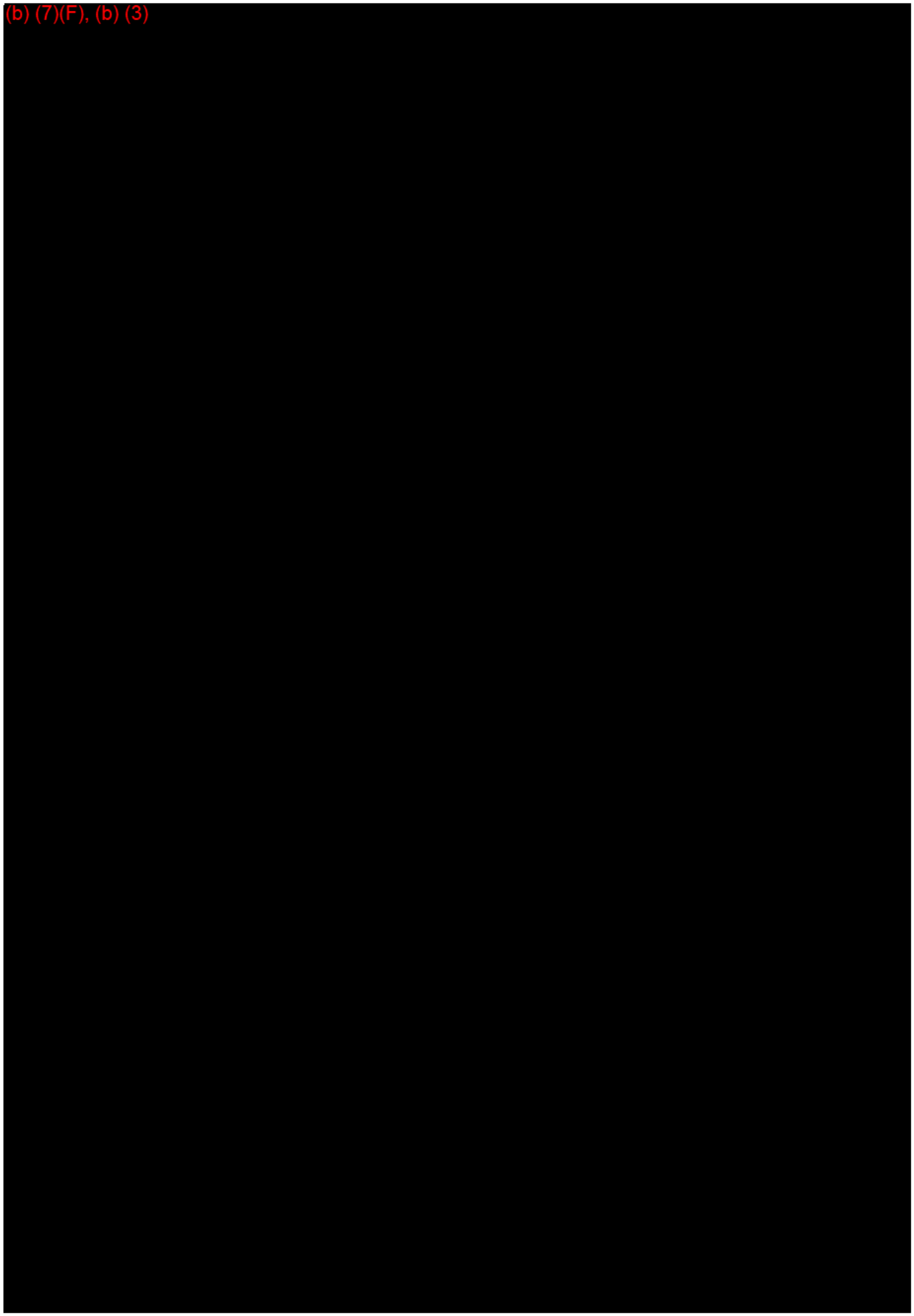

(b) (7)(F), (b) (3)

FIGURE 1-4 - PIPELINE SYSTEM OVERVIEW MAP

Click here to view - Pipeline System Overview Map

(0) (7)(F), (0) (3)

Printing Date: July 22, 2010
File: H:\Project_Files\Pipeline Systems\SanJoaquinValley\SanJoaquinValleySystem.mxd

FIGURE 1-4 - PIPELINE SYSTEM OVERVIEW MAP

Click here to view - Westside Pipeline Overview Map

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

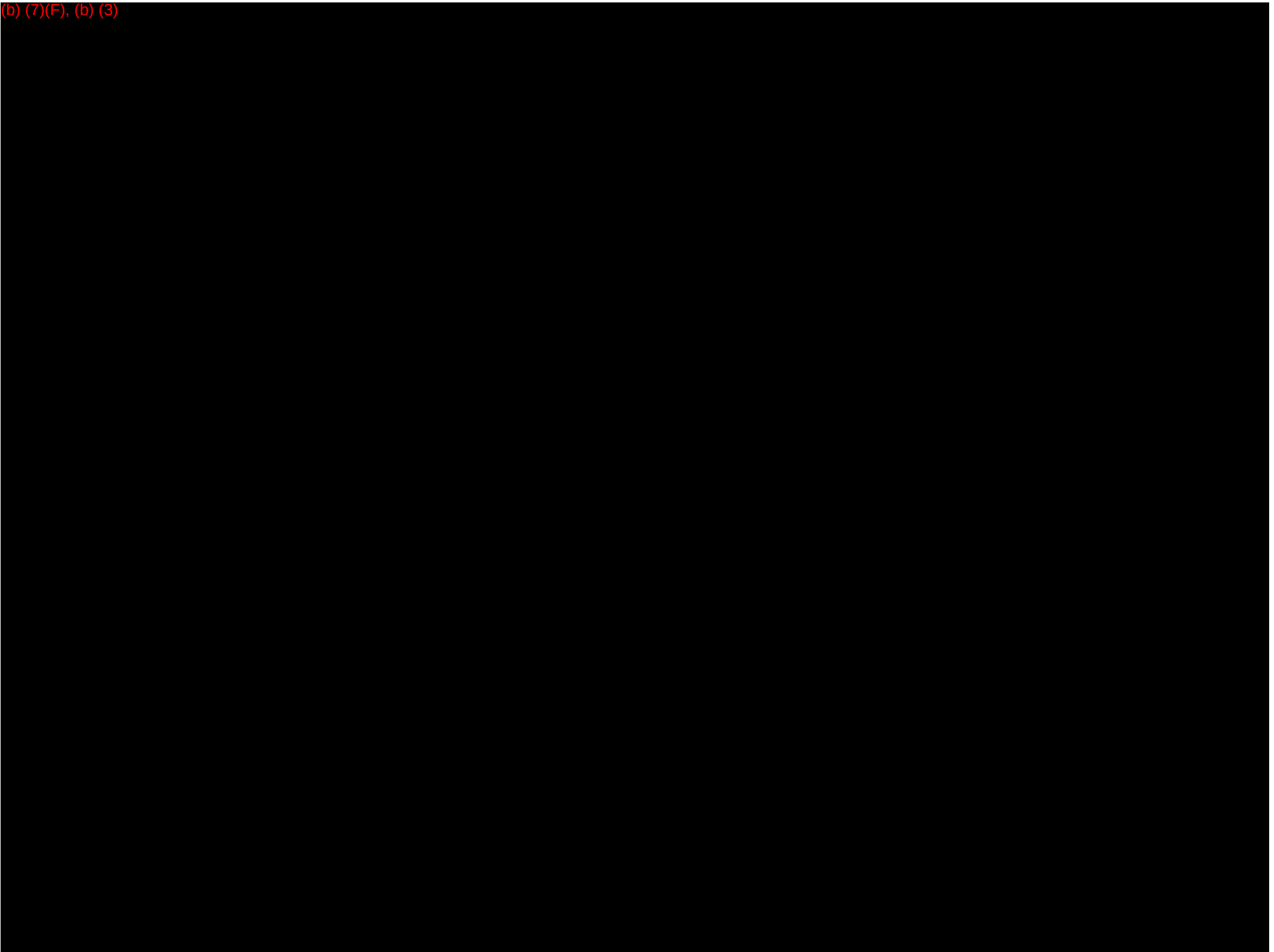


FIGURE 1-5 - STATION DESCRIPTIONS

Station Name:	Las Flores Pump Station
Station Location:	(b) (7)(F), (b) (3) [redacted]
Station Description:	[redacted]

Tank ID	Total Volume (bbl)	Capacities (bbl)	Comments

FIGURE 1-5 - STATION DESCRIPTIONS

Station Name:	Gaviota Pump Station
Station Location:	(b) (7)(F), (b) (3) [redacted]
Station Description:	

Tank ID	Total Volume (bbl)	Secondary Containment Capacities (bbl)	Comments

FIGURE 1-5 - STATION DESCRIPTIONS

Station Name:	Sisquoc Pump Station
Station Location:	(b) (7)(F), (b) (3) [redacted]
Station Description:	

Tank ID	Total Volume (bbl)	Secondary Containment Capacities (bbl)	Comments

FIGURE 1-5 - STATION DESCRIPTIONS

Station Name:	Pentland Station
Station Location:	(b) (7)(F), (b) (3) [redacted]
Station Description:	

Tank ID	Total Volume (bbl)	Secondary Containment Capacities (bbl)	Comments
4A01	(b) (7)(F), (b) (3) [redacted]		
4A02			
201			
202			
203			
204			
213			

FIGURE 1-5 - STATION DESCRIPTIONS

Station Name:	Belridge Station
Station Location:	(b) (7)(F), (b) (3) [redacted]
Station Description:	

Tank ID	Total Volume (bbl)	Secondary Containment Capacities (bbl)	Comments
101	(b) (7)(F), (b) (3) [redacted]		
102			

1.1 PURPOSE / SCOPE OF PLAN

The purpose of this Spill Response Plan (Plan) is to provide guidelines to quickly, safely, and effectively respond to a spill. The Pipeline is owned and operated by Plains Pipeline, L.P., herein referred to as "Company." This plan is intended to provide an overarching process for Level 3 emergency response actions.

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:

- Pipeline and Hazardous Materials Safety Administration (PHMSA), U.S. Department of Transportation requirements for an OPA 90 plan (49 CFR 194)
- Sections 815 - 819 of Title 14, Division 1 of the California Code of Regulations
- Santa Barbara County Final Development Plan (FDP) Conditions P-3, P-4, P-5
- Santa Barbara County Zoning Ordinance, Section 35.290
- The Plan's approval by the Santa Barbara County Fire Department and Office of Emergency Management (Fire/OEM) is based on its consistency with the county-wide Oil and Gas Industry Emergency Response Plan.
- Sections 815 - 819 of Title 14, Division 1 of the California Code of Regulations
- California Government Code Section 51010-51019.1

This plan shall be activated upon occurrence of any emergency. For purposes of this Plan, an emergency is defined as "any situation that requires immediate action so that persons are not injured and/or property or environmental damages do not occur". **If the emergency involved an oil spill, this plan shall be activated immediately following the initial emergency response actions identified in this Plan.**

The intent of the P-4 plan is to provide a means whereby one or more industry groups shall coordinate amongst themselves and with the government agencies/organizations to respond to a full-scale emergency (as described above). It is in the best interest of all involved parties to cooperate by providing mutual aid/assistance through the sharing of resources/manpower during full-scale emergencies. Through activation of the P-4 Area Oil and Gas Industry Emergency Response Plan, the Company, Exxon, PXP, ConocoPhillips, E&B Resources, Santa Maria Refining Company, Pacific Offshore Pipeline Company (POPCO), and Ellwood Pipeline, Inc. personnel and/or equipment could be utilized, if available, during an emergency.

Employees shall not hesitate to notify county emergency response agencies via 911 or in Santa Barbara County call (805) 683-2724 if reporting from a cellular phone, San Luis Obispo or Bakersfield, in the event of an emergency.

In order to satisfy Contingency Plan Requirements specified in the California Code of Regulations and Santa Barbara County FDP Condition P-5 as described above for the Company project, this Plan is submitted to the Office of Oil Spill Prevention and Response (OSPR) and various departments within the County of Santa Barbara.

1.1 PURPOSE / SCOPE OF PLAN, CONTINUED

The purpose of this plan is to detail the pertinent and required information relevant to the response, clean-up, and restoration of a potential oil spill from the pipeline or associated facilities while meeting the requirements as described above. The plan has been updated to assure consistency with the Company's system-wide Oil Spill Response Plan submitted to the United States Department of Transportation, Pipeline and Hazardous Materials Administration pursuant to 49 CFR 194 (hereinafter referred to as the DOT Plan). In the event of an incident requiring the implementation of this Plan in Santa Barbara County, its use assures that the Company will be operating in compliance with State and local regulations and in accordance with, and in many respects will be exceeding, measures contained in the DOT Plan. This plan has also been prepared to assure consistency with both the Area Contingency Plan (ACP) Los Angeles/Long Beach revised 2008 prepared by the U.S. Coast Guard and OSPR and the U.S. EPA's Region IX Area (Mainland) Contingency Plan.

In the event of an emergency situation, the Emergency Response Plan which is submitted as a requirement of Santa Barbara County's FDP Condition P-3, which is incorporated herein by reference, should be used first, prior to the activation of the Oil Spill Contingency Plan. The P-3 Plan identifies the emergency response procedures to be implemented in the event of an emergency situation that may affect public safety and/or the environment, regardless of whether or not spilled oil is involved.

The objective of this plan is to detail spill containment and recovery as well as site clean-up and restoration subsequent to an emergency response to an oil spill event involving any of the Company's facilities addressed in this Plan.

Employees shall not hesitate to notify County emergency response agencies via 911 or (805) 683-2724 if reporting from cellular phone, North County areas or from Bakersfield, in the event of an emergency.

1.2 PLAN REVIEW AND UPDATE PROCEDURE

In accordance with 49 CFR Part 194.121, and California Government Code Sections 51010-51019.1, this Plan will be reviewed annually and modified to address new or different operating conditions or information included in the Plan. Upon review of the response plan for each five-year period, revisions will be submitted to PHMSA provided the changes to the current plan are needed, or a letter stating that the plan is still current. Company internal policy states that the Plan will be reviewed at least annually and modified as appropriate. 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.

Plans shall be submitted to the California Department of Fish and Wildlife – Office of Spill Prevention and Response (OSPR) once every five years. A complete new plan will resubmitted for review only if there have been changes to the original plan or updates since the last submittal. If the original plan or submitted updates have not changed, or the relevant Area Plan has not been amended, a letter will be submitted to OSPR stating that the plan currently on file with the OSPR is up-to-date and complete. OSPR may require earlier or more frequent resubmission. Circumstances that would warrant an earlier review or update of the plan are included in (but are not limited to) the table below. For unscheduled updates, OSPR will be notified within 24 hours of any significant change or update to an approved plan. A significant change is one that could affect timely and adequate oil spill response including changes in tank vessel ownership and Financial Responsibility coverage. Changes which are not significant include minor changes in equipment, personnel, or operating procedures which do not affect timely and adequate oil spill response.

As soon as administratively feasible, OSPR will approve any change that would benefit the public health and safety, improve environmental protection, or facilitate more effective response, containment, and clean up. Revised plan pages will be distributed to all plan recipients within 15 days of the OSPR's approval of the revisions. Updates for insertion into the plan will not be distributed by fax. The updated section(s) will have a date revised located on the section cover page, and shall be accompanied by a record of changes that includes the date revised, page(s) revised, and subject matter of update. This information may be submitted either as hard copy or on electronic media in a format approved by the OSPR, as noted in Section 816.02(b)(3) of the California regulations.

1.2 PLAN REVIEW AND UPDATE PROCEDURE, CONTINUED

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

CONDITIONS REQUIRING REVISIONS AND SUBMISSIONS	DOT	OSPR
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	
A change in the type of oil handled, stored, or transferred that materially alters the required response resources.	x	
A change in key personnel (Qualified Individuals).	x	
A change in the name of the Oil Spill Removal Organization (OSRO).	x	
Any other changes that materially affect the implementation of the Plan.	x	
A change in the NCP or ACP that has significant impact on the equipment appropriate for response activities.	x	
A change in regulations.		x
The development of new oil spill response technologies as determined by OSPR during any review of Response Capability Standards.		x
Deficiencies identified in the OSPR's review of all the oil spill contingency plans as part of the Coastal Protection Review.		x
An increased need to protect plant and wildlife habitat.		x
Deficiencies in oil spill response capability identified during an oil spill.		x
Deficiencies in oil spill response capability identified during an oil spill drill.		x
Significant changes to the tank vessel or marine facility.		x
Any other situation deemed appropriate by the OSPR where deficiencies in the ability to provide timely and effective oil spill response are identified.		x

The HSE 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 need to be reprinted and inserted in to the paper copy of the plan. All revisions will be submitted to all parties on the distribution list in **FIGURE 1-1**.

1.3 CERTIFICATION OF ADEQUATE RESOURCES

CERTIFICATION
Pursuant to the Clean Water Act Section 311(j)(5)(F)
Plains Pipeline, L.P.

The Plains Pipeline, L.P., hereby certify to the Pipeline and Hazardous Materials Safety Administration of the Department of Transportation that they have 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 a substantial threat of such a discharge.

Darren Palmer
Qualified Individual (QI) and Alternate QI, Plains All American Pipeline, L.P.

1.4 CALIFORNIA CERTIFICATION OF FEASIBILITY AND EXECUTABILITY

Plains All American Pipeline, L.P./Plains Marketing, L.P.
3600 Bowman Court
Bakersfield, CA 93308

and

Plains All American Pipeline, L.P.
2230 S. Depot Street, Suite A
Santa Maria, CA 93455

and

Agents, consultants, contractors
and contract associates of the Company

Office of Spill Prevention and Response
Plan Number P4-42-0106
Certificates of Financial Responsibility
(See **TABLE OF CONTENTS**)

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.

Darren Palmer
Qualified Individual, Plains All American Pipeline, L.P.
8/17/2011

1.5 AGENCY SUBMITTAL / APPROVAL LETTERS

Click here to view California Department of Fish and Game - June 14, 1994

Click here to view Santa Barbra County Acceptance and Approval

Click here to view PHMSA Approval Letter

Click here to view OSRO Equipment Exercises Certifications 2013

STATE OF CALIFORNIA—THE RESOURCES AGENCY PETE WILSON, Governor

DEPARTMENT OF FISH AND GAME
1416 NINTH STREET
P. O. BOX 944209
SACRAMENTO, CA 94244-2090
(916) 445-9937

ROUTE TO:	ACTION	INIT.
MANAGER		
ASST. MGR.		
BUS/HR MGR.		
TRNR		
SEC		
YARD		
OTHER		

I-INFORMATION A-ACTION
T-READ/TOSS F-FILE

June 14, 1994

Mr. Darryle Waldron
Clean Seas
1180 Eugenia Place Suite 204
Carpenteria, California 93013

Dear Mr. Waldron:

In reply to your letter of June 1, 1994 regarding your Regional Resource Manual, the following comments apply:

Section 202: No additional comments, we understand that at present all of your subscribers fall within the reasonable worst case volume, as calculated in your manual.

Section 303: Please refer to section 817.02(c)(3)(B)4,5 of the California Code of Regulations. This specific section refers to Contingency Plan Content, and requires that resources at risk, from an oil spill be identified. As such, 817.02(c)(3)(B) requires that a map containing the locations of economically and culturally sensitive areas be specifically included. In order to ease the burden of mapping all cultural, historical or archaeological sites, we made allowances to just list a phone number for a point of contact, in case these sites are impacted. However, if you would like to identify and list all the sensitive archaeological, cultural etc. sites rather than list a point of contact, please include them in your manual.

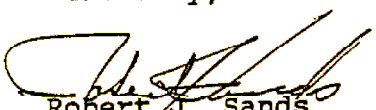
Section 301.3/500: Thank you for sending the site characterization checklists, copies will be made and corrections made to all Clean Seas Resource Manuals in our possession.

Section 305: A letter dated June 3, 1994 was sent to you explaining policy changes regarding temporary storage issues. Our interpretation of the regulations has led to clarification, through consultation, with various regulatory agencies. Potential changes in existing regulations to ease temporary storage requirements during an emergency response are under consideration at this time. We have been in contact with ENSR Consulting and Engineering to ensure that storage requirements are properly addressed in your manual.

Section 306: Thank you for clarifying the wildlife rehabilitation section of your plan. Please include a statement, in Section 306, stating that Clean Seas does not provide the required contracts for wildlife rehabilitation services for its cooperative members, as a matter of clarification for your members.

If you have any questions please write me at the letterhead address above or phone me at (916) 327-9943.

Sincerely,



Robert J. Sands
Chief, Planning Branch
Office of Oil Spill Prevention
and Response

PLAINS ALL AMERICAN PIPELINE, L.P.
EMERGENCY RESPONSE PLAN Permit Condition P-3
OIL SPILL CONTINGENCY PLAN Permit Condition P-5

Gaviota Pump Station
17100 Calle Mariposa Reinna
Goleta, CA 93117
(805) 567-1085
GPS Coordinates: Lat: (b) (7)(F), (b) (3) [redacted]

Las Flores Station
12050 Calle Real
Goleta, CA 93117
(805) 562-1288
GPS Coordinates: Lat: (b) (7)(F), (b) (3) [redacted]

Sisquoc Station
5781 Santa Maria Mesa Road
Santa Maria, CA 93454
(805) 937-8372
GPS Coordinates: Lat: (b) (7)(F), (b) (3) [redacted]

Plains All American Pipeline, L.P.
2230 S. Depot St. Suite A
Santa Maria, CA 93455
(805) 922-9897

Submitted by:

Thomas McLane DATE: 10·12·11
Thomas McLane, Director
Western Division, Environmental & Regulatory Compliance
(562) 728-2358

Santa Barbara County Acceptance and Approval:

Elsa Wendt DATE: 11/18/11
Santa Barbara County Office of Emergency Management

DATE: 11/18/11
Santa Barbara County Fire Department

DATE: 11/18/11
Santa Barbara County Planning & Development Department – Energy Division

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

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

February 7, 2014

Sheryl Nguyen
Compliance Specialist
Plains All American Pipeline, L.P.
5900 Cherry Avenue
Long Beach, CA 90805-4408

RE: LETTER OFAPPROVAL: Plains All American Pipeline, L.P., Bakersfield District Spill Response Plan (Santa Barbara, San Luis Obispo and Kern County), Sequence Number: 0107, January 31, 2014

Dear Ms. Nguyen:

The Pipeline and Hazardous Materials Safety Administration (PHMSA) has received and reviewed Plains All American Pipeline, L.P.'s amended oil spill response plan for Plains All American Pipeline, L.P., Bakersfield District Spill Response Plan (Santa Barbara, San Luis Obispo and Kern County) dated January 31, 2013. We conclude that the Plan complies with PHMSA's regulations concerning onshore oil pipelines found at 49 Code of Federal Regulations (CFR) Part 194. Your Response Plan has been approved.

This approval is valid for five years from the date of this letter. You must revise and resubmit a Response Plan for approval by **February 7, 2019**. If discrepancies are found during PHMSA inspections, or if new or different operating conditions or information would substantially affect the implementation of this plan, you will be required to resubmit a revised plan. See 49 CFR § 194.121(b).

Should you have any questions or concerns, please contact me at (202) 366-4595 or by email at PHMSA.OPA90@dot.gov. Please include the sequence number and your PHMSA Operator Identification Number on any future correspondence.

Sincerely,

David K. Lehman, Acting Director
Emergency Support and Security Division
Office of Pipeline Safety

cc: PHMSA Western Region

February, 2014
PREP Credit Report

Dear Client:

Please find attached the - ***NRC 2013 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 2013 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 and at Independent Contractor Network (ICN) facilities dispersed throughout the various Captain of the Port zones. The information categories include:

COTP ZONE - The COTP Zone in which the response equipment was deployed
LOCATION - The geographical location (city/state) in which the equipment was deployed.
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 Vessel 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 Independent Contractor Network (ICN) Participant facility, of which there are over one hundred, has an active file that feeds data to the Summary Report.

NRC's dispersant program includes access to 6 spray aircraft throughout the US, such as DC-4's and a DC-6. NRC conducts dispersant aircraft training through internal exercises on a routine basis.

ICN facility equipment deployment records are held at each facility and at NRC Headquarters in Great River, NY. 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 Christopher Eilers at 631.328.2517. 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

Regional Breakdown

Northeast Region
Regional Manager: John Hielscher
3500 Sunrise Highway, Great River, NY 11739
(631)328-2524 Office
[redacted]

Indiana, Michigan, Ohio, New York, Pennsylvania, Maryland, Delaware, New Jersey, Connecticut, Vermont, Massachusetts, Rhode Island, New Hampshire, Maine, West Virginia, Virginia

South Region
Regional Manager: John Robinson
17350 State Highway 249 – Suite 355, Houston, TX 77064
(713)965-4165 Office
(b) (7)(F), (b) (3)
States Covered:
Texas, Louisiana, Arkansas, Oklahoma, Kansas, Nebraska, Colorado, New Mexico, Mississippi, Alabama

Southeast Region
Regional Manager: Jason DeSantis
104 River Lane, Ormond Beach, FL 32176
(386)441-7719 Office
(b) (7)(F), (b) (3)
States Covered:
Kentucky, Tennessee, North Carolina, South Carolina, Georgia, Florida, Missouri, Illinois, Iowa, Minnesota, Wisconsin

Pacific Northwest Region
Regional Manager: Bart Dodson
9520 10th AVE, Seattle, WA 98108
(b) (7)(F), (b) (3)
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)749-4121 Office
(b) (7)(F), (b) (3)
Nevada, Utah, Arizona

Caribbean Region
Regional Manager: David Aviles
P.O. Box 9022750, San Juan, PR 00902
(787)789-2000 Office
(b) (7)(F), (b) (3)
o, St. Thomas, St. Croix, St. Lucia

Aruba
Regional Manager: James Haeghaert
Bungalow 251, First Ave., Seroe Colorado, San Nicholas, Aruba
Islands Covered: Aruba

2013 ANNUAL PREP EQUIPMENT DEPLOYMENT SUMMARY

NRC USCG OSRO # 0016

Attachment A

Date	COTP Zone	Contractor Name	Location	Boom 6"-18"	Boom 19"-42"	Skimmer Drum, Brush,	Skimmer Floating Suction	Skimmer Belt	Skimmer Rope	Region
1/1/2013	Pittsburgh	McCutcheon Enterprise	Apollo, PA	2400'						Northeast
1/6/2013	Baltimore	Miller Environmental Group	Baltimore, MD	400'		1				Northeast
1/11/2013	Delaware Bay	Miller Environmental Group	Philadelphia, PA	400'		1				Northeast
1/14/2013	New York	Miller Environmental Group	Staten Island, NY	13600'		8				Northeast
1/27/2013	New York	Miller Environmental Group	Astoria, NY	1000'						Northeast
2/4/2013	Delaware Bay	Miller Environmental Group	Milford, DE	400'			2			Northeast
2/11/2013	New York	Miller Environmental Group	Newburgh, NY	1800'						Northeast
2/26/2013	Delaware Bay	Miller Environmental Group	Marcus Hook, PA	1500'		1				Northeast
2/28/2013	Long Island Sound	Miller Environmental Group	Long Island, NY	2000'	2000'					Northeast
3/16/2013	New York	Miller Environmental Group	Astoria, NY	1000'						Northeast
3/18/2013	Boston	National Response Corporation	Boston, MA	1000'		1				Northeast
3/20/2013	Baltimore	Miller Environmental Group	Baltimore, MD	1000'		1				Northeast
3/20/2013	Boston	Boston Line Service	Revere, MA	1500'						Northeast
3/21/2013	Southeastern New England	Moran Environmental Recovery	Buzzards Bay, MA	1300'		1				Northeast
4/4/2013	New York	Miller Environmental Group	Lawrence, NY	1000'						Northeast
4/10/2013	Boston	Boston Line Service	Boston, MA	1000'						Northeast
4/10/2013	Ohio Valley	National Response Corporation	Cincinnati, OH			1				Northeast
4/19/2013	Long Island Sound	Miller Environmental Group	Port Jefferson, NY	100'						Northeast
4/25/2013	Southeastern New England	Coast Line Service	Providence, RI	1500'						Northeast
5/4/2013	Baltimore	Miller Environmental Group	Baltimore, MD	1000'		1				Northeast
5/9/2013	New York	Miller Environmental Group	Gowanus, NY	200'						Northeast
5/10/2013	Southeastern New England	Moran Environmental Recovery	Woodshole, MA	1100'		1				Northeast
5/15/2013	Pittsburgh	National Response Corporation	Apollo, PA	100'		1				Northeast
5/25/2013	Delaware Bay	Moran Environmental Recovery	Delaware, DE	900'			1			Northeast
6/3/2013	New York	Moran Environmental Recovery	New York, NY	1000'			1			Northeast
6/5/2013	Buffalo	National Response Corporation	Buffalo, NY	1000'		1				Northeast
6/12/2013	Boston	Boston Line Service	East Boston, MA	1000'						Northeast
6/12/2013	Southeastern New England	Coast Line Service	Providence, RI	1000'						Northeast
6/19/2013	Boston	Boston Line Service	East Boston, MA	1000'						Northeast
6/20/2013	Northern New England	National Response Corporation	Bangor, ME	1000'		1				Northeast
6/20/2013	Southeastern New England	Coast Line Service	Providence, RI	1600'						Northeast
6/22/2013	Boston	Boston Line Service	Deer Island, MA	1000'						Northeast
6/26/2013	Ohio Valley	Evergreen Environmental	Ohio River	400'						Northeast
7/8/2013	Hampton Roads	Moran Environmental Recovery	Chesapeake Bay, VA	1800'		1				Northeast
7/11/2013	Ohio Valley	Evergreen Environmental	Ohio River Kramers Lane	900'						Northeast
7/11/2013	Sault Ste. Marie	National Response Corporation	Rogers City, MI	2000'		2				Northeast
7/16/2013	Hampton Roads	Moran Environmental Recovery	Portsmouth, VA	200						Northeast
7/17/2013	Delaware Bay	Miller Environmental Group	Pennsauken, NJ	2000'			1			Northeast

Date	COTP Zone	Contractor Name	Location	Boom 6"-18"	Boom 19"-42"	Skimmer Drum, Brush,	Skimmer Floating Suction	Skimmer Belt	Skimmer Rope	Region
8/3/2013	Upper Mississippi Rive	Evergreen Environmental	Evansville, IN	400'						Northeast
8/5/2013	New York	National Response Corporation	Staten Island, NY					1		Northeast
8/8/2013	Baltimore	Miller Environmental Group	Baltimore, MD	1000'		1				Northeast
8/8/2013	Delaware Bay	Miller Environmental Group	Paulsboro, NJ	1500'		1				Northeast
8/8/2013	New York	Moran Environmental Recovery	New York, NY	1000'		1				Northeast
8/13/2013	Upper Mississippi Rive	National Response Corporation	Beulah, ND	500'		1				Northeast
8/28/2013	Delaware Bay	Miller Environmental Group	Delaware City, DE	1200'		2	2			Northeast
9/2/2013	Delaware Bay	Miller Environmental Group	Delaware City, DE	600'		2	2			Northeast
9/4/2013	New York	Miller Environmental Group	Staten Island, NY	500'						Northeast
9/7/2013	Hampton Roads	National Response Corporation	Norfolk, VA	1000'		1				Northeast
9/11/2013	Boston	Boston Line Service	Everett, MA	1000'						Northeast
9/12/2013	Boston	Boston Line Service	Chelsea, MA	1000'						Northeast
9/13/2013	New York	Miller Environmental Group	Staten Island, NY	2000'						Northeast
9/13/2013	Upper Mississippi Rive	Summit Environmental	Evansville, IN	600'	500'	2				Northeast
9/15/2013	New York	Miller Environmental Group	Staten Island, NY	3600'		1				Northeast
9/16/2013	New York	National Response Corporation	New York, NY		200'			1	1	Northeast
9/24/2013	Delaware Bay	Miller Environmental Group	Marcus Hook, PA	1500'		1				Northeast
9/25/2013	Ohio Valley	Evergreen Environmental	Ohio River Greenwood Boat Ramp	500'		1				Northeast
9/26/2013	Southeastern New England	Coast Line Service	Providence, RI	1500'						Northeast
9/29/2013	Upper Mississippi Rive	Summit Environmental	Evansville, IN	1000'		2				Northeast
10/2/2013	New York	Miller Environmental Group	Newburgh, NY	1800'						Northeast
10/7/2013	Baltimore	Miller Environmental Group	Salisbury, MD	1000'						Northeast
10/8/2013	Upper Mississippi Rive	Summit Environmental	Evansville, IN	1000'		1				Northeast
10/9/2013	Baltimore	Miller Environmental Group	Baltimore, MD	200'						Northeast
10/9/2013	New York	Miller Environmental Group	Haverstraw, NY	1300'						Northeast
10/17/2013	Long Island Sound	Miller Environmental Group	Riverhead, NY	1000'						Northeast
10/22/2013	Upper Mississippi Rive	Summit Environmental	Evansville, IN	1000'		1				Northeast
10/23/2013	Delaware Bay	Miller Environmental Group	Philadelphia, PA	1000'			1			Northeast
10/24/2013	Delaware Bay	Miller Environmental Group	Wilmington, DE	600'						Northeast
10/29/2013	Delaware Bay	Miller Environmental Group	Wilmington, DE	200'						Northeast
10/29/2013	Delaware Bay	Moran Environmental Recovery	Philadelphia, PA	1100'			1			Northeast
11/11/2013	Southeastern New England	Coast Line Service	Providence, RI	1000'						Northeast
11/12/2013	Boston	Boston Line Service	Everett, MA	1500'						Northeast
11/12/2013	New York	Miller Environmental Group	Newburgh, NY	2000'						Northeast
11/25/2013	Southeastern New England	Coast Line Service	Providence, RI	1000'						Northeast
11/26/2013	Southeastern New England	Coast Line Service	Providence, RI	1200'						Northeast
12/13/2013	Boston	Boston Line Service	Quincy, MA	1000'						Northeast
12/18/2013	Boston	Boston Line Service	East Boston, MA	1000'						Northeast
12/31/2013	New York	National Response Corporation	Staten Island, NY						1	Northeast
2/28/2013	Puget Sound	National Response Corporation	Nea Bay, WA			1				Northwest
4/11/2013	Portland	National Response Corporation	Columbia River, WA				1			Northwest
5/11/2013	Puget Sound	National Response Corporation	San Juans, WA	1000'						Northwest
6/5/2013	Puget Sound	National Response Corporation	Woodinville, WA				1			Northwest

Date	COTP Zone	Contractor Name	Location	Boom 6"-18"	Boom 19"-42"	Skimmer Drum, Brush,	Skimmer Floating Suction	Skimmer Belt	Skimmer Rope	Region
8/23/2013	Puget Sound	Moran Environmental Recovery	Renton, WA	300'		1				Northwest
8/31/2013	Puget Sound	National Response Corporation	Ferndale, WA			1				Northwest
9/17/2013	Puget Sound	National Response Corporation	Seattle, WA			1				Northwest
9/30/2013	Puget Sound	National Response Corporation	Seattle, WA	400'		1				Northwest
10/2/2013	Puget Sound	Moran Environmental Recovery	Eagle Harbor, WA	1100'		1				Northwest
11/8/2013	Puget Sound	National Response Corporation	Port Townsend, WA	200'						Northwest
12/2/2013	Puget Sound	National Response Corporation	Imperium, WA					1		Northwest
1/22/2013	San Juan	National Response Corporation	Guayanilla Bay			1		1		PR/ USVI
1/31/2013	San Juan	Caribbean Enviromarine Services	Pier 1, San Juan		2000'		1			PR/ USVI
5/20/2013	San Juan	National Response Corporation	Cul de Sac Bay St. Lucia				3			PR/ USVI
11/18/2013	San Juan	National Response Corporation	St. Thomas, USVI	3000'		3	3	1	1	PR/ USVI
11/18/2013	San Juan	National Response Corporation	St. Thomas		1000'	1				PR/ USVI
11/18/2013	San Juan	National Response Corporation	VIWAPA Facility St. Croix		1000'	1				PR/ USVI
11/19/2013	San Juan	National Response Corporation	Yabacoa Bay		1000'	1	1		1	PR/ USVI
11/20/2013	San Juan	Caribbean Enviromarine Services	Yabucoa Marine Terminal	1000'					1	PR/ USVI
1/4/2013	New Orleans	OMI Environmental Solutions	Venice, LA	400'						South
1/5/2013	New Orleans	OMI Environmental Solutions	Gretna, LA	400'						South
1/7/2013	Morgan City	OMI Environmental Solutions	Weeks Island, LA	300'						South
1/19/2013	Morgan City	OMI Environmental Solutions	Concordia, LA	600'						South
1/27/2013	Lower Mississippi River	USES	Vicksburg, MS	5000'		4				South
2/27/2013	Mobile	SWS	Decatur, AL	800'						South
3/8/2013	Mobile	Oil Recovery Company	Mobile, AL	1500'						South
3/16/2013	Morgan City	National Response Corporation	Grand Isle, LA		2000'	1				South
4/7/2013	Corpus Christi	Miller Environmental Services	Ingleside, TX	900'						South
4/27/2013	Corpus Christi	Miller Environmental Services	Ingleside, TX	900'						South
5/1/2013	Corpus Christi	Miller Environmental Services	Ingleside, TX	500'						South
5/1/2013	Corpus Christi	Miller Environmental Services	Ingleside, TX	500'						South
5/2/2013	Port Arthur	OMI Environmental Solutions	Port Arthur, TX	400						South
5/11/2013	Port Arthur	OMI Environmental Solutions	Beaumont, TX	400'						South
5/15/2013	Corpus Christi	Miller Environmental Services	Corpus Christi, TX	1800'			1			South
5/15/2013	Corpus Christi	Miller Environmental Services	Corpus Christi, TX	1800'						South
5/17/2013	Mobile	Oil Recovery Company	Mobile, AL	900'						South
6/5/2013	Houston Galveston	National Response Corporation	Galveston, TX	100'				1	1	South
6/5/2013	Houston Galveston	National Response Corporation	Galveston, TX		1100'			1	1	South

Date	COTP Zone	Contractor Name	Location	Boom 6"-18"	Boom 19"-42"	Skimmer Drum, Brush,	Skimmer Floating Suction	Skimmer Belt	Skimmer Rope	Region
6/10/2013	Mobile	Oil Recovery Company	Mobile, AL	1200'						South
6/18/2013	Morgan City	National Response Corporation	Grand Isle, LA		200'	1				South
6/26/2013	Corpus Christi	National Response Corporation	Corpus Christi, TX			1			2	South
6/26/2013	Houston Galveston	National Response Corporation	Galveston, TX	1100'				1	1	South
6/26/2013	Houston Galveston	National Response Corporation	Galveston, TX		1100'			1	1	South
7/28/2013	Morgan City	National Response Corporation	Grand Isle, LA			1				South
7/30/2013	Corpus Christi	National Response Corporation	Corpus Christi, TX		1200'			1		South
8/1/2013	Corpus Christi	Miller Environmental Services	Aransas Pass, TX	200'						South
8/5/2013	Houston Galveston	OMI Environmental Solutions	LaPorte, TX	1600'						South
8/23/2013	Morgan City	National Response Corporation	Grand Isle, LA		2100'	1				South
8/28/2013	Corpus Christi	National Response Corporation	Corpus Christi, TX		100'					South
8/28/2013	Morgan City	National Response Corporation	Grand Isle, LA	300'		1				South
9/9/2013	Corpus Christi	Miller Environmental Services	Ingleside, TX	1500'						South
9/9/2013	Corpus Christi	Miller Environmental Services	Ingleside, TX	1500'						South
9/11/2013	Houston Galveston	National Response Corporation	Galveston, TX		400'			1	1	South
9/11/2013	New Orleans	OMI Environmental Solutions	Plaquemine, LA	500'			1			South
9/23/2013	Port Arthur	OMI Environmental Solutions	Lake Arthur, LA	100'						South
9/27/2013	Corpus Christi	National Response Corporation	Corpus Christi, TX						2	South
10/15/2013	Corpus Christi	National Response Corporation	Cotulla, TX	1000'		1				South
11/16/2013	Morgan City	OMI Environmental Solutions	Patterson, LA	500'		1				South
11/21/2013	Port Arthur	OMI Environmental Solutions	Cameron, LA	500'						South
11/27/2013	Morgan City	OMI Environmental Solutions	Intracoastal, LA	200'						South
12/4/2013	St. Petersburg	National Response Corporation	Tampa, FL			1				South
12/16/2013	Morgan City	OMI Environmental Solutions	Fourchon, LA	660'						South
12/18/2013	Corpus Christi	National Response Corporation	Corpus Christi, TX			1			2	South
1/5/2013	Mobile	Oil Recovery Company	Mobile, AL	1000'						South
1/30/2013	Corpus Christi	National Response Corporation	Corpus Christi, TX			1		1	2	South
2/8/2013	Port Arthur	Clean Harbors	Port Arthur, TX	1000'						South
3/19/2013	Mobile	National Response Corporation	Mobile, AL				1	1		South
4/23/2013	Morgan City	National Response Corporation	Grand Isle, LA			1				South
8/1/2013	Corpus Christi	Miller Environmental Services	Aransas Pass, TX	200'						South
8/9/2013	Corpus Christi	National Response Corporation	Aransas Pass, TX		1400'					South
8/26/2013	Mobile	SWS	Mobile, AL	1000'						South
12/16/2013	Port Arthur	Clean Harbors	Port Arthur, TX	1000'						South
1/29/2013	St. Petersburg	SWS	St. Petersburg, FL	1200'						Southeast
2/10/2013	St. Petersburg	SWS	St. Petersburg, FL	1200'						Southeast
2/14/2013	St. Petersburg	Moran Environmental Recovery	St. Johns River, FL	1000'		1	1			Southeast
2/16/2013	Miami	CBI	Ft. Lauderdale, FL	1800'						Southeast
2/20/2013	Charleston	National Response Corporation	North Charleston, SC	4000'		1	1			Southeast
2/20/2013	Charleston	National Response Corporation	North Charleston, SC		100'	2				Southeast
2/21/2013	St. Petersburg	Diversified Environmental Services	Tampa, FL	600'						Southeast
2/23/2013	St. Petersburg	SWS	St. Petersburg, FL	1200'						Southeast
2/26/2013	Savannah	National Response Corporation	Savannah, GA			1				Southeast

Date	COTP Zone	Contractor Name	Location	Boom 6"-18"	Boom 19"-42"	Skimmer Drum, Brush,	Skimmer Floating Suction	Skimmer Belt	Skimmer Rope	Region
2/26/2013	Savannah	National Response Corporation	Savannah River, GA	4100'			1			Southeast
3/20/2013	Miami	CBI	Ft. Lauderdale, FL	1000'						Southeast
3/20/2013	Miami	National Response Corporation	Miami, FL				1	1		Southeast
3/20/2013	Miami	National Response Corporation	Miami, FL		100'	1				Southeast
4/9/2013	St. Petersburg	SWS	St. Petersburg, FL		3000'					Southeast
4/23/2013	Miami	SWS	Ft. Lauderdale, FL	1000'						Southeast
4/24/2013	Key west	National Response Corporation	Key west, FL	3000'		1				Southeast
5/1/2013	Ohio Valley	First Environmental	Macon, GA	400'						Southeast
5/8/2013	Charleston	Moran Environmental Recovery	Hawthorne, SC	1100'		1	1			Southeast
5/16/2013	Ohio Valley	SWS	Nashville, TN	300'						Southeast
5/21/2013	Charleston	Moran Environmental Recovery	Charleston, SC	700'			1			Southeast
6/10/2013	Ohio Valley	Evergreen Environmental	Louisville, KY	500'						Southeast
6/13/2013	Ohio Valley	SWS	Nashville, TN	3000'						Southeast
6/13/2013	St. Petersburg	SWS	Tampa, FL	1000'						Southeast
6/27/2013	Miami	CBI	Ft. Lauderdale, FL	400'						Southeast
6/27/2013	Miami	SWS	Ft. Lauderdale, FL	1000'						Southeast
6/28/2013	Miami	National Response Corporation	Miami, FL		2200'	1				Southeast
7/8/2013	Savannah	SWS	Savannah, GA	1200'						Southeast
7/9/2013	St. Petersburg	Diversified Environmental Services	Tampa, FL	700'						Southeast
7/24/2013	Ohio Valley	Evergreen Environmental	Central City, KY	400'						Southeast
7/25/2013	St. Petersburg	SWS	Tampa, FL	100'						Southeast
7/26/2013	Ohio Valley	SWS	Nashville, TN		1					Southeast
7/28/2013	Miami	National Response Corporation	Miami, FL	100'		2	2	1	1	Southeast
7/29/2013	Mobile	SWS	Pensacola, FL	360'						Southeast
7/29/2013	Ohio Valley	SWS	Nashville, TN	300'		1				Southeast
8/7/2013	Jacksonville	National Response Corporation	Jacksonville, FL	500'		3	4			Southeast
8/12/2013	Miami	CBI	Ft. Lauderdale, FL	120'						Southeast
8/15/2013	Delaware Bay	National Response Corporation	Delaware Bay	1000'		1				Southeast
8/23/2013	St. Petersburg	Moran Environmental Recovery	St. Johns River, FL	1300'		1	1			Southeast
8/30/2013	St. Petersburg	SWS	Tampa, FL	1200'						Southeast
9/18/2013	Savannah	Moran Environmental Recovery	Savannah River, GA	1000'		1				Southeast
9/25/2013	Jacksonville	Jacksonville Pollution Control	Jacksonville, FL	2600'		1				Southeast
9/25/2013	Jacksonville	National Response Corporation	Port Canaveral, FL			1				Southeast
10/9/2013	Jacksonville	SWS	Jacksonville, FL	1000'						Southeast
10/9/2013	Ohio Valley	Evergreen Environmental	Central City, KY	400'						Southeast
10/12/2013	Charleston	Moran Environmental Recovery	Mount Pleasant, SC	800'			1			Southeast
10/17/2013	Long Island Sound	National Response Corporation	Long Island, NY	1000'		1				Southeast
10/24/2013	Upper Mississippi River	National Response Corporation	Paducah, KY	2200'			1			Southeast
10/25/2013	Ohio Valley	SWS	Louisville, KY	1000'						Southeast
10/25/2013	St. Petersburg	Diversified Environmental Services	Tampa, FL	500'						Southeast
11/1/2013	Savannah	First Environmental	Waycross, GA	200'						Southeast
11/5/2013	Miami	National Response Corporation	Miami, FL	1000'		1				Southeast
11/19/2013	St. Petersburg	SWS	Tampa, FL	1000'		1				Southeast

Date	COTP Zone	Contractor Name	Location	Boom 6"-18"	Boom 19"-42"	Skimmer Drum, Brush,	Skimmer Floating Suction	Skimmer Belt	Skimmer Rope	Region
11/20/2013	St. Petersburg	Diversified Environmental Services	Tampa, FL	400'						Southeast
11/20/2013	St. Petersburg	SWS	Tampa, FL	500'						Southeast
11/23/2013	St. Petersburg	National Response Corporation	Tampa, FL		4000'	3	1			Southeast
11/30/2013	Miami	National Response Corporation	Miami, FL		2200'	1				Southeast
12/11/2013	St. Petersburg	SWS	Tampa, FL	500'						Southeast
12/12/2013	St. Petersburg	SWS	Tampa, FL			1				Southeast
1/9/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
1/9/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 164		1400'					West
1/9/2013	San Francisco	National Response Corporation	Alameda Point, CA		5000'					West
1/11/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
1/11/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 165		1400'					West
1/17/2013	San Francisco	National Response Corporation	Folsom Lake, CA	1080'						West
1/18/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
1/18/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
1/18/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 166		1400'					West
1/18/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 167		1400'					West
1/22/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
1/22/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 168		1400'					West
1/25/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
1/25/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 169		1400'					West
1/25/2013	San Francisco	National Response Corporation	Feather River, Pluma County	800'	1200'					West
2/12/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
2/12/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 170		1400'					West
2/13/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
2/13/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 171		1400'					West
2/14/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
2/14/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 172		1400'					West
2/27/13	San Diego	National Response Corporation	San Diego County, CA	500'						West
3/8/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
3/8/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 173		1400'					West
3/11/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
3/18/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
3/21/2013	San Francisco	National Response Corporation	Lake Herman Benicia, CA	300'						West
3/26/2013	San Francisco	National Response Corporation	Humboldt Bay	3500'						West
3/26/13	San Francisco	National Response Corporation	Humboldt Bay		3500					West
3/28/13	Portland	National Response Corporation	Contra Costa Water District		100'					West
4/2/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
4/2/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 174		1400'					West
4/3/13	San Francisco	National Response Corporation	Blue Lake, CA		800'					West
4/4/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
4/4/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1100'					West
4/4/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 175		1400'					West
4/8/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West

Date	COTP Zone	Contractor Name	Location	Boom 6"-18"	Boom 19"-42"	Skimmer Drum, Brush,	Skimmer Floating Suction	Skimmer Belt	Skimmer Rope	Region
4/8/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 176		1400'					West
4/9/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
4/9/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 177		1400'					West
4/9/2013	San Francisco	National Response Corporation	Bay Farm Eel Graas, CA		2000'					West
4/12/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
4/12/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 178		1400'					West
4/25/13	San Francisco	National Response Corporation	Nustar, Crockett CA.		600'					West
4/26/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
4/26/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 179		1400'					West
4/26/13	San Francisco	National Response Corporation	Pier 3 Alameda Point		300'					West
4/29/13	San Francisco	National Response Corporation	Pier 3 Alameda Point		300'					West
5/3/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
5/3/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 180		1400'					West
5/7/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
5/7/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 181		1400'					West
5/9/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1000'	2	2			West
5/9/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1100'					West
5/9/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 182		1400'					West
5/9/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth T-15		1000'	3	1			West
5/13/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
5/13/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 183		1400'					West
5/16/2013	San Francisco	National Response Corporation	Berth 32 Port of Oakland, CA	600'				1		West
5/23/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
5/23/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 184		1400'					West
5/23/13	San Francisco	National Response Corporation	Pier 92 Port of San Francisco		600'		1			West
5/24/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
5/24/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 185		1400'					West
5/29/13	San Francisco	National Response Corporation	Santa FE Channel Richmond CA.		2000'					West
5/31/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
5/31/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 186		1400'					West
6/4/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
6/4/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 187		1400'					West
6/12/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
6/12/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 188		1400'					West
6/17/13	San Francisco	National Response Corporation	Pier 50 Port of San Francisco		1800'					West
6/18/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
6/18/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 189		1400'					West
6/19/13	San Diego	National Response Corporation	San Diego County, CA	500'						West
6/19/13	San Francisco	National Response Corporation	BP/ARCO Richmond CA.		600'					West
6/25/13	San Francisco	National Response Corporation	Golden Gate Ferry San Francisco		500'					West
6/26/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
6/26/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 190		1400'					West
6/27/13	San Francisco	National Response Corporation	BP/ARCO Richmond CA.		1000'					West

Date	COTP Zone	Contractor Name	Location	Boom 6"-18"	Boom 19"-42"	Skimmer Drum, Brush,	Skimmer Floating Suction	Skimmer Belt	Skimmer Rope	Region
7/1/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
7/1/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 191		1400'					West
7/3/13	San Francisco	National Response Corporation	Berth 2 Port of Stockton		1400'					West
7/4/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
7/4/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 192		1400'					West
7/5/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1100'					West
7/5/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 193		1400'					West
7/11/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
7/11/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 194		1400'					West
7/15/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
7/15/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 195		1400'					West
7/17/13	San Francisco	National Response Corporation	150 Metcalf road, San Jose CA.		300'					West
7/18/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
7/18/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 196		1400'					West
7/26/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
7/26/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 197		1400'					West
8/1/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
8/1/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 198		1400'					West
8/7/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
8/7/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 199		1400'					West
8/11/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
8/11/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 200		1400'					West
8/13/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
8/13/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 201		1400'					West
8/14/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
8/14/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 202		1400'					West
8/21/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
8/21/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 203		1400'					West
8/23/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
8/23/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 204		1400'					West
9/3/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
9/3/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 205		1400'					West
9/10/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
9/10/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 206		1400'					West
9/17/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
9/17/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 207		1400'					West
9/18/2013	San Diego	National Response Corporation	San Diego County, CA	500'						West
9/25/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
9/25/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 208		1400'					West
10/1/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
10/1/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 209		1400'					West
10/3/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
10/3/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 210		1400'					West

Date	COTP Zone	Contractor Name	Location	Boom 6"-18"	Boom 19"-42"	Skimmer Drum, Brush,	Skimmer Floating Suction	Skimmer Belt	Skimmer Rope	Region
10/8/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400					West
10/8/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 211		1400'					West
10/12/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400					West
10/12/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1100'					West
10/12/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 101		1100'					West
10/12/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 212		1400'					West
10/16/13	San Francisco	National Response Corporation	Cogswell Marsh, Hayward CA		1000'					West
10/16/13	San Francisco	National Response Corporation	Steinberger Slough, Redwood city CA		1000'					West
10/17/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
10/17/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 213		1400'					West
10/25/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
10/25/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 214		1400'					West
11/2/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
11/6/2013	San Diego	National Response Corporation	San Diego County, CA	800'						West
11/9/2013	San Diego	National Response Corporation	San Diego County, CA	1000'						West
11/12/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 215		1400'					West
11/14/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1100'					West
11/14/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 101		1100'					West
11/15/13	San Francisco	National Response Corporation	Martinez Marina, Marina CA.		2000'			1		West
11/18/13	San Francisco	National Response Corporation	BP/ARCO Richmond CA.		600'					West
11/19/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
11/19/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 216		1400'					West
11/20/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
11/20/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 217		1400'					West
11/23/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
11/23/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 218		1400'					West
12/10/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
12/10/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 219		1400'					West
12/18/2013	San Francisco	National Response Corporation	Humboldt Bay	200'						West
12/18/13	San Francisco	National Response Corporation	Humboldt Bay		200					West
12/19/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
12/19/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 220		1400'					West
12/29/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles		1400'					West
12/29/2013	Los Angeles - Long Beach	National Response Corporation	Port of Los Angeles Berth 221		1400'					West

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: 13 February 2014

Steven A. Candito
President
National Response Corporation

Attachment B

SECTION 2
INITIAL RESPONSE ACTIONS

Last Revised: May 2008

SECTION 2
INITIAL RESPONSE ACTIONS, CONTINUED

2.1 INCIDENT RANKING

When an incident occurs, it will be ranked from both an operational and a communications perspective. The rankings will be completed by Corporate Operations team (generally either the VP of Operations, the Director of West Coast Operations or the Director of East Coast Operations) and the Corporate Communications team (generally either the Manager of Communications or the Director of Investor Relations); the following table is provided for reference.

Level	Field Incident Ranking	Communications Ranking
0	Minor incident; no/possible agency reporting; no emergency response personnel; limited impact to operations.	No expectations of media coverage.
1	Moderate incident w/ quick resolution; agency reporting required; possible injuries; emergency personnel called.	Possible media interest; media statement prepared/held/used if needed; no interviews expected.
2	Major incident with immediate action required but quick resolution; agency reporting required; first responders needed; travel teams on standby/ deployed as needed.	Media interest expected due to size/ location of incident, potential injuries; media statement prepared/distributed, media expected on site, extended comms team on standby.
3	Major incident with immediate action required, first responders needed; possible casualties; multi-day response expected; outside agency involvement expected; travel teams deployed.	Media scrutiny expected due to size/location of incident, injuries; extended comms team needed; ongoing communications required.

2.2 SPILL RESPONSE

The first priority in any emergency plan of action is to take any and all actions necessary, including evacuation, to protect the public. Although protecting the environment during an emergency is important, ensuring the safety and health of the public and response personnel must take precedence over all other considerations.

Refer to **APPENDIX C.2** for spill detection protocols and receiving report of an emergency. Refer to **FIGURE 2.2-1** for the spill response action checklist.

An emergency or potential emergency will be considered to exist if any of the following conditions occur:

- Fire or explosion occurring near or directly involving a pipeline facility.
- Accidental release of hazardous vapors and liquids from a pipeline.
- Operational failure causing a hazardous condition to exist.
- Natural disaster affecting pipeline facilities (lightning, earthquakes, flood, etc.).
- Acts of sabotage or vandalism.

All reports of potential and actual emergencies shall be recorded on the Emergency Notification Form No. 601 (**SECTION 5.9.1**) and retained on file at the Division office, and Regulatory Compliance Department. Paper copies are retained for at least five (5) years and electronic copies are kept permanently on one of the Company servers located in Houston, Texas.

There are two classes of events reported as emergencies. They are:

- Possible
- Confirmed

A "Possible" emergency is an event:

- That has been reported and cannot be immediately confirmed by the information known at that time.
- That is indicated by a pressure or flow rate indication but is not confirmed by another source.
- That is suspicious or abnormal but has not been fully investigated or confirmed.

A "Confirmed" emergency is an event:

- That is reported by any source and is confirmed by a company employee.
- That has been reported by someone other than a company employee but has been "confirmed" by another source, such as a pressure reading, flow indication, station lockout, or another person.

2.2 SPILL RESPONSE, CONTINUED

The County Fire Department will most likely be the first emergency response agency on-scene. Once on-scene, the Company Incident Commander and the County's Incident Commander shall jointly establish a Unified Command System. Accordingly, the Unified Command of all fire, spill, rescue, and disaster incidents will be implemented. Facility personnel will be trained and ready to respond to all incidents, and to enact and follow this Plan. Upon arrival of the Fire Department, facility personnel shall work in cooperation with the Fire Department to mitigate the problem via the establishment of the Unified Incident Command.

Company personnel shall provide technical support and expertise to County personnel on site, and shall cooperate with the County's emergency response activities as a component of the Incident Command System.

FIGURE 2.2-1 - SPILL RESPONSE ACTION CHECKLIST

RESPONSE ACTION	
First Person to Discover Spill	
Immediately notify the Operations Control Center and local Supervisor, and call 9-1-1.	■
(b) (7)(F), (b) (3) [redacted]	■
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. Conduct accountability of personnel and visitors.	■
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. Keep drivers away from truck rack if spill occurs there.	■
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.	■
Immediately notify District Operations Manager. Take appropriate action to protect life and ensure safety of personnel. Contact the appropriate local emergency responders or request the office to do so.	■
Assign initial role of Incident Commander (IC) and Safety Officer (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 Division E&R/C Director or designee who will make agency notifications such as NRC either electronically or by calling 1-800-424-8802. Calls to NRC must be made within 1 hour of confirmation of telephonic reportable pipeline release/accident.	■
District Operations Manager	
Assume role of Incident Commander until relieved by upper Management (if applicable).	■
Evacuate nonessential personnel, notify emergency response agencies to provide security, and evacuate surrounding area (if necessary). Conduct preliminary assessment of health and safety hazards.	■
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).	■
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 2.2-1 - SPILL / RELEASE RESPONSE ACTION CHECKLIST, CONTINUED

RESPONSE ACTION, CONTINUED	
E&R/C Division Director	
Make appropriate notifications: • National Response Center (800) 424-8802 (Make call within 1 hour of confirmation of telephonic reportable release/accident. • External regulatory notifications (**FIGURE 3.1-6**)	■
Emergency Management Team	
Activate all or a portion of Emergency Management Team (EMT) (as necessary). The 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 2.2.3**. 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 2.2-1 - SPILL / RELEASE RESPONSE ACTION CHECKLIST, CONTINUED

SITE SPECIFIC ACTIONS	
DOCUMENT ALL ACTIONS TAKEN	
First Priority	
Assess.	■
ESD.	■
Call 9-1-1.	■
Second Priority	
Isolate & Deny Entry.	■
Eliminate Ignition Sources.	■
Accountability.	■
Notifications.	■
Secure Spill source, if possible.	■
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 to recover spilled product, safety conditions permitting.	■
If unable to contain spill to facility property, refer to SECTION 6.11 for location of tactical strategy.	■
The Bakersfield District Manager in conjunction with Santa Maria Operations Supervisor will manage all pipeline repairs and coordinate with County agencies as appropriate. Spare pre-tested pipe, fittings, and other material are maintained at Plains warehouses at the District offices. Material not available may be transported in from other Plains locations or purchased locally for delivery as soon as possible.	■
In the event an incident results in a long term loss of power, CARB permitted portable generators may be brought to a pumping station as a temporary source of pump power. If communication and SCADA capability was lost as a result of an incident, the pipeline could be operated manually. The use of temporary pumping power and manual operation of the pipeline would not be undertaken unless resumption of operation of the pipeline was deemed critical to oil producers served by the pipeline or a federal or state agency such as the Homeland Security Administration directed Plains to take all measures to resume operations for national security or other reasons.	■
The Company's ICS will respond to emergency situations that may affect public safety and/or the environment along the pipeline routes.	■
FIGURE 4.5-1 depicts the Company's ICS Organization which depicts key positions within the Company's ICS roster for full scale emergencies and their alternates. Checklists for personnel duties and responsibilities for each "ICS Position", including the Incident Commander regardless of the nature of the emergency, are provided in SECTION 4.6. These positions will be filled, as necessary and required, depending on the level of response needed to adequately respond and mitigate the incident. These IC's primary and alternate positions are included in SECTION 3.1-5.	■
Bakersfield District Operations and Maintenance personnel and local consultants will be immediately called upon to respond to an emergency in Santa Barbara, San Luis Obispo or Kern County, thus minimizing the response times necessary to expeditiously arrive at the incident site. These operations, maintenance, and consulting personnel will be "on-call" and will have adequately equipped vehicles to access sites in all counties within the District.	■
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**.	■

PREPARED BY:	**DATE/TIME:**

FIGURE 2.2-1 - SPILL / RELEASE RESPONSE ACTION CHECKLIST, CONTINUED

SITE SPECIFIC ACTIONS	
Third Priority	
It will be the responsibility of the Qualified Individual or the Control Room Manager to ensure that local responders have been, or are being, immediately notified consistent with the sequence of Notification in SECTION 3.1.	■
Local emergency medical aid for industrial injuries is provided by the hospitals listed in FIGURE 3.1-6. All hospitals (i.e., Santa Ynez Valley Hospital, Goleta Valley Community Hospital and Marian Hospital) have heli-pads or adequate access for a helicopter landing. For serious injuries, 911 should be called to request paramedic and/or ambulance service. Paramedics and ambulance attendants typically transport injured persons to the nearest hospital emergency room.	■
Any request for helicopter support in Santa Barbara County must be coordinated through Santa Barbara County Emergency Dispatch via 911 if the call is originating in Santa Barbara County or (805) 683-2724 if the call originates outside Santa Barbara County or is made from a cell phone.	■
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**.	■
PREPARED BY:	**DATE/TIME:**

2.2.1 Spill Detection and Mitigation Procedures

See **APPENDIX C.2** 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 2.2-2**. Discharge volume calculations are provided in **APPENDIX C.**

FIGURE 2.2-2 - SPILL MITIGATION PROCEDURES

TYPE	MITIGATION PROCEDURE
Failure of Transfer Equipment	1. Call 9-1-1. 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. Call 9-1-1. 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. Call 9-1-1. 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. Call 9-1-1. 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 2.7**.
Manifold Failure	1. Call 9-1-1. 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).

2.2.2 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 2.2-3**.
- The Company utilizes USCG classified OSRO's to address aerial surveillance.

FIGURE 2.2-3 - 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 2.2-3 - 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	
PREPARED BY:	**DATE/TIME:**

2.2.3 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:

- Release on land: With the area and depth of free oil defined, use the formula below to determine the volume of oil released.

  avg. length (ft) x avg. width (ft) x avg. depth (in) x 0.0149 = volume (bbls)

  If this document is being viewed electronically, the calculator below may be used:

  Click here to view - Volume Calculations

- 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.
- Release on water: method based on visual assessment of the surface area and thickness (**FIGURE 2.2-4**); 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, weather conditions, and viewing angle.
  - Different products may behave differently, depending upon their properties.

FIGURE 2.2-4 - 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

- Use the chart above to estimate the approximate volume of oil in the film.

  If this document is being viewed electronically, the calculator below may be used to estimate the volume of oil on water:

  Click here to view - Estimating Volume of Oil on Water

2.2.4 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

2.2.5 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.

2.2.6 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.

2.3 EVACUATION

EVACUATION CHECKLIST	
TASK	
(b) (7)(F), (b) (3) [redacted]	

2.4 NATURAL DISASTERS

Natural disasters have the potential to be present in some form or another at any pipeline location. This particular pipeline could reasonably be expected to be subjected to lightning, earthquakes, floods, wind storms of various types, and wild fires.

Following a natural disaster, the Division Manager, at his discretion, may order any test to be performed of the pipeline to insure the continued integrity of the pipeline.

2.4.1 Lightning

Possibly the most frequent effect of lightning is the loss of power or communications to one or more locations on the pipeline. These events are covered in the "abnormal operation" procedures in the Plains Pipeline Operations and Maintenance Procedures Manual.

The most devastating effect of lightning is the striking of a tank resulting in a fire. This should be handled as any other fire or explosion would be handled in the "emergency" procedures of this manual.

LIGHTNING CHECKLIST	
TASK	
Maintain equipment grounding system in good condition to dissipate the effects of a lightning strike.	■
Provide lightning arrestors on important electrical equipment throughout the system.	■
During thunderstorms, personnel are to avoid the following: • Storage tanks. • Pumping equipment. • Being in contact with or in close proximity to above ground piping or any uninsulated device attached to the pipeline. • Trees and metal buildings. • Open fields. • Holding metallic objects.	■
During thunderstorms personnel should be aware of the potential for lightning and remain alert for strikes that may affect the pipeline operation.	■
PREPARED BY:	**DATE/TIME:**

2.4.2 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.	■
The division office, in conjunction with the aerial patrol support, if considered necessary, will physically inspect the pipeline and its facilities for signs of damage.	■
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.	■
PREPARED BY:	**DATE/TIME:**

2.4.3 Flood

Floods are somewhat more predictable than either lightning or earthquakes. Their path is more defined and their magnitude is more easily estimated. Despite this they can be more devastating to pipeline operation than any other natural disaster. The biggest single concern during flooding is river crossings. Not that river crossings aren't capable of withstanding flooding in the river bed, but the real concern is the river changing course and exposing or washing out the pipeline. Possible areas of concern are listed in **SECTION 6**.

FLOOD CHECKLIST	
TASK	
Perform continuous monitoring of the situation by listening to radio and/or television reports (**FIGURE 3.1-6**). • Flash flood watch means flooding is possible. • Flash flood warning means flooding is occurring or is imminent.	■
Update Supervisory Personnel when flooding is imminent and call 9-1-1, if necessary.	■
Establish an evacuation plan (**SECTION 2.3**).	■
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).	■
Frequently inspect river and creek banks for erosion. If the integrity of the pipeline is threatened by erosion, shut down and shut in the line with the mainline block valves on both sides of the river or flooded area being closed.	■
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.	■

2.4.3 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.	■
After inspection, if damage is not apparent, start the line up and monitor the operation as described in the "Returning to Normal Operations"; "Abnormal Operations" section in the Plains Pipeline Operations and Maintenance Procedures manual.	■
If damage is detected, assess the damage and its severity. The pipeline may be restarted only after a favorable assessment or repairs have been made as necessary.	■
Note: It is impossible to list precise actions for each possible type of damage. The Division Manager in conjunction with the Manager of Operations shall make the decision to re-start the line based on the actual circumstances at the time.	■
PREPARED BY:	**DATE/TIME:**

2.4.4 Wind Storm

"Wind storms" is intended as a general category including such weather events as dust storms, thunderstorms, tornados, or any other occurrence of potentially damaging winds. Above ground pipeline facilities are subject to damage from these conditions and such damage could lead to a malfunction which may damage the pipeline itself.

The most likely damage of a wind storm is electrical power line or pole damage. This would lead to a power outage and would be classified as an "abnormal" event. See "Abnormal Operations" of the Plains Pipeline Operations and Maintenance Procedures manual.

A fire created by such an event would be an "emergency" event and would be handled under the provisions of **SECTION 2.7**. A release as a result of this event shall be classified as an emergency event and would be handled as provided in this section. It is unlikely that the opportunity will exist to prepare for an approaching wind storm.

It should be noted, however, that large storage tanks are susceptible to wind damage. These tanks will handle straight wind conditions better when partially filled with liquid. Empty or near empty tanks should be closely watched during these times. Tornado winds could possibly damage these tanks in either their full or empty condition; however, tornadoes and their paths are totally unpredictable and no preventative action is possible.

2.4.4 Wind Storm, Continued

WIND STORM CHECKLIST	
TASK	
Monitor news media reports (**FIGURE 3.1-6**). • 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.	■
PREPARED BY:	**DATE/TIME:**

2.4.5 Wildfires

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.	■
PREPARED BY:	**DATE/TIME:**

2.5 MEDICAL

MEDICAL CHECKLIST	
TASK	
Summon Emergency Medical Services (EMS) to the scene (**FIGURE 3.1-6**).	■
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.	■
Site-Specific Actions:	
All hospitals listed in FIGURE 3.1-6 (i.e., Santa Ynez Valley Hospital, Goleta Valley Community Hospital and Marian Hospital) have heli-pads or adequate access for a helicopter landing. For serious injuries, 911 should be called to request paramedic and/or ambulance service. Paramedics and ambulance attendants typically transport injured persons to the nearest hospital emergency room. Note: Any request for helicopter support must be coordinated through Santa Barbara County Emergency Dispatch via 911 if the call is originating in Santa Barbara County or (805) 683-2724 if the call originates outside Santa Barbara County or is made from a cell phone.	■
PREPARED BY:	**DATE/TIME:**

2.6 SECURITY

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

[redacted]

2.6.1 Sabotage

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

[redacted]

SABOTAGE CHECKLIST
TASK
(b) (7)(F), (b) (3) [redacted]

2.6.2 Bomb/Terrorist Threat

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

[redacted]

BOMB THREAT BY PHONE CHECKLIST
TASK

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

[redacted]

2.6.2 Bomb/Terrorist Threat, Continued

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

[redacted]

2.6.2 Bomb/Terrorist Threat, Continued

BOMB THREAT BY LETTER, TELEGRAM, MESSAGE CHECKLIST
TASK
(b) (7)(F), (b) (3) [redacted]

PREPARED BY:	DATE/TIME:

2.6.3 Vandalism

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

2.7 FIRE AND/OR EXPLOSION

Note: These procedures are not intended to give explicit details of the method for fighting fires. These procedures are intended to provide Company personnel with certain recommendations designed to reduce the severity of the situation, thus enabling trained fire fighting personnel to bring it under control.

Fires and explosions, at or near pipeline facilities, are extremely serious situations which require proper action in order to safely control the situation. There are several situations which must be considered which require different responses.

Crude oil fire hazards are dependent on the type of oil and the conditions at the location. The heavier crude oils contain relatively low concentrations of volatile hydrocarbons and their potential flammability is proportionally lower than for lighter crude oils. While a crude oil fire could theoretically occur at any location along the pipeline, the potential is more likely at pump stations (where some or all of the spilled material will be contained) or at areas where a significant ignition source exists.

Upon learning of a fire or explosion **immediately** notify the Oil Movement Control Center (OMC). After or concurrently while shutting down the affected pipeline section, the OMC will notify the appropriate fire department and emergency medical service. Listings of contact telephone numbers for each area along the pipeline system are listed in the phone directory provided in **SECTION 3**.

Emergency notification, response and reporting procedures shall be handled as stated in **SECTION 2.2** and **SECTION 3**. Take no action regarding the opening or closing of valves or starting or stopping of pumps (**after the initial shutdown**) without consulting the Incident Commander at the scene of the fire or explosion.

Keep communication lines to the emergency scene open and remain at your location until the situation is controlled or until relief personnel arrive.

2.7 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	
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 9-1-1).	■
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.	■

2.7 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	
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.	■
Site-Specific Actions:	
For wild land fires on or near the pipeline easement the Company and County Fire Department agree to coordinate and communicate relative to earthmoving fire suppression, containment and control activities. Detailed pipeline locations maps have been provided to County Fire for future reference and PPLP representatives knowledgeable of the pipeline's location will be made available for on-site assistance, if requested by County Fire.	■
PREPARED BY:	**DATE/TIME:**

2.7 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 (Dial 9-1-1).	■
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.	■
Site-Specific Actions:	
For wild land fires on or near the pipeline easement the Company and County Fire Department agree to coordinate and communicate relative to earthmoving fire suppression, containment and control activities. Detailed pipeline locations maps have been provided to County Fire for future reference and PPLP representatives knowledgeable of the pipeline's location will be made available for on-site assistance, if requested by County Fire.	■

PREPARED BY:	**DATE/TIME:**

2.7 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 nearby facility or facility served by the Company	
Contact OMC and call 9-1-1.	■
The OMC will notify the Division Manager.	■
The Division Manager shall dispatch an employee to the scene to evaluate the effect of the fire or explosion on the Company system.	■
Once the status is determined, the employee will notify the OMC who in turn will notify the Division Manager.	■
Based on the evaluation report, the Division Manager shall determine if the Company facility should be declared to be in an emergency situation. If an emergency is declared, the responses and procedures in this manual shall be implemented.	■
If the Division Manager feels the situation at present does not warrant emergency action, he should maintain communication with the site throughout the emergency and maintain readiness in order to react to any worsening conditions. The OMC shall be kept informed of the situation at all times. (To do this it may be necessary to post an employee at the scene with a radio equipped vehicle).	■
PREPARED BY:	**DATE/TIME:**

2.7 FIRE AND/OR EXPLOSION, CONTINUED

The possibility of a wildland 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 wildland 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 fire fighting 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.

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	
Wildland Fire	
Notify the OMC. Observe and be prepared to report wind direction, wind velocity, and direction of fire travel.	■
The OMC will immediately notify the Division Manager and appropriate jurisdictional authority.	■
Unless specifically trained to fight a wildland fire, make no attempts at fire suppression. Relocate to a safe zone where the status of the fire can be monitored and reported.	■
PREPARED BY:	**DATE/TIME:**

2.7 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	
On the Company pipeline or facility	
Contact OMC and call 9-1-1.	■
The OMC 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.	■
PREPARED BY:	**DATE/TIME:**

2.8 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. • Call 9-1-1. Only the fire department will be permitted to enter the Facility.	■
Contact the appropriate agencies and potentially affected neighbors (refer to **FIGURE 3.1-6**).	■
PREPARED BY:	**DATE/TIME:**

2.9 OPERATIONAL FAILURE

Operational failures on pipelines can be divided into two basic categories: operator error or mechanical/electrical failure.

Operational failures manifest themselves as essentially harmless shutdowns, pipeline ruptures or spills, or perhaps as a fire or an explosion.

Ruptures, spills, fires, or explosions shall be handled by Division personnel as previously addressed in this section.

2.9.1 Tank Overflow

Tanks overflow due to mechanical failure of some equipment or due to operator error. Unlike a pipeline, tanks have a containment system to handle such situations, tank dikes. Even though the dike contains the spilled oil, the situation is a very dangerous one. The following steps must be taken to minimize the amount of oil spilled and clean up of the area after a spill.

TANK OVERFLOW CHECKLIST	
TASK	
Stop the flow. Close any valve or valves necessary to stop the flow. It may even be necessary to shut the pipeline down to stop flow. Call 9-1-1, as needed.	■
Lower the tank liquid level. When possible, lower the liquid level in the tank by starting pumps that take suction from that tank. Do not pump the level in the tank below the level of spilled liquid in the tank dike! If pumps are not feasible, it may be possible to open valves to other tanks and allow the tank levels to equalize.	■
Use portable pumps to pump the liquid contained in the dike into another tank or into trucks.	■
Once the free oil is picked up, the event is no longer classified as an "emergency" and normal maintenance procedures may be used to clean the tank and associated piping.	■
PREPARED BY:	**DATE/TIME:**

2.10 RAILROAD DERAILMENT

Railroad derailments pose a potential threat to the integrity of the pipeline due to the mechanical stresses which may be imposed on the pipe from derailed rail cars or from heavy equipment which could possibly damage the pipeline during railroad repair operations. Pipeline sections exposed to potential derailment damage are those which are in a common right-of-way, in a parallel right-of-way, or cross a railroad right-of-way. There are no sections of the Company pipeline system in the California Western Region that cross a railroad.

In the future, should additions to the pipeline system include a railroad crossing, in the event of a railroad derailment, the Division Manager and the Control Room shall immediately be notified, 9-1-1 shall be called, and the following procedures followed.

RAILROAD DERAILMENT CHECKLIST	
TASK	
The Control Room dispatcher will block in the section of the pipeline which could potentially be damaged from the derailment.	■
The railroad company will be contacted to determine extent of damage and planned corrective action.	■
Shippers and receivers of crude oil in the pipeline will be contacted.	■
The pipeline right-of-way will be physically inspected for possible damage.	■
If considered necessary by the Operations and Engineering Departments, the pipeline will be excavated to fully evaluate possible mechanical damage.	■
The Engineering Department will be consulted to affect any required repairs to the pipeline.	■
Repairs will be made as directed by the Engineering Department.	■
If no damage is found, the site will be manned by the Company representative until it is determined that the derailment and/or repairs will not affect the integrity of the pipeline.	■
The affected pipeline section will remain blocked in until the Manager of Operations Support and the Manager of Operations concur on start up.	■
PREPARED BY:	**DATE/TIME:**

2.11 ANALYZING FAILED PIPE (COMPONENT)

The only way to properly assess a failed component is to determine the cause of the failure. Proper preventative measures cannot be taken until a careful analysis has been performed on the failed component.

2.11.1 Preservation of Specimen

Whenever a pipeline fails, even if the failure is due to "Third Party" damage, the component or section of failed pipe should be treated with care in order to protect any evidence regarding the failure. The following measures will ensure the protection of the specimen of the failed component and will meet the requirements of the testing laboratory.

PRESERVATION OF SPECIMEN CHECKLIST	
TASK	
Exercise care when excavating around pipe to avoid further damage.	■
Leave at least 15 inches of undamaged pipe on each end of the damaged area.	■
When handling the specimen, use canvas slings when possible. AVOID THE USE OF CHAINS OR CABLE SLINGS!	■
Do not clean the damaged area of pipe by wire brushing, sandblasting, scraping, or any other means that may obscure what may be valuable information. In the case of liquids that may leave a residue that may be hazardous when shipped, a gentle solvent wash would be acceptable.	■
Protect any bare or shiny metal with WD-40 or a light coating of grease.	■
When shipping, crating the specimen will insure that it arrives in good shape. An uncrated specimen can sustain much damage during shipping.	■
Mark the specimen with company name, date, location from where it was taken (Mile Post, Station No., Station), and material description.	■
Provide the name of the company employee who can discuss all phases of the circumstances surrounding the specimen.	■
Photographs should be taken of the failure before removing any components, during removal, and after removal.	■
PREPARED BY:	**DATE/TIME:**

2.11.2 Selection of Laboratory

The Company employs various laboratories and consultants on a continuing basis. In order to assure that a specimen is sent to a laboratory that the Company considers qualified to perform metallurgical analysis and investigations on failed components, the Company Engineering and Regulatory Compliance Departments shall be consulted.

Any dispute over the status or disposition of the specimen with any regulatory agency shall be referred to the Company Legal Department at the earliest possible moment.

2.11.3 Third Party Damage

Many times, in cases involving "third party" damage the specimen may be required as evidence in possible litigation. In such cases, not only is preservation of any specimen(s) as described above important, but photographs of the accident site after the accident and during all phases of any failed component removal and repair shall be taken whenever possible.

2.12 Hydrogen Sulfide (H_2S)

Hydrogen Sulfide is present in the crude oils handled by the Company, but in relatively low concentrations. Hydrogen sulfide is poisonous at relatively low levels, and protective equipment is necessary when concentrations exceed 20 ppm. H_2S has the odor of "rotten eggs" and is detectable at levels of around 1 ppm. However, it quickly paralyzes the sense of smell and its odor may not be detectable after initial exposure. Therefore, odor should not be used to detect H_2S presence. In general, H_2S should not present a hazard to spill responders in open air. However, worker and public exposure should be evaluated in every case, particularly in those situations involving confined space entry. When a Company employee encounters a situation such as a spill or an open pipeline, they will use their 4-Gas monitors to detect the presence of H_2S and other gases. Once detected then the employee will follow the standard emergency steps which involve calling their supervisor and 9-1-1 if necessary.

2.13 NON-OPERATIONAL RISKS AND OTHER CONSIDERATIONS

It is possible that circumstances might arise that could have a negative impact on the asset, facility or company but might not require a significant (or any) operational response. Such events could include:

- Environmental activist protests at or near a Plains facility or asset
- Labor strikes
- Public health concerns
- Issues involving the character of a Plains employee (allegations of criminal activity)
- Construction plans that could impact or have the perception of impacting either the daily routines of local residents or the physical environment
- Other unplanned media inquiries

In addition, incidents that are minor in nature could become more meaningful depending on where they happen (i.e. a small release in a major metropolitan area or populated waterway) or based on the perceived risk (a few gallons of oil found in a drinking water source or a location with endangered species). Each of these examples could solicit negative reaction from area media, elected officials or residents – regardless of the size of the spill itself.

If you are concerned about whether or not an incident – no matter how small – or a perceived risk will have an impact on the company, it is important to alert your supervisor and to contact a member of the Plains Communications team as soon as possible – despite whether or not the incident has triggered Operational notification/response. If the potential exists for a negative story in the paper or a negative reaction/increased scrutiny from area residents, elected officials or other stakeholders, contact the Plains Communications team as soon as possible as a precaution.

Please contact the following individuals:

Brad Leone
Manager, Communications
Office: 713-646-4196
(b) (6) [redacted]
bleone@paalp.com

Roy Lamoreaux
Director, Investor Relations
Office: 713-646-4222
(b) (6) [redacted]
rilamoreaux@paalp.com

SECTION 3

Last Revised: June 25, 2014

NOTIFICATIONS / TELEPHONE NUMBERS

3.1 Emergency Information and Notification Procedures

3.1 EMERGENCY INFORMATION AND NOTIFICATION PROCEDURES

The notification sequence for a spill is as follows:

- The Pipeline Control Center (PCC) Dispatcher will receive notification of a potential emergency from either the SCADA system (verified), an external report, or an internal report from a Company associate and immediately initiate the shutdown and monitoring of the affected pipeline segment (s), as appropriate.

- Prior to reporting the spill to 9-1-1 or 683-2724 if calling from out of Santa Barbara County or from a cell phone, the reporting Dispatcher shall determine the level of emergency in accordance with the Organization Transition Matrix in **FIGURE 4.4-1**.

- After the level of emergency is determined, PCC personnel will immediately notify Division personnel who will then notify Santa Barbara County via 9-1-1 or (805) 683-2724 if call from out of Santa Barbara County or from a cell phone to describe the incident and report the level of the emergency in accordance with the guidance matrix. Activate the Santa Barbara County Area Oil & Gas Industry Emergency Response Plan (Industry Mutual Aid) for any Level 3 incident.

- After the County emergency response agency has been notified, PCC personnel should proceed with notifying:

    - the Qualified Individual;
    - the Division Manager, and
    - the Pipeline Control Manager or his designee.

- Upon completion of these initial notifications by PCC, personnel shall maintain communications with field personnel, and to the extent necessary, the County emergency response agency. Tier 1 notifications, including the National Response Center (after verification of oil spill); the California Office of Emergency Management (CalEMA); and the Santa Barbara County Fire Department and Office of Emergency Management shall be made by personnel assigned by the Qualified Individual, the Pipeline Control Manager or their respective designees.

3.1 EMERGENCY INFORMATION AND NOTIFICATION PROCEDURES, CONTINUED

TIER ONE CALLS (Immediately Notify Upon Verification)
National Response Center (NRC) (**Note:** NRC notifies the pre-designated Federal On-Scene Coordinator for the impacted area. This call is made upon verification of an oil spill.) (800) 424-8802 or http://www.nrc.uscg.mil/nrchp.html
State Warning Center
Kern County Fire Department
Santa Barbara County OEM
California Highway Patrol [if not already notified by 911 (805) 683-2724 dispatch]. Notify appropriate CHP area in closest proximity to incident.
Santa Maria, California (Santa Maria County Fire Department (805) 934-6293)
Goleta, California (Highway Patrol Goleta (805) 967-1234)
Buellton, California (Highway Patrol Buellton (805) 688-5551)
Bureau of Land Management (BLM) (if Emergency is on BLM Land) Riverside, California
US Forest Service (if Emergency is on USFS Land) Goleta, California
In the event any of the following entities are affected or will be potentially affected, the following notifications will also be made as Tier 1 calls (immediately upon verification):
Plains Exploration & Production Company (PXP)Gaviota Oil & Gas Plant
Exxon Company, USALas Flores Canyon Facility
Gaviota State Park (**Note:** For Emergencies Only 9until 11:00 pm after 11:00 pm call the Chief Ranger, State Parks Superintendent, and S.P. Ranger 1 personnel.)
Hollister Ranch Owners Association Gate House – if near Gaviota Creek(b) (7)
City of Buellton If near Buellton (b) (7)
POPCO Las Flores Canyon Gas Processing Facility
Landowner and/or on-site resident notifications shall be made as necessary and appropriate by Company personnel as assigned by the Oil Movements Manager or SCADA System Supervisor.
Cal-OSHA Ventura, California
Emergency Response Organizations (Oil Spill Only) - Refer to **FIGURE 3.1-6**.
TIER TWO CALLS (as soon as practical after Tier 1 calls)
Office of State Fire Marshal Pipeline Safety Division – Lakewood
US Department of TransportationWestern Regional Office Lakewood, Colorado
Planning & Development Department Energy Division Santa Barbara, CA
Southern Pacific Railroad (if affected)
For non-emergency events, the Energy Division shall be notified within 2 hours of event verification.

3.1 EMERGENCY INFORMATION AND NOTIFICATION PROCEDURES, CONTINUED

The following emergency situations could cause an immediate hazard to persons or property:

- Pipeline oil spill reported by a Company employee, reported by an outside source, or confirmed by the SCADA system (i.e., simultaneous changes in both pressures and flow rates indicative of a leak).
- Pipeline or facility fire or explosion reported by a Company employee, reported by an outside source, or detected by the SCADA system (e.g., fire alarm).
- Wildland fire which is reported by a Company employee, by an outside source, or as an alarm from a pump station facility. (See note below).
- Natural disaster such as a flood or an earthquake which results in an oil spill or fire.
- Bomb threat.

As noted in **FIGURE 3.1-1**, the Pipeline Control Center (PCC) and the Emergency Operations Center (EOC) in Bakersfield, will maintain communications links with field personnel, including the Qualified Individual/Incident Commander.

After the initial emergency response actions have been implemented, the Company's Bakersfield District Emergency Response Plan will be activated if the emergency event includes an oil spill.

Note: For wildland fires on or near the pipeline easement the Company and County Fire Department agree to coordinate and communicate relative to earthmoving fire suppression, containment and control activities. Detailed pipeline locations maps have been provided to County Fire for future reference and Company representatives knowledgeable of the pipeline's location will be made available for on-site assistance, if requested by County Fire.

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

3.1 EMERGENCY INFORMATION AND NOTIFICATION PROCEDURES, CONTINUED

The following information concerning the oil spill should be available as part of the notification procedures:

1. What happened.
2. Where it occurred and can it be contained. For locational references refer to **SECTION 1** and **SECTION 6** for accurate immediate response locations maps, complete Thomas Guide Map reference charts and written directions to PPLP facilities.
3. When it occurred or was first observed.
4. Estimated size of spill.
5. Number of injuries or loss of life.
6. Type of damage to equipment or property (not value).
7. Current environmental conditions.
8. Property or equipment that might be affected.
9. Cause of spill, if determined.
10. Action being taken to contain the spill.
11. Agencies or persons already notified. (Be sure to record the name of representative of any agency contacted).

If, in the opinion of the Company's Qualified Individual, local containment efforts are, or will be, inadequate to contain the spill in the immediate vicinity of the location where the spill originated, then he will mobilize and activate the Incident Command Response Team. The Incident Command Response Team is responsible for the coordination of all spill containment and clean-up efforts at the site.

For Santa Barbara County only – consistent with the direction (SB County Emergency Notification Matrix located in this section) received from County OEM and the County Fire Department, the following pages describe the County notification process for hazardous materials spills that conform to the following criteria:

- Spill size is greater than 1 barrel outside of secondary containment;
- Spill size is greater than 5 barrels inside secondary containment unless it impacts or potentially impacts marine waters;
- Two combustible gas or fire eye alarms;
- Verified high level combustible gas (> 50% LEL);
- Smoke investigation;
- Spills outside secondary containment;
- Bomb or extortion threat;
- Fire reported out;
- Spill poses a threat to the environment.

If the incident meets any of the following criteria, it is considered an "Emergency" and 9-1-1 needs to be called. Criteria for Emergencies is listed on **FIGURE 3.1-8**.

3.1 EMERGENCY INFORMATION AND NOTIFICATION PROCEDURES, CONTINUED

If these conditions are met for a hazardous material spill in Santa Barbara County, the notification form provided in this section must be completed and sent via facsimile to HMU/CUPA [(805) 686-8183] and to the Planning and Development Department – Energy Division [(805) 886-7165]. The Hazardous Materials Incident Reporting Form must be prepared as soon as all relevant on-site event data has been collected and shall be sent to the HMU/CUPA via facsimile as soon as possible but no later than 24 hours from the time the event began or the next working day. Within 2 hours of verifying the non-emergency incident, the County Energy Division shall be notified by calling (805) 886-7165. If the non-emergency event occurs on a weekend, holiday or after hours, recorded information will allow the event to be properly recorded. All other notification procedures (e.g., federal, state) must be followed, as applicable. The Hazardous Materials Minor Spill and Release Incident Report Form, **FIGURE 3.1-4** is used to report Non-Emergency Incidents, those not meeting the thresholds listed in **FIGURE 3.1-8**.

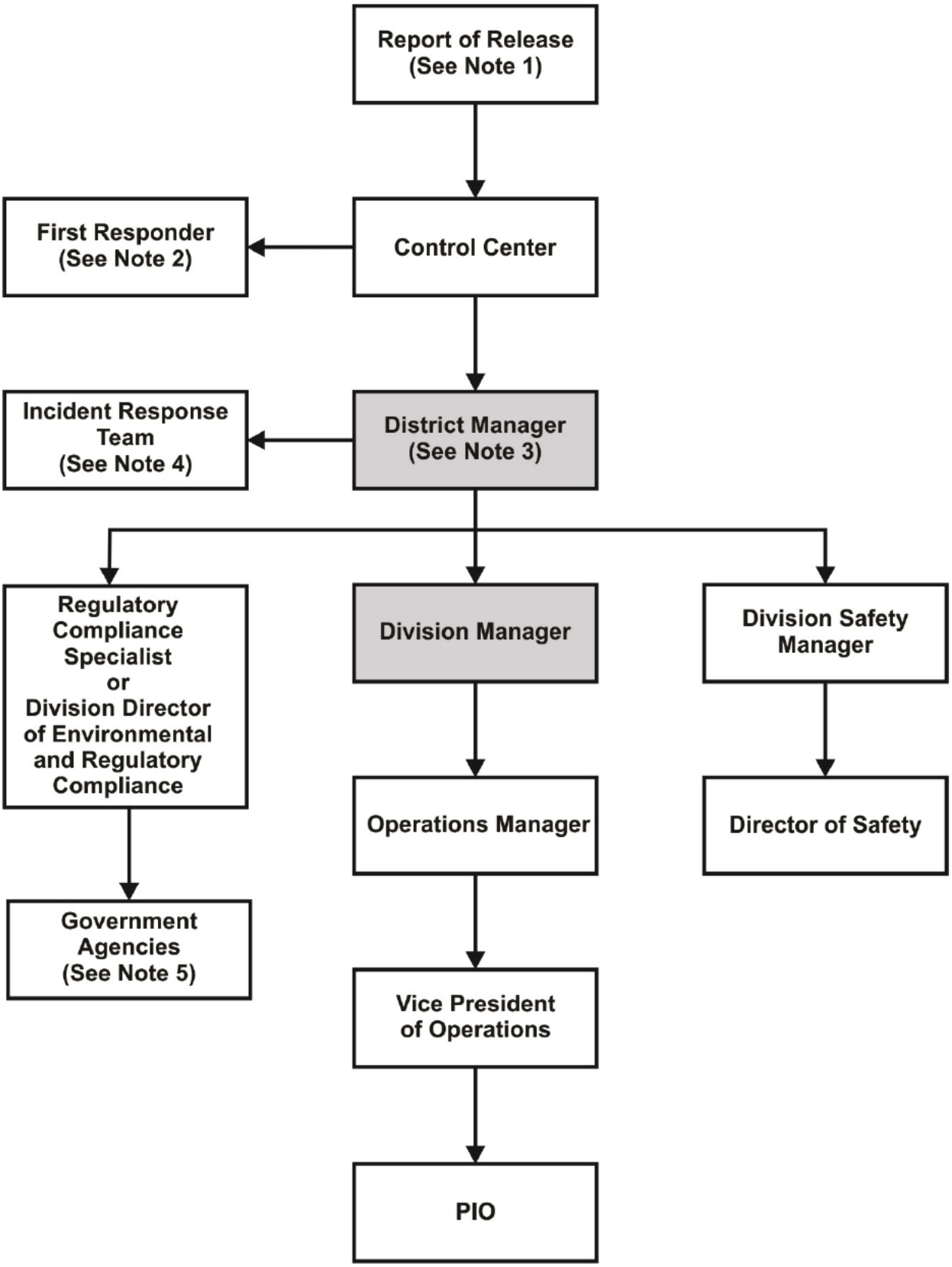
This section discusses the notification requirements and procedures the Company will undertake in the event of an emergency event in Santa Barbara County along the pipeline rights-of-way between Las Flores Canyon and the Cuyama River, at the motor operated valve sites, at the Las Flores, Gaviota and Sisquoc Pump Stations, along the Feederline. Specifically, federal, state and local agencies that would be notified are presented below and internal notification procedures for emergency response personnel are discussed.

Santa Maria District Operations and Maintenance personnel and nearby consultants, will be immediately called upon to respond to an emergency in Santa Barbara County, thus minimizing the response times necessary to expeditiously arrive at the incident site. These operations and maintenance personnel and consultants will be “on-call” and will have adequately equipped vehicles to access sites in the Santa Barbara County. It will be the responsibility of the Qualified Individual and the Manager Pipeline Control to review **FIGURE 3.1-8** to determine the threshold for Emergency Incidents that require calling 9-1-1.

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 notification.
- **FIGURE 3.1-3** provides a PHMSA Report Form. This form is utilized for pipeline summary of documentation.
- **FIGURE 3.1-4** provides a Hazardous Materials Minor Spill and Release Incident Report Form. This form is utilized to report non-emergency incidents to Santa Barbara County.
- **FIGURE 3.1-5** and **FIGURE 3.1-6** provide a listing of personnel and agencies requiring notification in the event of an emergency.
- **FIGURE 3.1-7** provides information on reporting requirements.
- **FIGURE 3.1-8** provides a Santa Barbara County Emergency Notification Matrix, which outlines the thresholds that require calling 9-1-1. These are considered emergency situations.

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 3.1-1 - EMERGENCY NOTIFICATION FLOW CHART, CONTINUED

Emergency: A situation that requires immediate action so that persons are not injured and/or property or environmental damage does not occur.

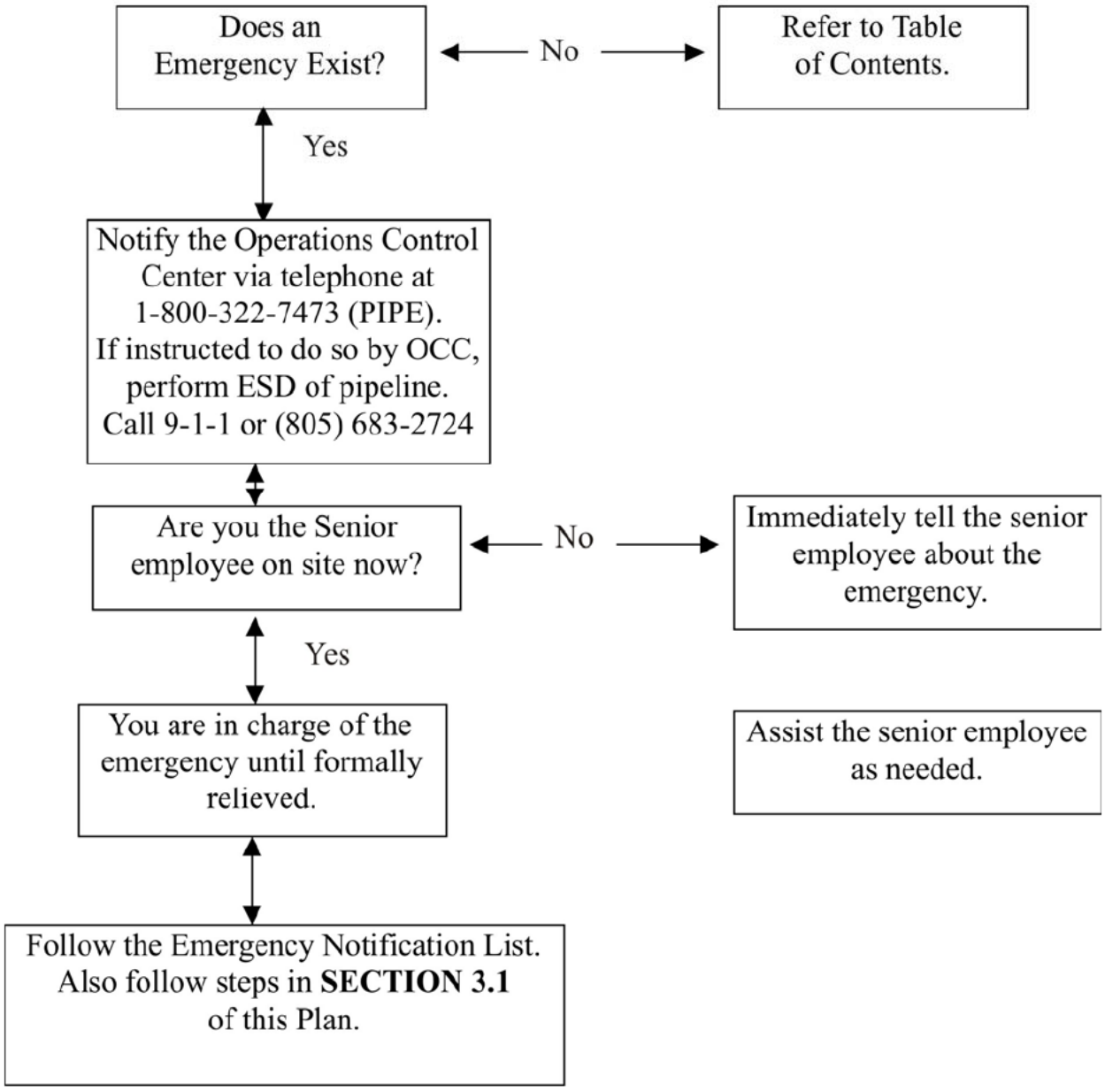


FIGURE 3.1-1 - EMERGENCY NOTIFICATION FLOW CHART, CONTINUED

Santa Barbara County Oil Spill Notification Sequence

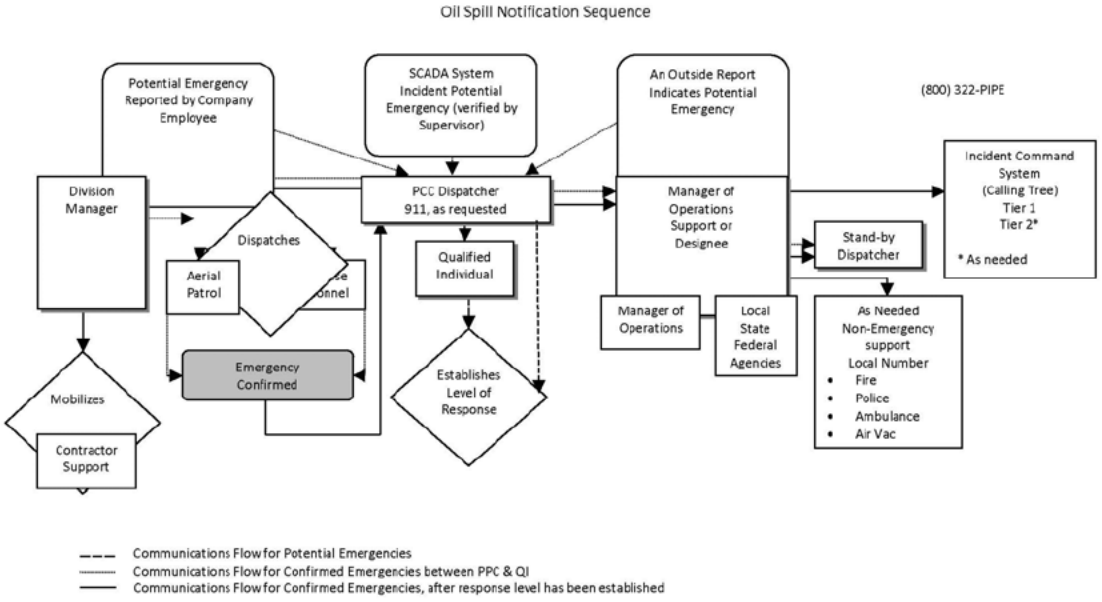


FIGURE 3.1-2 - SITUATION REPORT (SPILL EVENT) INFORMATION COLLECTION WORKSHEET

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:		
Prevailing Weather and Sea Conditions at scene: (include forecast and wind directions if poss ble)		
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:
Amount at Immediate Risk of Spillage / Release:	Barrels:	Gallons:
Inhalation Hazards or Explosive Vapor Hazards, if known:		
Size and Appearance of Slick:		
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:	
Inuries and Fatalities:	Injuries:	Fatalities:
Any other Information, as appropriate:		
Local, State, or Federal Agencies Contacted?		
Name / Position / Agency:		
Name / Position / Agency:		
Name / Position / Agency:		
Name / Position / Agency:		
Name / Position / Agency:		
Name / Position / Agency:		

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

FIGURE 3.1-3 - PHMSA REPORT FORM

Name of pipeline:
Time of discharge:
Location of discharge:
Name of oil involved:
Reason for discharge (e.g., material failure, excavation damage, corrosion):
Estimated volume of oil discharged:
Weather conditions on scene; and:
Actions taken or planned by persons on scene:

FIGURE 3.1-4 - HAZARDOUS MATERIALS MINOR SPILL AND RELEASE INCIDENT REPORT FORM

HAZARDOUS MATERIALS MINOR SPILL AND RELEASE INCIDENT REPORT GUIDE

Approved Jointly By

Santa Barbara County Chapter of CAER

Community Awareness & Emergency Response

and

Santa Barbara County Fire Chiefs

This guide is for members of the Santa Barbara County business community who handle hazardous materials / waste, and is designed to assist in **some** of your reporting obligations in the event of a hazardous materials / waste spill, including oil, and produced water. It simplifies compliance with existing mandates, and allows **non-emergency incidents to be reported by fax.**

The Hazardous Materials Minor Spill and Release Incident Report Form provides:

1. A **single** fax number for Santa Barbara County businesses for legally required reporting of all hazardous materials / waste releases to the primary local agencies that you are obligated to notify. Follow-up your fax with a telephone call verifying receipt of the fax (686-8170) first thing the next business day. The primary local agencies include all Santa Barbara County fire departments, County Protection Services Division and County Office of Emergency Services. Hazardous material releases that are reported by using this form in some cases must also be reported to the State Office of Emergency Services (OES) – 800-852-7550. Other reporting requirements to other local, state and federal agencies may still apply.

2. Guidance on how to assess whether the incident is an emergency. The burden is on each business to make this distinction. **However, when in doubt, call 9-1-1.**

Contents

Questions?

Call Santa Barbara County Fire Protection Services at 686-8170

FIGURE 3.1-4 - HAZARDOUS MATERIALS MINOR SPILL AND RELEASE INCIDENT REPORT FORM, CONTINUED

Hazardous Materials Minor Spill and Release Incident Report Form

Approved Jointly by CAER (Community Awareness & Emergency Response) and Santa Barbara County Fire Chiefs

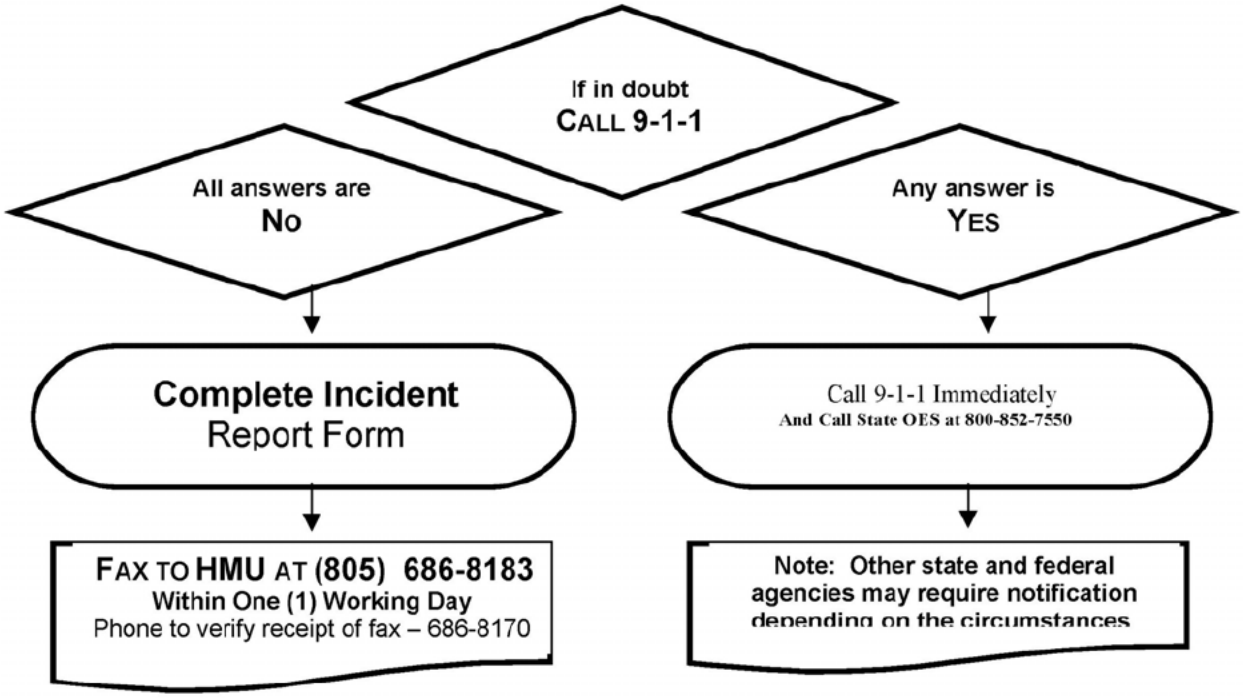
GUIDELINES FOR INCIDENT ASSESSMENT

Does the hazardous material spill / release, or threatened release, poses a threat to life, property or the environment?

If the answer is YES to <u>any</u> of the following questions – REPORT SPILL TO 9-1-1:

- Was anyone killed, seriously injured or admitted to a hospital for observation?
- Was anyone, other than employees in the immediate area of the release, required to evacuate?
- Did the release cause off-site damage to public or private property?
- Did the release extend into any wetlands, sewers, waterways, agricultural properties, public highways, or escape secondary containment/
- Is there a <u>threat</u> of release of a significant volume of a hazardous substance?
- Will containment, decontamination, and/or clean-up require the assistance of federal, state, county, or municipal response elements?
- Did the incident impact the environment, or threaten to impact the environment (e.g. animals, plant life, wetlands, sewers, waterways, agricultural properties, or roadways?
- Is there an increased potential for secondary effects including fire, explosion, line rupture, equipment failure, or other outcomes that may endanger employees, the general public, or the environment?

FIGURE 3.1-4 - HAZARDOUS MATERIALS MINOR SPILL AND RELEASE INCIDENT REPORT FORM, CONTINUED



Hazardous Materials Minor Spill and Release Incident Report Form

Approved Jointly by CAER (Community Awareness & Emergency Response) and Santa Barbara County Fire Chiefs

INCIDENT REPORTING

Who is obligated to notify?

Requirements for immediate notification of all spills or releases cover: Owners, Operators, Persons in Charge, and Employees. Notification is required regarding releases from facilities, vehicles, vessels, pipelines and railroads.

What is a release?

Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment, unless permitted or authorized by a regulatory agency – CA H&SC 25501(s)

Who must be notified of a spill and/or release in Santa Barbara County?

Pursuant to the California Health and Safety Code Section 25507, and Santa Barbara County Ordinances, all hazardous material releases must be reported at once to the County CUPA /Administrating Agency and/or State OES. In Santa Barbara County, the CUPA (County Fire Department Protection Services Division is the Authorized Agency), the local fire agency and the County Office of Emergency Services must be notified. When a minor spill and/or release occurs, the Hazardous Materials Minor Spill and Release Incident Report Form is to be faxed to the County Fire Department Protection Services Division within one (1) working day. Follow-up the fax with a telephone call the next working day to verify receipt of the fax. This will satisfy the emergency notification for these agencies in Santa Barbara County only. Other reporting requirements may apply.

FIGURE 3.1-4 - HAZARDOUS MATERIALS MINOR SPILL AND RELEASE INCIDENT REPORT FORM, CONTINUED

What other agencies may need to be notified?

In addition to 9-1-1 and/or faxed Incident Report, the following apply under varying circumstances:

- All releases that equal or exceed Federal Reportable Quantities – Call the National Response Center (NRC) at 1-800-424-8802 or on-line at www.nvc.uscg.mil/online.htm
- All releases on highway – Call California Highway Patrol at (805) 967-1234.
- All hazardous waste tank releases – Call Department of Toxic Substances Control Regional Office at (818) 551-2933
- All serious worker injuries or harmful exposures – Call Cal OSHA District Office at (805) 654-4581
- All oil spills at drilling and production fixed facilities – Call Conservation Department, Division of Oil, Gas and Geothermal Resources at (805) 937-7246.
- All spills with a potential to impact State water quality – Call State Fish & Game Department at (916) 445-0045
- All significant, potential or actual railroad releases – Public Utilities Commission at (213) 897-2975.
- All Hazardous Liquid Pipelines – Call local fire department.
- All Natural Gas Pipelines – Call Public Utilities Commission at (213) 897-2975.
- Consult Federal, State and Local laws and regulations for complete notification requirements.

Reminder: All hazardous material releases reported to Santa Barbara County Fire Department Protection Services Division, must also be reported to the State OES at 800-852-7550.

What other statutes and regulations require emergency notification of a hazardous chemical release?

• California Health and Safety Code	Sections 25270.8, 25507, 25503(c)(9)
• CA Vehicle Code	Section 23112.5
• CA Public Utilities code	Section 7673 (c)
• CA Government Code	Sections 51018, 8670.25.5(a)
• CA Water Code	Sections 13271(a), 13272(a), 13260(a)
• California Labor Code	Section 9030
• U.S. Code, Title 42	Sections 9603, 11004
• California Code of Regulations	Title 8, Section 5209 Title 13, Section 1166 Title 14, Section 1722(h) Title 19, Sections 2703, 2705 Title 22, Sections 66265.56(j), 66265.196(e) Title 23, Sections 2230, 2250, 2251, 2260
• 49 CFR	Parts 100 – 177, 263 Section 263.30
• 49 CFR	Part 171.16

Other Federal and State laws / regulations may apply.

Are there any web sites available to review the statues and regulations?

	http://www.oes.ca.gov
State Regulations	http://www.calregs.com/ http://www.leginfo.ca.gov/calaw.html
Federal Regulations	http://www.access.gpo.gov/nara/cfr/index.html

FIGURE 3.1-4 - HAZARDOUS MATERIALS MINOR SPILL AND RELEASE INCIDENT REPORT FORM, CONTINUED

Hazardous Materials Minor Spill and Release Incident Report Form

Approved Jointly by CAER (Community Awareness & Emergency Response) and Santa Barbara County Fire Chiefs

Fax Completed Report to Santa Barbara County Fire Department Protection Services Division. Follow-up with telephone verification to 686-8170

(805) 686-8183

1. INCIDENT AND RESPONSE DESCRIPTION

911 CALLED? ☐ YES ☐ NO

Date / Time Discovered	Date / Time Discharge	Discharge Stopped ☐ Yes ☐ No
Incident Reporting Date / Time		
Incident Business / Site Name		
Incident Address		
Other Locators (Bldg, Room, Oil Field, Lease, Well #, GIS)		
Please describe the incident and indicate specific causes and area affected.		
Indicate actions to be taken to prevent similar spills from occurring in the future.		

2. ADMINISTRATIVE INFORMATION

Business Name	
Address	
Supervisor in charge at time of incident	Phone
Contact Person	Phone

3. CHEMICAL / RELEASE INFORMATION

CALL 911 FOR ANY RELEASES INTO WATERWAYS, WETLANDS, OR AGRICULTURE AREAS.

Chemical	Quantity	☐ GAL ☐ LBS ☐ FT^3
Chemical	Quantity	☐ GAL ☐ LBS ☐ FT^3
Chemical	Quantity	☐ GAL ☐ LBS ☐ FT^3
Clean-Up Procedures & Timeline:		
Completed By		Phone
Print Name	Title	Date and Time

SANTA BARBARA COUNTY FIRE DEPARTMENT PROTECTION SERVICES DIVISION USE ONLY

Date Received	Time	OES Control #	CIR #
Received By	Assigned To		ER ☐ Yes ☐ No
Date / Time Reported to 911	Late Report ☐ Yes ☐ No		INCIDENT #
From 911 Dispatch ☐ Yes ☐ No	Dispatch Requested HMU Respond ☐ Yes ☐ No		Time of Dispatch Request
Time HMU Responding	Time On Scene	Time Back in Service	☐ Joint ☐ Multi-Agency

PROP 65 ☐ YES ☐ NO	DATE/TIME TO HCS	DATE/TIME TO COUNTY OES
MATERIAL		VOLUME
HAZARD		EVACUATION/ACCESS RESTRICTED ☐ YES ☐ NO

Current Status

- ☐ Clean-Up Underway
- ☐ Condition Abated
- ☐ No Action Taken
- ☐ Pollution Characterization Underway
- ☐ Preliminary Site Assessment Underway
- ☐ Other
- ☐ Case Closed (Clean-Up Completed or Unnecessary)
- ☐ Investigation

COMMENTS

NOTIFICATION CHECKLIST

CODE 20 ☐ YES ☐ NO ☐ UNKNOWN			☐ LOCAL FIRE _____	☐ APCD	☐ CAL TRANS
☐ COUNTY OES	☐ COUNTY PETROLEUM	☐ COUNTY AG COMM	☐ ROAD DEPT	☐ CHP	☐ CAL OSHA
☐ STATE OES RESPONSE	☐ STATE DOGGR	☐ STATE FISH & WILDLIFE	☐ STATE RWQCB	☐ EHS	☐ DTSC

FIGURE 3.1-5 - 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

COMPANY PERSONNEL

NAME/TITLE	PHONE NUMBER	RESPONSE TIME (hours)	ICS POSITION	RESPONSE TRAINING TYPE[1]		
				1	2	3
Operations Control Center (OCC)	(800) 987-4737 (Office) (562) 728-2311 (Office) (562) 728-2389 (Office)					
Darren Palmer District Manager **Qualified Individual**	(661) 336-7908 (Office) (b) (6))	2	Incident Commander	x	x	x
Kathy Randall Operations Supervisor **Qualified Individual**	(805) 922-9897 (Office) (b) (6))	1	Operations Section	x	x	x
Ngiabi Gicuhi Western Division Dir., Environmental & R/C **Qualified Individual**	(562) 728-2358 (Office) (b) (6))	3	Compliance, Liaison			
Rick Taylor Division Safety Manager **Qualified Individual**	(562) 728-2353 (Office) (b) (6))	3	Safety Officer			
Juan Martinez Construction Supervisor, Group Supervisor Pipeline Repair Team **Qualified Individual**	(661) 336-7905 (Office) (b) (6))	2	Operations Section			
Steve Caddell Western Division Operations Manager **Qualified Individual**	(562) 728-2895 (Office) (b) (6))	3	Public Information Officer			
Richard Hartig Western Division Assistant Operations Manager **Qualified Individual**	(562) 728-2023 (Office) (b) (6))	3	Planning Section			
Jim Jacoby Manager, ROW & Claims	(562) 728-2020 (Office) (b) (6))	3	ROW & Local Government, Liaison			
Bob Osborne Maintenance Supervisor **Qualified Individual**	(661) 336-7907 (Office) (b) (6))	2	Logistics 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 3.1-5 - 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

COMPANY PERSONNEL						
NAME/TITLE	PHONE NUMBER	RESPONSE TIME (hours)	ICS POSITION	RESPONSE TRAINING TYPE[1]		
				1	2	3
Pavankumar Khatri Engineer	(661) 336-7951 (Office) (661) 859-3748, (791) (b) (6)	2	Operations Section			
Randy Fordham Sr. Division Safety Manager **Qualified Individual**	(661) 327-3788 (Office)	2	Safety Officer			
Jeremy Wiggins E&R/C Specialist	(661) 336-7913 (Office) (b) (6)	2	Wildlife/Environmental Branch			
Audie Cantrell P/L Operator **Qualified Individual**	(661) 332-0105 (Office) (b) (6)	2				
Tom McLane Sr. Director Environmental & R/C	(713) 646-4109 (Office) (b) (6))	48	Corporate Support Personnel			
Meredith Hartley PAA Communications Manager - Corporate Support	713-646-4416 (Office) (b) (6))		Public Information Officer			
Ryan Smith Director, Investor Relations	(713) 646-4108 (Office)	8	Corporate Support Personnel			
24Z Injection Station	(661) 768-4187 (Office)	N/A				
31-X Pump Station	(661) 762-0092 (Office)	N/A				
Belridge Pump Station	(661) 762-7441 (Office)	N/A				

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 - 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

COMPANY PERSONNEL						
NAME/TITLE	PHONE NUMBER	RESPONSE TIME (hours)	ICS POSITION	RESPONSE TRAINING TYPE[1]		
				1	2	3
Berry Injection Station	(661) 769-8276 (Office)	N/A				
Emidio Pump Station	(661) 858-2982 (Office)	N/A				
Gaviota Booster Pump Station	(805) 567-1002 (Office)	N/A				
Gaviota Creek Pump Station	(805) 567-1082 (Office)	N/A				
Gaviota Pump Station	(805) 567-1085 (Office)	N/A				
Las Flores Pump Station	(805) 562-1288 (Office) (805) 562-1291 (Office)	N/A				
Pentland Pump Station	(661) 769-8038 (Lab) (661) 769-8609 (Fax) (661) 769-8112 (Office) (661) 322-0105 (Office)	N/A				
Sisquoc Pump Station	(805) 937-8372 (Office)	N/A				

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 - 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
Worley Catastrophe Response	(888) 887-8070 (office) (b) (6) [redacted] (866) 753-3619 (claims)	0				
Amergent Tech	(714) 892-0085	0				
M.P. Environmental Services, Inc.	(661) 393-1151* (661) 393-0508* (fax)	1				
Clean Seas, LLC	(805) 684-3838*	4	Oil Spill			
Witt O'Brien's	(985) 781-0804 (714) 577-2115 (b) (6) [redacted])	4	Spill management			
NRC Environmental Service	(800) 899-4672* (562) 432-1304* (562) 432-1826* (fax)	4	Oil Spill			
Center for Toxicology and Environmental Health, LLC (CTEH)	(501) 801-8500 Office (866) 869-2834 24 Hour	24	Air Monitoring			

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 3.1-6 - 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		
California Office of Emergency Services	(916) 845-8510	
National Response Center http://www.nrc.uscg.mil/nrchp.html	(800) 424-8802* (202) 267-2675* (202) 267-1322 (Fax)	
Recommended		
Federal Agencies		
Bureau of Land Management Bakersfield Field Office	(661) 391-6000 (661) 391-6041 (fax)	
Bureau of Land Management California State Office	(909) 383-5651* (Emergency) (909) 383-5652*	
Bureau of Ocean Energy Management, Regulation and Enforcement	(800) 672-2627 (805) 389-7550* (Camarillo, CA)	
Environmental Protection Agency - San Francisco, California	(800) 300-2193	
U.S. Army Corps of Engineers - Los Angeles, CA	(213) 452-3413	
U.S. Coast Guard Santa Barbara	(805) 962-7430	
U.S. Department of Transportation Western Regional Office - Lakewood, CO	(720) 963-3471	
U.S. Fish & Wildlife - Ventura	(805) 644-1766	
U.S. Fish & Wildlife Service	(800) 344-9453 (916) 414-6464 (Sacramento, CA) (805) 644-1766 (Ventura)	
U.S. Fish and Wildlife Service (USFWS)	(916) 414-6600	
U.S. Forest Service San Luis Obispo, California	(805) 968-6640 911*	
State Agencies - California		
California Conservation Dept., Division of Oil, Gas and Geothermal Resources	(805) 937-7246	
California Department of Fish & Wildlife - OSPR	(916) 445-0045 (Spill Report) (805) 568-1235 (fax) (805) 568-1229	

FIGURE 3.1-6 - 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		
State Agencies - California		
California Department of Fish & Wildlife Headquarters	(916) 445-0411	
California Dept. of Toxic Substances Control	(818) 717-6500	
California Division of Oil & Gas - Santa Maria, CA	(805) 937-7246	
California Highway Patrol - Goleta, CA	911* (805) 967-1234	
California Oiled Wildlife Care Network (OWCN)	(877) 823-6926	
California Public Utilities Commission	(213) 576-7000	
California State Fire Marshal Office Pipeline Safety	(916) 445-8477 (8am-5pm M-F) (562) 497-9100 (So. Cal.)	
California State Fire Marshal's Office	(916) 445-8477 (8am-5pm M-F) (562) 497-9103 (Lakewood)	
California State Office of Emergency Management - Kern County	(661) 873-2602 (661) 861-2521 (After Hrs)	
California State Office of Emergency Management - San Luis Obispo County	(805) 781-5011 (805) 543-7082 (Emergency) (805) 781-4553	
California State Office of Emergency Management - Santa Barbara County	(805) 681-5526*	
Cal-OSHA Bakersfield Area - Fresno District	(209) 445-5302	
Cal-OSHA Santa Maria Area - Ventura District	(805) 654-4581	
CalTrans	(805) 688-6649 (Buellton) (805) 568-1250 (New Cuyama) (800) 427-7623 (General)	
Department of Forestry - Dispatch	(800) 992-4494	

FIGURE 3.1-6 - 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		
State Agencies - California		
Highway Patrol	911* (805) 549-3619 (San Luis Obispo)) (805) 688-5551 (Buellton)	
Highway Patrol	(805) 967-1234 (Goleta) (805) 349-8728 (Santa Maria)	
Planning & Development Energy Division	(805) 886-7165 (Santa Barbara)	
Regional Water Quality Control Board - Central Coast-San Luis Obispo Branch	(805) 549-3147 (805) 543-0397 (Fax)	
Regional Water Quality Control Board - Central Valley-Fresno Branch	(559) 445-5116 (559) 445-5910 (Fax)	
Santa Barbara County Emergency Dispatch Center, Highway Patrol	(805) 683-2724 (805) 681-5526 911*	
Santa Maria Valley Water Conservation	(805) 925-8989 (805) 925-5212	
State-Wide Flight Service	(800) 992-7433	
County Agencies - California		
Kern County		
Bakersfield Memorial Hospital 420 34th St., Bakersfield	(661) 327-1792	
Henry Mayo Newhall Hospital 23845 Mc Bean Pkwy., Bakersfield	911* (661) 253-8000	
Kern County Fire	(661) 391-7000 911*	
Kern County Fire	(661) 769-8239 (Maricopa) (661) 762-7396 (McKittrick)	
Kern County Fire	(661) 858-2490 (Mettler) (661) 765-2155 (Taft)	
Kern County Fire	(661) 391-7000 (Bakersfield) (661) 768-4341 (Fellows)	
Kern County Police Department/ Sheriff's Department	911* (800) 861-3110 (661) 763-8550 (Taft)	

FIGURE 3.1-6 - 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		
County Agencies - California		
Kern County		
Kern Medical Center 1830 Flower St., Bakersfield	(661) 326-2000	
Mercy SW Hospital 400 Old River Rd., Bakersfield	911* (661) 663-6000	
Mission Community Hospital 700 Chatsworth Dr., San Fernando	911* (818) 787-2222	
San Joaquin Community Hospital and Burn Center 2615 Eye St., Bakersfield	911* (661) 395-3000	
San Luis Obispo County		
Arroyo Grande Police	(805) 473-5100	
Santa Barbara County		
Cottage Hospital; Santa Barbara, CA	(805) 682-7111	
County of Santa Barbara Fire Prevention Division CUPA/Hazardous Materials Unit	911* (805) 686-8170 (Business Line Only)	
County of Santa Barbara Office of Emergency Management	(805) 681-5524 (Direct) (805) 681-5526 (24/7) (805) 681-5592 (Fax)	
County of Santa Barbara Planning & Development - Energy Division	(805) 568-2040	
County of Santa Barbara Protection Services Division Hazardous Materials Unit	(805) 681-5500 (Business Line Only)	
County Petroleum Office	(805) 934-6128	
Goleta Valley Community Hospital 351 South Patterson Ave. Goleta, CA 93117	(805) 967-3411	
Lompoc County Health	805-737-6400	
Lompoc Valley Medical	805-737-3300	
Marian Hospital 1400 East Church St. Santa Maria, CA 93454	(805) 739-3000	

FIGURE 3.1-6 - 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		
County Agencies - California		
Santa Barbara County		
Mobile Life Support (Santa Barbara County Emergency Dispatch)	911* (Santa Barbara County) (805) 683-2724 (Outside county or via cell phone)	
Physician's Exchange; Santa Barbara, CA	(805) 966-4181	
Santa Barbara County Fire	(805) 681-5500 – Administration 9-1-1* if calling within the County (805) 683-2724 – Dispatch if calling from cell phone or out of County	
Santa Barbara County Fire Stations	(805) 681-5518 Gaviota (805) 686-5062 Bulleton (805) 686-5058 Santa Ynez (805) 934-6215 Los Alamos	
Santa Barbara County Fire Stations	(805) 934-6293 Santa Maria (805) 934-6294 Sisquoc	
Santa Barbara County Sheriff	(805) 681-4100 (Admin) (805) 686-8150 (Buellton) (661) 766-2310 (New Cuyama) (805) 934-6150 (Santa Maria)	
Santa Ynez Valley Hospital 700 Alamo Pintado Solvang, CA 93463	(805) 688-6431	
Sherman Oaks Hospital Burn Center; Sherman Oaks, CA	(818) 981-7111	

FIGURE 3.1-6 - 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
Recommended		
USCG CLASSIFIED OSRO		
Clean Seas, LLC Carpinteria, CA	(805) 684-3838*	
NRC Environmental Service Long Beach, CA	(800) 899-4672* (562) 432-1304* (562) 432-1826* (fax)	
NON USCG CLASSIFIED OSRO		
Center for Toxicology and Environmental Health, LLC (CTEH)	(501) 801-8500 Office (866) 869-2834 24 Hour	
M.P. Environmental Services, Inc.	(661) 393-1151* (661) 393-0508* (fax)	
Witt O'Brien's	(985) 781-0804 (714) 577-2115 (562) 217-0791 (Brendon Geraghty Mobile)	
Worley Catastrophe Response	(888) 887-8070 (office) (b) (6) (866) 753-3619 (claims)	
Accommodations		
Best Western	(800) 780-7234	
Courtyard by Marriott	(888) 236-2427	
Crowne Plaza	(877) 227-6963	
Doubletree Hotel	(800) 222-8733	
Hampton Inn	(800) 426-7866	
Hilton	(800) 445-8667	
Holiday Inn	(800) 465-4329	
Holiday Inn Express	(800) 465-4329	
Marriott	(888) 236-2427	

FIGURE 3.1-6 - 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		
Aviation Companies		
Artic Air Service	(805) 964-0684 (SB Airport Goleta) (805) 938-5500 (Hqtrs Santa Maria)	
Calaska Air Transport	(805) 922-1199	
Patroline	661-837-1550	
Contract Spill Management Technical Advisors		
CTEH (Centers for Toxicology and Environmental Health), LLC	(866) 869-2834* Emergency Response	
Neighboring Facilities		
City of Buellton	(805) 688-5177	
City of Goleta General Offices	(805) 961-7500	
Exxon/Mobil Company, USA - Las Flores Canyon Facility	(805) 961-4055* Emergency	
Hollister Ranch Owners Association	(805) 567-5016* (805) 567-5020 Front Gate	
POPCO Las Flores Canyon Gas Processing Facility	(805) 961-5055* Emergency	
PXP-GOHF (Gaviota Oil Heating Facility)	(805) 739-1111*	
Union Pacific Railroad (if affected)	(888) 877-7267*	
Parks/Recreation Areas		
State Park (El Presidio State historic park, Painted Cave, El Capitan State Beach, Refugio State Beach, Gaviota State Park, La Purisima Mission, and Point Sal State Beach)	(805) 968-1711 (951) 443-2969* Emergency (951) 443-2948 Non-Emergency	
Utilities		
Underground Service Alert	(800) 227-2600	
Waste Management		
Cirrus Environmental, Inc. (Waste Analysis)	(805) 346-1766	
Environmental Dynamics	(310) 952-9812 (Gardena)	

FIGURE 3.1-6 - 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		
Waste Management		
Kettlemen Hills	(209) 386-9711	
McKittrick Waste Treatment Site	(661) 762-7366	
Safety Kleen	(661) 762-6200	
Terrain Technology	(661) 762-7292	
Zalco Laboratories (Waste Analysis)	(661) 395-0539	
Weather		
Marine Weather	(310) 477-1463	
National Weather Service (San Joaquin Valley)	(559) 584-3752	
Wildlife Rehabilitation		
California Oiled Wildlife Care Network (OWCN)	(877) 823-6926	
International Bird and Rescue Research Center	(707) 207-0380 (310) 514-2573 (888) 447-1743 (rpt a spill)	
SB Wildlife Care Network	(805) 681-1080	

FIGURE 3.1-7 - REPORTING REQUIREMENTS

AGENCY / ADDRESS	DESCRIPTION
Cal OSHA District Office ,	VERBAL: Notify for all serious worker injuries or harmful exposures.
California Dept. of Fish & Game / Office of Spill Prevention & Response 1700 K Street, Suite 250 Sacramento, CA 95811	All spills: Notify immediately. VERBAL: Notify for all spills with a potential to impact State water quality. Any release in water >1 bbl release on land, rupture, explosion, fire.

FIGURE 3.1-7 - REPORTING REQUIREMENTS

AGENCY / ADDRESS	DESCRIPTION
California Dept. of Toxic Substances Control Regional Office ,	VERBAL: Notify for all hazardous waste tank releases.
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.

FIGURE 3.1-7 - REPORTING REQUIREMENTS

AGENCY / ADDRESS	DESCRIPTION
California Highway Patrol ,	VERBAL: Notify for all releases on the highway.
California Public Utilities Commission ,	VERBAL: Notify for all significant, potential or actual railroad releases and for all natural gas pipelines.

FIGURE 3.1-7 - REPORTING REQUIREMENTS

AGENCY / ADDRESS	DESCRIPTION
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.
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 The National Response Center has deployed an On-Line Reporting Tool at the following web address: http://www.nrc.uscg.mil/nrchp.html

FIGURE 3.1-7 - REPORTING REQUIREMENTS

AGENCY / ADDRESS	DESCRIPTION
Pipeline Control Center ,	Any substantial threat: Notify immediately.
Santa Barbara County Chapter of CAER and Santa Barbara County Fire Chiefs 4408 Cathedral Oaks Road Santa Barbara, CA 93110	Requirements for immediate notification of all spills or releases cover: Owners, Operators, Persons in Charge, and Employees. Notification is required regarding releases from facilities, vehicles, vessels, pipelines and railroads. Pursuant to the California Health and Safety Code Section 25507, and Santa Barbara County Ordinances, all hazardous material releases must be reported at once to the County CUPA /Administrating Agency and/or State OES. In Santa Barbara County, the CUPA (County Fire Department Protection Services Division is the Authorized Agency), the local fire agency and the County Office of Emergency Services must be notified. When a minor spill and/or release occurs, the Hazardous Materials Minor Spill and Release Incident Report Form is to be faxed to the County Fire Department Protection Services Division within one working day. Follow-up the fax with a telephone call the next working day to verify receipt of the fax. This will satisfy the emergency notification for these agencies in Santa Barbara County only. Other reporting requirements may apply.

FIGURE 3.1-7 - REPORTING REQUIREMENTS

AGENCY / ADDRESS	DESCRIPTION
Santa Barbara County Chapter of CAER and Santa Barbara County Fire Chiefs 4408 Cathedral Oaks Road Santa Barbara, CA 93110	VERBAL: If the answer is YES to any of the following questions – REPORT SPILL TO 9-1-1: - Was anyone killed, seriously injured or admitted to a hospital for observation? - Was anyone, other than employees in the immediate area of the release, required to evacuate? - Did the release cause off-site damage to public or private property? - Did the release extend into any wetlands, sewers, waterways, agricultural properties, public highways, or escape secondary containment? - Is there a threat of release of a significant volume of a hazardous substance? - Will containment, decontamination, and/or clean-up require the assistance of federal, state, county, or municipal response elements? - Did the incident impact the environment, or threaten to impact the environment (e.g. animals, plant life, wetlands, sewers, waterways, agricultural properties, or roadways? - Is there an increased potential for secondary effects including fire, explosion, line rupture, equipment failure, or other outcomes that may endanger employees, the general public, or the environment? WRITTEN: Non-emergency incidents to be reported by fax. The Hazardous Materials Minor Spill and Release Incident Report Form provides: 1. A single fax number for Santa Barbara County businesses for legally required reporting of all hazardous materials / waste releases to the primary local agencies that you are obligated to notify. Follow-up your fax with a telephone call verifying receipt of the fax (686-8170) first thing the next business day. The primary local agencies include all Santa Barbara County fire departments, County Protection Services Division and County Office of Emergency Services. Hazardous material releases that are reported by using this form in some cases must also be reported to the State Office of Emergency Services (OES) – 800-852-7550. Other reporting requirements to other local, state and federal agencies may still apply. 2. Guidance on how to assess whether the incident is an emergency. The burden is on each business to make this distinction. However, when in doubt, call 9-1-1. Reminder: All hazardous material releases reported to Santa Barbara County Fire Department Protection Services Division, must also be reported to the State OES at 800-852-7550.
Santa Barbara County Fire Department ,	Notify if any smoke investigation, fire, fire reported out, bomb or explosion, Fire Eye Alarms, earthquake or flooding damage. Notify for all spills with the potential to, or impacting creeks, state or marine waters. Notify for 2 combustible alarms, a verified reading of less than or equal to 50% LEL. 1 Toxic gas release at less than 10ppm. ESD, H2S in sales gas or off-site potential. Notify for any HazMat spill outside secondary containment designed for that vessel, system or pipeline; if requires Emergency Rescue personnel; if there is offsite potential. Notify if medical assistance and/or transport required. Notify immediately after ESD and closing of valves, if appropriate. Information to Report: 1. Type of fire, hazardous material, or injury/illness and location of release or threatened release, 2. If applicable, location and condition of injured/ill personnel, estimate of quantity of release involved and potential hazards of material, 3. Name of facility, 4. Address, 5. Your name/ phone no.

FIGURE 3.1-7 - REPORTING REQUIREMENTS

AGENCY / ADDRESS	DESCRIPTION
Santa Barbara County Fire Department / Office of Emergency Management ,	Report if: Any smoke investigation, fire, fire reported out, bomb or explosion, Fire Eye Alarms, earthquake or flooding damage. Spill of any size poses a threat to humans or property. All spills over one (1) barrel outside a secondary containment. all spills over five (5) barrels inside secondary containment. ESD. Offsite potentially impacts state or marine waters. Notify County OEM ASAP and notify fire dept. immediately after ESD and shutting off source. Information to Report: 1. Exact location of release or threatened release and quantity released. 2. Your name and phone number, the name of the facility and its address. 3. Type of hazardous materials involved. 4. Estimate of quantity involved. 5. Potential hazards of the hazardous material.
Santa Barbara County Planning & Development - Energy Division ,	Notify immediately after making internal and emergency response agency notifications. All uncontained spills. Non-emergency spills: Notify immediately upon verification. Within 2 hours of verification. This is a Second Tier required notification.

FIGURE 3.1-8 - SANTA BARBARA COUNTY EMERGENCY NOTIFICATION MATRIX

TYPE OF EMERGENCY	PERSONS & AGENCIES TO BE NOTIFIED	NOTIFICATION CRITERIA	NOTIFICATION TIME FRAME	INFORMATION TO REPORT
Fire or Explosion	Control Room	Any Smoke Investigation, Any Fire. Any Fire reported out. Any Bomb or Extortion Threat. Any Explosion. Fire Eye Alarms. Earthquake or Flooding Damage.	Call 9-1-1 NOW! Immediately perform rescue, ESD, evacuation, etc. Follow Checklists in **SECTION 2**.	1. Type of fire 2. Name of facility 3. Address 4. Your name and phone
	Fire Department			
	Co. Office of Emergency Services			
Gas Release (toxic or non-toxic)	Control Room	2 combustible gas alarms. A verified reading of =50% LEL. 1 Toxic gas release at > 10 ppm. ESD, H2S in sales gas or off-site potential	Call 9-1-1 NOW! Immediately perform rescue, ESD, evacuation, etc. Follow Checklists in **SECTION 2**.	1. Location of release or threatened release 2. Name of facility 3. Address 4. Your name and phone
	Fire Department			
	County Fire Hazardous Materials Unit (HMU/CUPA)	Same as Fire above		
	Co. Office of Emergency Services	Same as Fire above		
	CA State Warning Center	All significant or threatened releases		
	EPA/USCG (National Response Center)	Reportable Quantities (RQ)		
Oil/Produced Water Spill	Control Room	1 bbl+ outside a secondary containment. 5 bbl+ inside secondary containment. ESD. Offsite potential, impacts or potentially impacts state or marine waters.	Call 9-1-1 NOW! Immediately perform rescue, ESD, evacuation, etc. Follow Checklists in **SECTION 2**.	1. Location of release or threatened release 2. Quantity released 3. Name of facility 4. Address 5. Your name and phone
	Fire Department			
	County Fire Hazardous Materials Unit (HMU/CUPA)	Same as Fire above	ASAP	
	Co. Office of Emergency Services	Same as Fire above	ASAP	
	CA State Warning Center	All significant or threatened releases	ASAP	
	EPA/USCG (National Response Center)	Reportable Quantities (RQ)	ASAP	
HAZMAT Release (including ignitable liquids, e g. NGL, gasoline, diesel, etc.)	Control Room	Any HazMat spill outside secondary containment designed for that vessel, system or pipeline. Requires Emergency Rescue personnel.Offsite potential	Call 9-1-1 NOW! Immediately perform rescue, ESD, evacuation, etc. Follow Checklists in **SECTION 2**.	1. Type of hazardous material 2. Estimate of quantity involved 3. Potential hazards of the material 4. Name of facility 5. Address 6. Your name and phone
	Fire Department			
	County Fire Hazardous Materials Unit (HMU/CUPA)	Same as Fire above	ASAP	
	Co. Office of Emergency Services	Same as Fire above	ASAP	
	CA State Warning Center	All significant or threatened releases	ASAP	
	EPA/USCG (National Response Center)	Reportable Quantities (RQ)	ASAP	
Spill Entering Storm Drain, Creek, Ocean, or other Waterway	Control Room	All spills with the potential to, or impacting creeks, state or marine waters.	Immediately Follow Checklists in **SECTION 2**.	1. Location of release 2. Type of material and quantity 3. Name of facility 4. Address 5. Your name and phone
	Fire Department			
	County Fire Hazardous Materials Unit (HMU/CUPA)	Same as Fire above	ASAP	
	Co. Office of Emergency Services	Same as Fire above	ASAP	
	CA State Warning Center	Any substantial threat	ASAP	
	EPA/USCG (National Response Center)	Any quantity	Within 1 hour	
Medical Emergencies	Control Room	Medical assistance and/or transport required	ASAP. Follow Checklists in **SECTION 2**.	1. Type of injury/ illness 2. Location 3. Condition 4. Action taken 5. Name of facility 6. Address 7. Your name and phone
	Fire Department/ Ambulance/ Lifeflight			
	Co. Office of Emergency Services	Same as Fire above	ASAP	

Refer to **FIGURE 3.1-5** and **FIGURE 3.1-6** for telephone numbers. Written follow-up reports may be required.

SECTION 4

Last Revised: May 2008

RESPONSE TEAM ORGANIZATION

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.

Company personnel that are expected to respond to emergency events have received training sufficient to allow them to serve as the Incident Commander and/or Safety Officer until they have been relieved with the arrival of additional company support on site. Further, a certain level of cross-training has been provided to key personnel within ICS structure to ensure adequate "Depth". For example, an individual listed on the pages following **FIGURE 4.5-2** may be listed as the Assistant to the Incident Commander. Depending upon the on-site circumstances and personnel available at the time of assignment by the IC, this individual may be assigned the duties of Logistics Section Chief or other functional responsibility as may be appropriate within the ICS structure.

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 3.1-5** for each team member's response time "EPA Facilities only".

4.4 INCIDENT COMMAND SYSTEM / UNIFIED COMMAND

The Company will rely on the Incident Command System (ICS) to respond to any emergency, including but not limited to an accidental oil spill, a pipeline or facility fire, major earthquake, flood or tidal wave, civil disobedience and state of war or bomb threat, that may arise along the pipeline rights-of-way or at its pump station facilities in Santa Barbara County. The 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.

4.4 INCIDENT COMMAND SYSTEM / UNIFIED COMMAND, CONTINUED

The National Incident Management System (NIMS) Incident Command System (ICS) model will be utilized for emergency response issues that occur within Santa Barbara County. Utilization of the Standardized Emergency Management System (SEMS) model will promote clear communications and stakeholder involvement in all aspects of emergency response within the County. The Unified Command includes the following:

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

These people share decision-making authority within the Incident Command System and are each responsible for coordinating other federal, state, local, and company personnel to form an effective integrated Emergency Management Team. Refer to **FIGURE 4.4-1** for the organization transition matrix. Refer to **SECTION 4.6** for detailed checklists of the EMT roles and responsibilities, as well as organizational interfaces with external parties.

FIGURE 4.4-1 - ORGANIZATION TRANSITION MATRIX

LEVEL EMERGENCY	CRITERIA	INCIDENT COMMANDER	TYPICAL FIRE DEPT. RESPONSE	NOTIFICATION
LEVEL 1 Initial Response Minor On-Site Incident	1. Oil spill or produced water spill >1 bbl outside secondary containment designated for that vessel, system or pipeline, or ≥5 bbl inside secondary containment designated for that vessel, system or pipeline, unless it impacts or potentially impacts state or marine waters, in which case go to Level 3. 2. Two combustible gas or fire eye alarms 3. Verified high level combustible gas (≥ 50% LEL) alarm 4. Single hand held detector with a LEL reading = 50% 5. Smoke Investigation 6. Fire reported out 7. Hazardous material release outside secondary containment designed for that vessel, system or pipeline. 8. Bomb or extortion threat	Highest ranking-on-duty operations person until relieved by Fire Dept.	One Engine Code 2	9-1-1 See Facility's Notification Section
LEVEL 2 Sustained Response Major On-Site Incident	1. Oil spill or produced water spill ≥5 bbl unless it impacts or potentially impacts state or marine waters, in which case go to Level 3. 2. Any toxic gas release > 10 ppm by fixed or handheld monitor. 3. More than 2 combustible gas or fire eye alarms 4. Fire 5. Hazardous materials release requiring hazardous materials emergency response from emergency rescue personnel or contractors. 6. Sour gas in sales line 7. Earthquake or flooding damage 8. Activation of emergency shutdown for plant and/or pipeline	Highest ranking on-duty operations person until relieved by Fire Dept.	1st alarm 3 engines, Chief Officer Code 3	9-1-1 See Facility's Notification Section

FIGURE 4.4-1 - ORGANIZATION TRANSITION MATRIX, CONTINUED

LEVEL EMERGENCY	CRITERIA	INCIDENT COMMANDER	TYPICAL FIRE DEPT. RESPONSE	NOTIFICATION
LEVEL 3 Major Incident with Public Exposure Potential (off-site impacts)	1. Oil spill or produced water spill impacting or potentially impacting state or marine waters, or threatened release of oil or produced water impacting or potentially impacting state or marine waters. 2. Fire with potential for spreading 3. Explosion 4. Hazardous materials release or gas leak with off-site potential 5. Civil disturbance 6. State or War 7. Highway 101 closure or impact on other significant access routes or roads	Highest ranking on-duty operations person until relieved by Fire Dept. and Potentially: • Responsibile Party • Sheriff's Dept. • CHP • Federal On-Scene • State On-Scene • Local On-Scene Coordinators	2nd alarm or greater, additional engines and/or specialized equipment/ resources 2 Chief Officers	9-1-1 • Off-duty personnel • Community notification • Agency notification, as required See Facility's Notification Section

4.5 QUALIFIED INDIVIDUAL (QI)

The Qualified Individual (QI) 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 **FIGURE 1-2** and **FIGURE 3.1-5**.

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

(Click here for larger view)

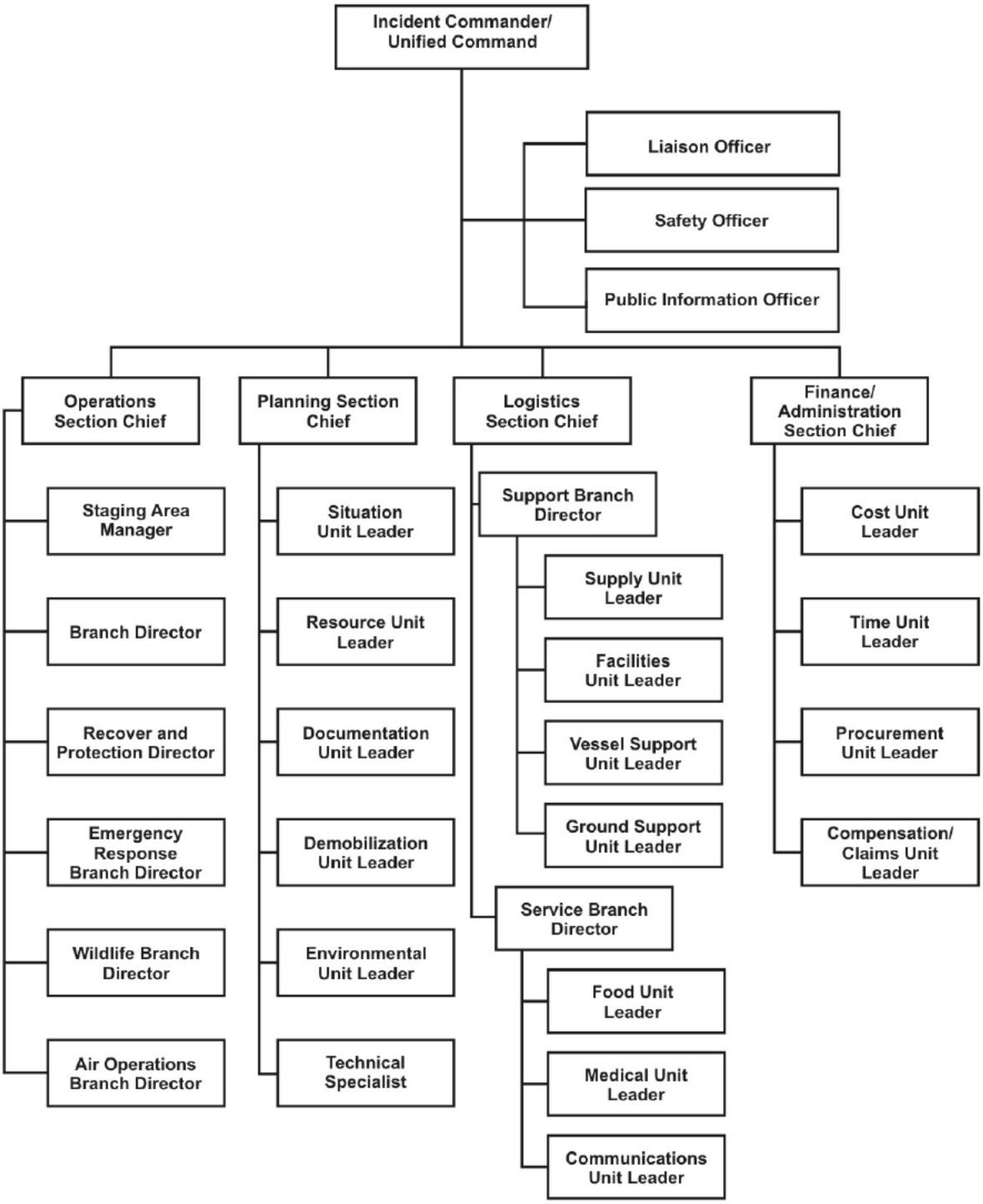
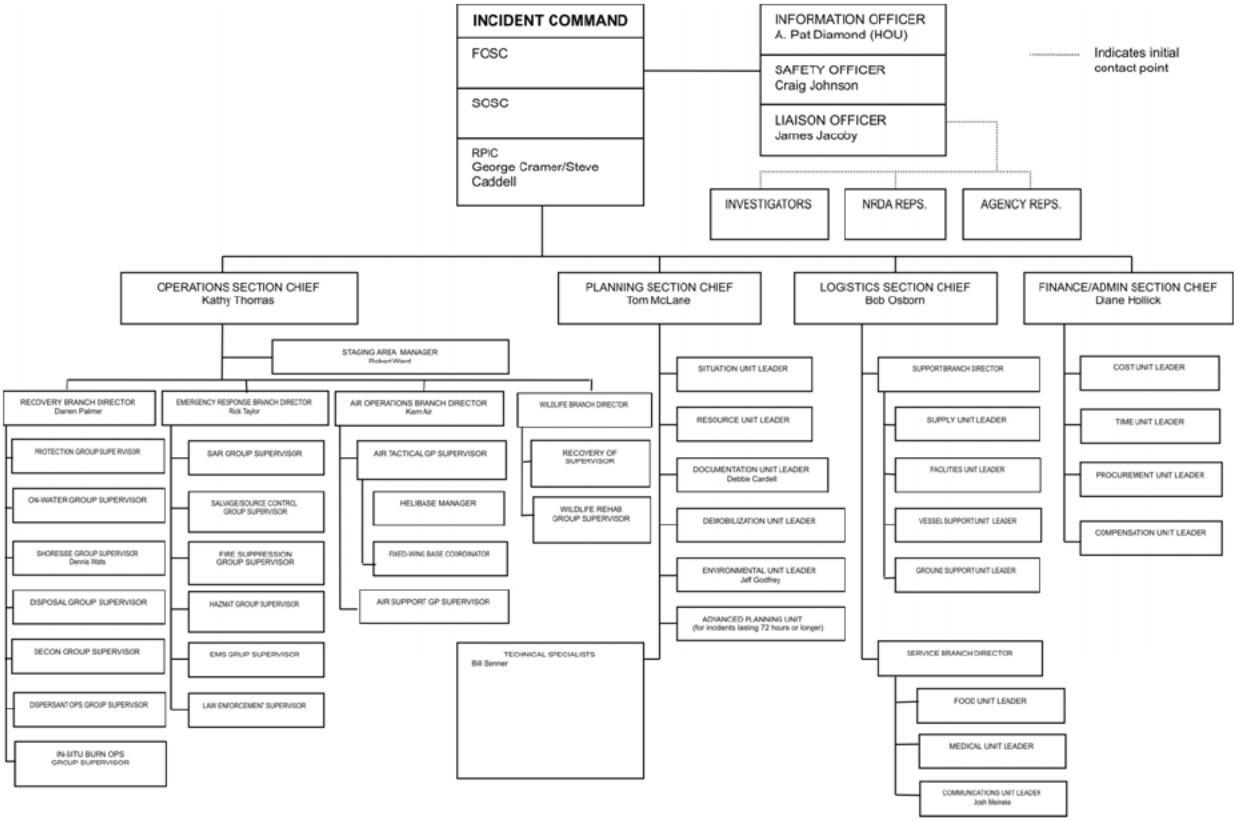


FIGURE 4.5-2 - OIL SPILL RESPONSE ORGANIZATION CHART

(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

Although not considered as part of the on-scene Incident Command System, the Oil Movement Control Room Dispatchers (Company has 2 full time, 24 hours per day); and the SCADA System Supervisor and the Pipeline Control Manager play critical roles in the effective management of an emergency response event. Therefore, their primary duties and responsibilities are briefly outlined below:

- Oil Movement Control Room Dispatchers, SCADA System Supervisor, Pipeline Control Manager

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 National Incident Management System (NIMS) Incident Command System (ICS) model will be utilized for emergency response issues that occur within Santa Barbara County. Utilization of the Standardized Emergency Management System (SEMS) model will promote clear communications and stakeholder involvement in all aspects of emergency response within the County. The Unified Command includes the following:

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

As soon as possible but not later than one (1) week following an incident, the Incident Commander shall conduct a retrospective analysis of the response and provide an After Action Report identifying problematic issues and needs for improvement, propose measures to counteract problematic elements, and lessons learned. 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 Post-Incident Response Review/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**).

OIL MOVEMENT CONTROL ROOM DISPATCHERS, SCADA SYSTEM SUPERVISOR, PIPELINE CONTROL MANAGER

The Control Room Dispatchers are primarily responsible for isolating the affected line sections, monitoring pressure between line sections, valves or stations, and operating all unaffected facilities until normal operations are restored. The Control Room Dispatchers should also maintain constant communications with dispatched local responders and ensure that all Control Room personnel are provided all relevant details.

The following checklist has been prepared for reference by either of the two OMC Dispatchers on duty, the SCADA System Supervisor, the Pipeline Control Manager during an emergency event or drill in Santa Barbara County.

Control Room personnel (Dispatchers, SCADA System Supervisor and Pipeline Control Manager) are responsible to ensure that all initial advisory and confirming emergency notifications to the local emergency response agency and local Company responders have been, or are, being made.

Responsibilities:

- Shut down upstream pumping equipment; keep downstream pumps running until shutdown in low suction.
- Shut-in and block out gate valves as appropriate to isolate and block in affected facilities while allowing continuous pressure monitoring between affected line sections, valves or stations.
- Maintain control of unaffected line sections and facilities, as appropriate.
- Advise shippers (Exxon, Agruello Inc., Chevron) of emergency situation and keep them advised, as may be appropriate.
- Advise PAALP's Bakersfield, California Scheduler's of the emergency situation and request that they advise downstream delivery customers (Pacific, Shell, Tosco), as appropriate.
- As necessary, maintain communications with emergency response personnel dispatched to the incident scene and ensure that Control Room personnel are kept advised of all relevant details.

SECTION 5
INCIDENT PLANNING

Last Revised: August 16, 2012

SECTION 5
INCIDENT PLANNING, CONTINUED

SECTION 5
INCIDENT PLANNING, CONTINUED

5.9 Emergency Response Records and Documentation

5.9.1 PPLP Form 601 Emergency Notification Report

5.9.2 PPLP Form 603 Emergency Event Log

5.9.3 PPLP Form 101 Leak/Accident Report

5.9.4 PAALP Form 701 Record of Training or Drill

5.9.5 Oil Spill Notification Form

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 and video surveys,
- Climatological data,
- Labor and equipment accounting,
- Press clippings,
- Reports to government agencies, and
- Copies of all logs, contracts, contacts, and plans prepared for the incident.

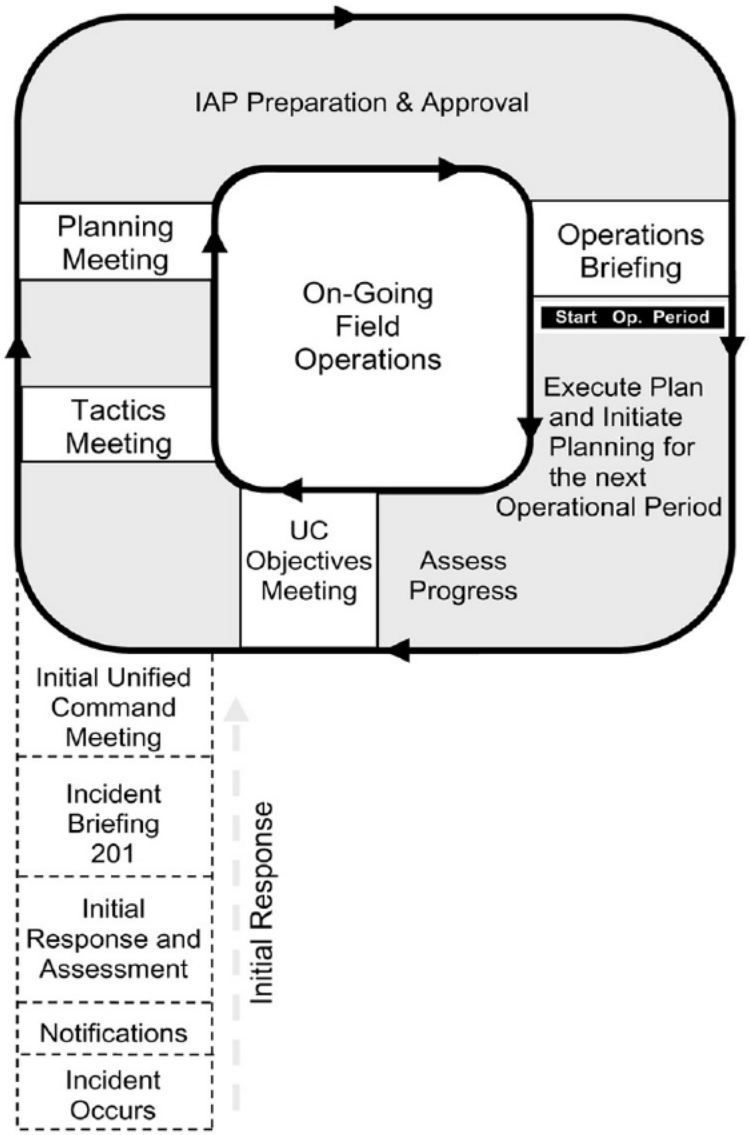
5.2 INCIDENT ACTION PLAN PROCESS AND MEETINGS

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 206)	[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.

Click here to view - FEMA ICS Forms

- **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/forms/ics.asp

  - **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)

5.3.1 Incident Briefing ICS 201-OS, Continued

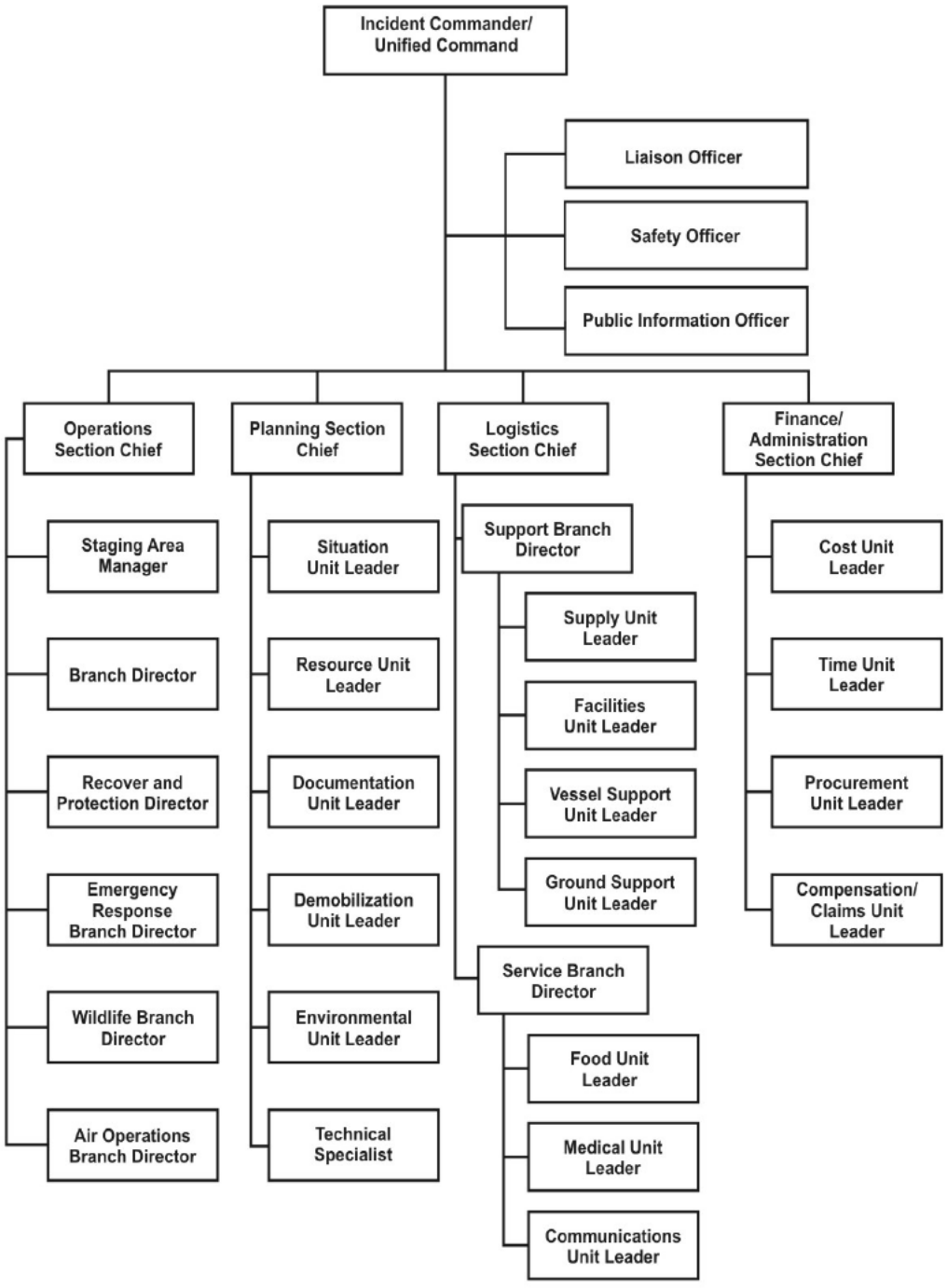
1. Incident Name	2. Prepared By: (name) Date: Time:	INCIDENT BRIEFING ICS 201-OS
4. Initial Incident Objectives		
5. Summary of Current Actions		

Time	Action/Note

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



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)

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

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	

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	
Vessel Support Unit	
Ground Support Unit	

b. Service Branch

Director	
Communications Unit	
Medical Unit	
Food 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	
Time Unit	
Procurement Unit	
Compensation Unit	
Cost Unit	

9. Prepared by: (Resources Unit) **Date/Time**

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

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

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

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 (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						

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

10. Special Notes

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

NC DENT 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

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

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

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 ■ River ■ Ocean ■ Bay ■ Canal ■ Tidelands ■ Other:					
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 Required: ■ Yes ■ No	Pumps Ordered:	Time: ■ AM ■ PM
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: ■ Yes ■ No (API 1104)	Full Sleeve Repair Needed: ■ Yes ■ No (API 1104)
Rectifier Turned Off: ■ Yes ■ No	Hot Work Permit Issued: (PL) ■ Yes ■ No
Lock Out/Tag Out Done: ■ Yes ■ No (Safety Procedures Manual)	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.

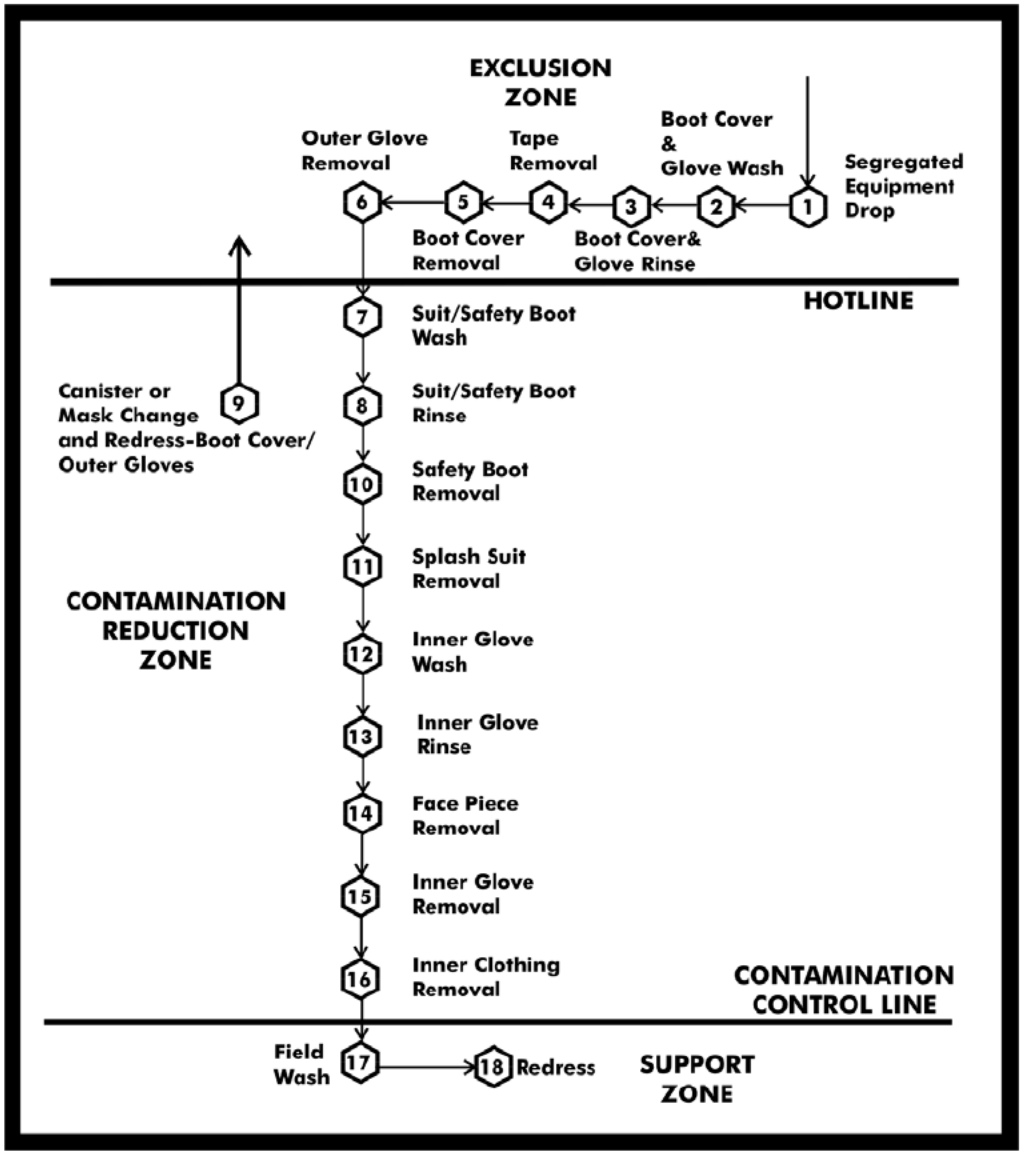
5.5 DECONTAMINATION PLAN, CONTINUED

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

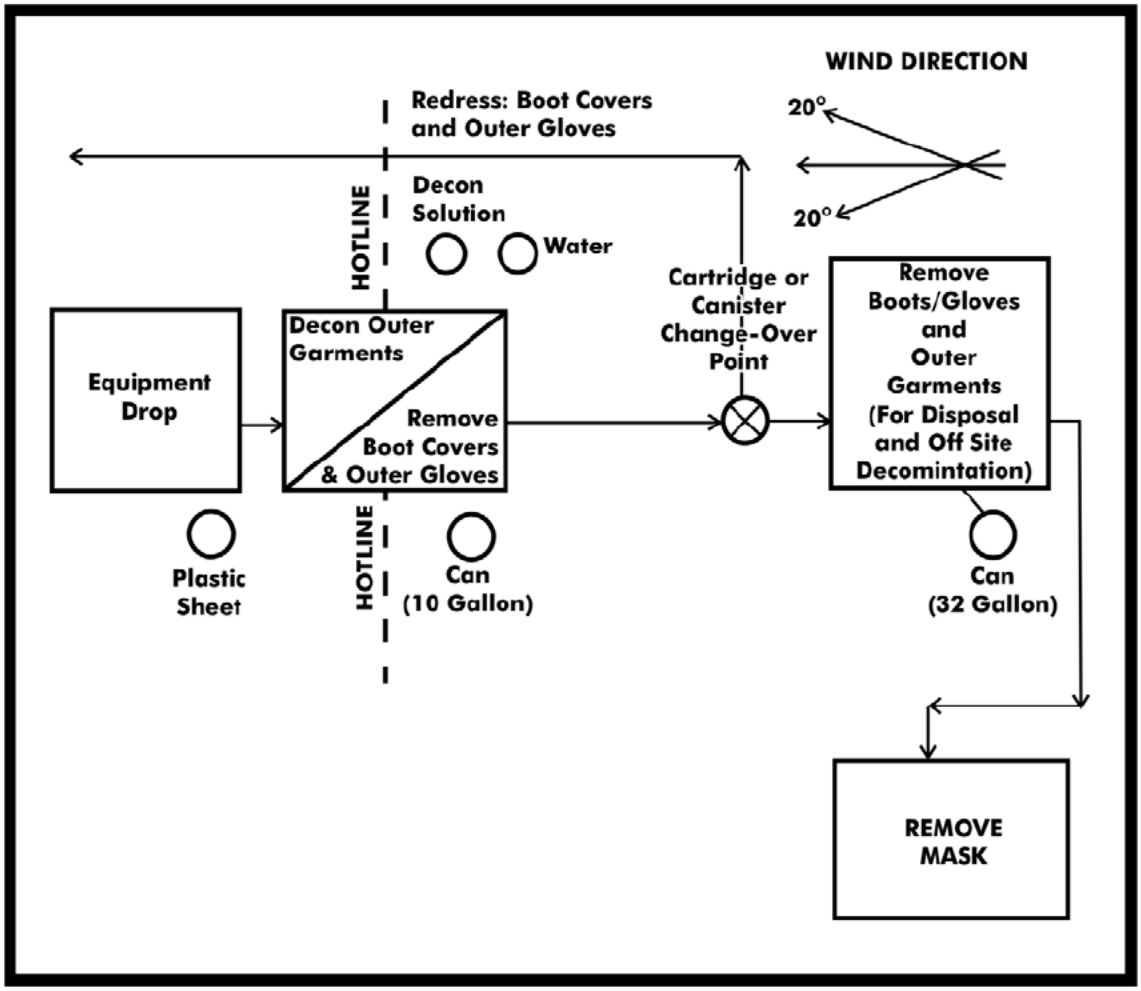


5.5 DECONTAMINATION PLAN, CONTINUED

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), (b) (3)

[redacted]

5.7 INCIDENT SECURITY PLAN, CONTINUED

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

[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.

5.9 EMERGENCY RESPONSE RECORDS AND DOCUMENTATION

PPLP Form No. 601

In the event of any emergency, PPLP Form No. 601 must be completed upon notification of the event. This report requires information pertaining to the informant, discovery information and location information. On the back of this form is a statement prepared by the Company Safety Department to be quoted to informant regarding general public and company personnel safety instructions. In addition to this information, Form 601 also includes a section for calls of threats.

As part of the Emergency Notification Report, the following statements have been prepared by the Company Safety Department to be quoted for informants regarding general and Company personnel safety instructions:

General Public Safety Instructions:

1. Call the Oil Movements Control Center [1-800-322-7473 (PIPE)] to report all pipeline incidents (i.e., fire, spill, etc.).
2. Evacuate yourself and others from the area.
3. Make an attempt to control access to the area until emergency response personnel arrive.
4. Do not attempt to take corrective action that will endanger you in any way. Your safety and the safety of others in the area should be your first concern.
5. Call the Oil Movements Control Center [1-800-322-7473 (PIPE)] to inform them if conditions change significantly from when the incident was first reported.

Company Personnel Safety Instructions:

1. Follow all above steps.
2. Make an attempt to control the pipeline incident that is consistent with the level of training which you have received, if that action can be achieved without endangering any personnel.

PPLP Form No. 602

PPLP Form No. 602 is a multipurpose form and is an effective tool for obtaining information from local public agencies (police, fire departments, etc.) and local support contractors.

The information received from the use of this report is the backup and source for the listings of the Local Authority and Emergency Support Contacts in this manual. This form as administered through the Regulatory Compliance Department serves as a record of contact for the Company's Public Education Program / Public Awareness (establishing liaison with public officials).

PPLP Form No. 603

Once response to an emergency has be initiated, the employee designated by the Incident Commander shall begin recording information on PPLP Form No. 603. This form is designed to be a "Running Log" which shall be maintained from the beginning of the emergency through the return to normal operations. This form is two part. The first page pertains to general summary information such as:

- Date and time of emergency
- Nature of the emergency
- Any factual details pertaining to the cause
- Names of news media or non-Company personnel on-site
- Physical description of damage
- Approximate area covered or affected

5.9 EMERGENCY RESPONSE RECORDS AND DOCUMENTATION, CONTINUED

The second page of Form No. 603 is set up as a log. The date and time is to be entered as indicated for all events which occur throughout the mitigation of the emergency. Examples of events to be logged:

- The arrival and departure of all personnel
- Name and purpose of contractors
- Names of local public safety personnel or agencies
- When emergency support personnel arrive and leave
- When vacuum trucks arrive and leave
- When repairs are started and finished
- Personnel involved in effecting repair
- When valves are opened or closed
- When and what tests were performed
- When and what safety equipment was used (and where)
- What pictures were taken and who took them
- Any and all other information occurring on the scene that would pertain to the factual recording of the event.

The completed log Form No. 603 is to be delivered to the Incident Commander immediately following the return to Normal Operations.

PPLP Form No. 101

PPLP Form No. 101 shall be completed by the Division Office for all spills regardless of size and whether or not they are reportable to DOT.

PPLP Form No. 102 - NRC Notification

In the event that the accident is a reportable accident requiring that the National Response Center be notified, PPLP Form No. 102 must be completed before the call is made. This report requires information pertaining to the pipeline operator, product released and a description of the incident, which will be required for the National Response Center's records.

PAALP Form 701

All training activities, including field deployment drills, are reported to the Senior Director of Environmental and Regulatory Compliance in the Houston office. Except for the CBT training program (which has a separate reporting function), all reports must be submitted on the "Record of Training or Drill"), PAALP Form No. 701. All information must be thoroughly completed and accompanied by any course related materials (i.e., course outlines, student materials, class schedule of events, etc.). if available, a certificate of completion is also included in the report packet for filing.

Oil Spill Notification Log

All calls concerning oil spill notification will be logged, with a record made of the date, time of notification, and name of person contacted, both within the Company and the outside party.

DOT Form 7000-1

DOT Form 7000-1 will be completed by the Regulatory Compliance Department for each spill incident requiring submittal to DOT within 30 days of the event.

5.9 EMERGENCY RESPONSE RECORDS AND DOCUMENTATION, CONTINUED

D.O.T. Documentation Requirements Pertaining to the Exposing, Evaluation, and Repair of Hazardous Liquid Pipelines

Specifications or Standards (195.202)

DOT requires that construction on the pipeline must be in accordance with comprehensive written specifications (195.202). We have complied with this article by publishing the Plains Pipeline "Maintenance Welding and Repair Procedures Manual". This manual includes specifications and procedures for maintenance repair work on the pipeline system. The welding procedures in this manual have been tested and qualified for use on our system. Whenever repair welding is performed, the procedure(s) used shall be noted on Form No. 501.

Qualification of Welders (195.214)

Welders performing welding on a pipeline regulated by the DOT must be qualified in accordance with API 1104 or ASME section IX. Only qualified welders will be allowed to weld on any part of the PPLP system. Welder qualification will be documented on PPLP Form 905 for New Construction Welding and Form 906 for In-Service Welding.

Pre-testing of Replacement Components (195.304)

It is a requirement that all replacement components have a record of being pre-tested. A component is defined as any part, which may be subject to pipeline pressure including but not limited to pipe, valves, elbows, tees, flanges, and closures. In order to comply with this article, all vendor test reports must be retained as part of the repair records. The records must certify that the component was tested by the manufacturer or that it was manufactured through a quality program in which the prototype was tested. In the case of replacement pipe, the pipe shall be pre-hydrostatically tested. In addition to the hydrotest records, the records for pre-tested pipe shall include the pipe heat number and manufacturer's name to trace the pipe to a material test report. If records for pre-tested pipe are not available, the pipe may not be used. Before an emergency occurs, the location of pre-tested pipe should be known as well as the assurance that test records on the pipe are on file and that the pipe can be traced to the test records.

Whenever Buried Pipe Is Exposed (195.416; e)

Whenever the pipeline is exposed for any reason, the coating system and pipe surface must be evaluated for evidence of corrosion. Compliance with this requirement is accomplished by completing the Form No. 501 "Pipeline Inspection & Repair Report". The top section of this form pertains primarily to the location of the section, and a description of the pipe and coating. The bottom section is more specifically designed to record evidence of corrosion and corrosion control data. The back of the form is to be used to describe (in detail) any pipe damage, corrosion or pipe defect.

5.9 EMERGENCY RESPONSE RECORDS AND DOCUMENTATION, CONTINUED

Maps and Records of Repairs and System Modifications (195.404; b,2)

Any modification or repair to the pipeline system must be documented as to the type and location of the work. These records and drawings become a permanent "Map" of the pipeline and must be retained for the life of the system. To comply with this requirement PPLP Form No. 501, "Pipeline Inspection and Repair Report", must be completed. As stated before, this form includes information pertaining to the type of repair made, what type of materials were used, what procedures were followed and how it was tested.

Construction Records (195.266)

In line with the requirements for maps and records, DOT restates in its section under construction that all nondestructive test reports be retained for the life of the pipeline. These reports, normally completed by a third party non-destructive test company, should be attached to Form No. 501.

When a Section of the Pipeline is Removed (195.418; d)

Part 195.418 requires, that whenever a section of the pipe is removed, the internal surface must be examined for corrosion. This examination is to be performed by the Corrosion Technician or an independent consultant. When performed by the Company Technician, PPLP Form No. 501, "Pipeline Inspection and Repair Report", shall be used to document the examination. It is important to note that when a section is removed, it must be well preserved so a proper examination of the section can be made.

Analysis of a Pipeline Failure (195.402; c,5)

The analysis of a pipeline failure (Accident) may involve the study of a valve mechanism, a piece of equipment, a closure, or section of the pipeline system itself. It is very important that the defective mechanism or section of pipe once removed be safeguarded to preserve its original condition. In many instances the failed section or item will need to be transported to a laboratory or outside consulting service specialized in the evaluation of failures. It is a DOT requirement that all pipeline accidents be analyzed to determine the cause. The samples of material taken from the location are a very important part of this process.

Gathering of Data During an Accident (196.402)

The D.O.T requires that the operating company have a means of gathering data needed for reporting an accident in a timely and effective manner. As stated before, during the event of an accident (or emergency) PPLP Form No. 603 was developed to record all events and activities in the event of a pipeline accident. This log in conjunction with the above mentioned reports will provide the necessary information to complete the DOT Accident Report Form 7000-1.

5.9.1 PPLP Form 601 Emergency Notification Report

PPLP Form 601 Rev. 03/04	EMERGENCY NOTIFICATION REPORT		
Date:	Time:		Report Taken By:
Instructions: Complete this form for each call pertaining to a potential emergency regardless of source. Check appropriate box for source of call.	☐ OMC ☐ Company Employee ☐ Aerial Patrol	☐ Landowner ☐ Passerby ☐ Public Agency	☐ Tendering or Delivery Facility ☐ Saboteur or Prankster ☐ Other:

PART A	INFORMANT INFORMATION
a) Informant's Name: b) Where can informant be contacted: Address: Phone:	c) If informant represents a firm or agency, complete this section. Name of firm or agency: Address:_____ _____ Phone:

PART B	DISCOVERY INFORMATION
a) When was it discovered? b) When did it happen? c) How did it happen?	d) Is product leaking from the pipeline system? e) If product is leaking, how much area has been affected? f) If product is leaking, what is the estimated damage? g) Is the product on fire? h) Has there been injury? i) Has any other agency been notified? (specify)

PART C — LOCATION INFORMATION

a) What is the closest milepost? b) What is the closest road or highway? c) Nearest Town?

d) Predominate type of area?

☐ Commercial ☐ Residential ☐ Undeveloped ☐ Industrial ☐ Rural ☐ Other (specify)

e) Geographic Area?

☐ Hill Side ☐ Road Crossing ☐ Other (specify)
☐ River Crossing ☐ Wash

f) Weather Conditions?

☐ Windy ☐ Calm ☐ Other (specify)
☐ Rainy ☐ Temperature:

PART D — BOMB THREAT INFORMATION

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

[redacted]

5.9.2 PPLP Form 603 Emergency Event Log

PLAINS PIPELINE, L.P. PPLP Form 603-A Rev. 03/04	**EMERGENCY EVENT LOG** *Frequency: Every Accident or Emergency*	Page____of____

PART A — DESCRIPTION OF INCIDENT

1. Start of Log: Date:_____ Time:_____
2. Emergency Notification Received: Date:_____ Time:_____
3. Nature of Emergency (Personal Injury, Fire, Leak, Damage to System):
   Remarks: _____
4. Cause of Emergency (If Known):
   Remarks: _____
5. Location of Emergency (State or Mile Post):_____
6. Area affected by the Emergency Event (Attach sketch to this log):
   Remarks: _____

PART B — VISITORS ON SITE

All personnel and equipment entering or leaving the site of the Emergency shall be routed thorugh "Staging" and shall be logged in and out on this report. Detailed information for completing this form is included in SECTION 5.9 of the Spill Response Plan.

NAME	COMPANY/AGENCY	TIME IN	TIME OUT

Distribution: (Original) Operation Center
(Copy) Division Office

_____ ____/____/____ _____ ____/____/____
Log Completed By *Date* *Supervisor* *Date*

Retention: Life of System

5.9.2 PPLP Form 603 Emergency Event Log, Continued

PLAINS PIPELINE, L.P. PPLP Form 603-B Rev. 03/04	**EMERGENCY EVENT LOG** *Frequency: Every Accident or Emergency*	Page____of____

PART C — LOG OF EVENTS

DATE	TIME	REMARKS

_____ ____/____/____ _____ ____/____/____

Log Completed By *Date* *Supervisor* *Date*

Retention: Life of System

5.9.3 PPLP Form 101 Leak/Accident Report

PPLP Form 101-A Rev. 03/04	**LEAK/ACCIDENT REPORT** *Frequency: When ANY leak or accident occurs*

PART A—TIME AND LOCATION OF ACCIDENT

1. **Date (*Month, Day, Year*):**
2. **Hour (*24-Hour Clock*):**
3. **Give County or City:**
4. **Did accident occur on Federal Land?** ☐ **Yes** ☐ **No**
5. **Specify Location. (*If location is near buildings, other landmarks, sucha s highways, waterways or railroads, attach a sketch or drawing showing relationship to these landmarks.*)**

PART B—ORIGIN OF RELEASE OF LIQUID *(Check all applicable items.)*

1. **Part of System Involved:**
   ☐ **Mainline** ☐ **Tank Farm** ☐ **Pump Station**
2. **Item Involved:**
   ☐ **Pipe** ☐ **Valve** ☐ **Scraper Trap** ☐ **Pump** ☐ **Welded Fitting**
   ☐ **Girth Weld** ☐ **Tank** ☐ **Bolted Fitting** ☐ **Longitudinal Weld**
   ☐ **Other (*Specify*):**
3. **Year item installed:**
4. **Depth of Cover (*Inches*):**

PART C—CAUSE OF ACCIDENT

☐ **Corrosion** ☐ **Failed Pipe** ☐ **Failed Weld** ☐ **Oustide Force Damage**
☐ **Malfunction of Control Relief Equipment** ☐ **Incorrect Operation by Operator Personnel**
☐ **Other (*Specify*):**

PART D—DEATH OR INJURY

1. **Number of Persons Killed.**
   Operator Employees:_____ **Non-Employees:**_____
2. **Number of Persons Injured and Requiring Medical Treatment other than On-Site First Aid.**
   Operator Employees:_____ **Non-Employees:**_____

PART E—ESTIMATED TOTAL COST

$_____

PART F—AMOUNT OF OIL INVOLVED

1. **Estimated Amount of Oil Spilled**
   Barrels Spilled:_____ **Barrels Recovered:**_____
2. **Was there an explosion?**
   ☐ **Yes** ☐ **No**
3. **Was there a fire?**
   ☐ **Yes** ☐ **No**
4. **Was there a rupture?**
   ☐ **Yes** ☐ **No**
5. *** Area Covered by Spill**
   _____ **Feet x** _____ **Feet**
6. *** Depth of Soil Saturation**
   _____ **Inches**
   *** (Attach Sketch)**
7. **Was contaminated soil removed?**
   ☐ **Yes** ☐ **No**

_____	____/____/____	_____	____/____/____
Technician or Inspector	*Date*	*Supervisor*	*Date*

Retention Life of System

5.9.3 PPLP Form 101 Leak/Accident Report, Continued

PPLP Form 101-B Rev. 03/04	**LEAK/ACCIDENT REPORT** *Frequency: When ANY leak or accident occurs*

INSTRUCTIONS: ***Answer Sections G, H or I only if it applies to the particular accident being reported.***

PART G—OCCURRED IN LINE PIPE ***(Check all applicable items.)***

1. Nominal Diameter (inches):_____
2. Wall Thickness (inches):_____
3. SMYS (psi):_____
4. Type Joint: ■ Welded ■ Flanged ■ Threaded ■ Coupled ■ Other
5. Pipe Was: ■ Below Ground ■ Above Ground
6. Maximum Operating Pressure:_____
7. Pressure at Time and Location of Accident (*psig*):_____
8. Had there been a pressure test on the system? ■ Yes ■ No
9. Duration of Test (*hrs*):_____
10. Maximum Test Pressure (*psig*):_____
11. Date of Last Test:_____

PART H—CAUSED BY CORROSION

1. Location of Corrosion:	■ Internal	■ External
2. Facility Coated?	■ Yes	■ No
3. Facility Under Cathodic Protection?	■ Yes	■ No
4. Type of Corrosion?	■ Galvanic	■ Other (*specify*):_____

PART I—CAUSED BY OUTSIDE FORCE

1. ■ Damage by Operator or by Company Contractor
   ■ Damage by Others
   ■ Damage by Natural Forces
   ■ Landslide
   ■ Subsidence
   ■ Washout
   ■ Earthquake
   ■ Mudslide
2. Was damage prevention program in effect?
   ■ Yes ■ No
3. If yes, was the program:
   ■ "one-call" ■ Other:_____
4. Did excavator call?
   ■ Yes ■ No
5. Was the pipeline location temporarily marked?
   ■ Yes ■ No

PART J—ACCOUNT OF ACCIDENT

5.9.4 PAALP Form 701 Record of Training or Drill

PLAINS	1. Division	2. District	3. Jurisdiction ■ DOT ■ EPA ■ OSHA ■ Other:	RECORD OF TRAINING OR DRILL FORM 701

4. Description

a. Type ■ Training ■ Drill	b. Activities	c. Materials Used	d. Attachments to Form
■ Deployment ■ SPCC ■ Emergency Response ■ Tabletop ■ Operator Qualification ■ Technical ■ Other:	■ Audio/Visual Presentation ■ Lecture ■ Role Playing ■ Case Study Analysis ■ Problem Solving Exercise ■ Tours ■ Equipment Demonstration ■ Question & Answer Session ■ Quizzes ■ Hands-on ■ Other:	■ None ■ Handouts ■ Video ■ Slides ■ Other:	■ No ■ Yes In item 4e describe any attachments

e. Subject and Summary	f. Location
	g. Course Hours:

5. Instructor's Name: Company: Date:

6. Participants

Print Name	Signature	Employee No.	Print Name	Signature	Employee No.
1.			13.		
2.			14.		
3.			15.		
4.			16.		
5.			17.		
6.			18.		
7.			19.		
8.			20.		
9.			21.		
10.			22.		
11.			23.		
12.			24.		

Distribution (by email or as noted): DOT except OQ - PHMSA Records Spec; DOT/OQ Coordinator; EPA - Division Regulatory Comp. Spec.; OSHA - Mgr. Training & Comp.; Other - District Office
NOTE: If pen and ink signature required, mail record to appropriate distribution recipient.

RECORD OF TRAINING OR DRILL Covered Task: None Revised: August 2008 Regulatory Citations: See Instructions **FORM 701**

5.9.4 PAALP Form 701 Record of Training or Drill, Continued

Purpose. The Record of Training or Drill is used to document the various training or drills that are conducted in each location.

Preparation. The individuals who are conducting the training or drill will complete this record and distribute as described in the distribution.

Distribution (by email or as noted)**:** DOT except OQ - PHMSA Records Spec; DOT/OQ - Division OQ Coordinator; EPA - Division Regulatory Spec.; OSHA - Mgr. Training & Compliance. Other - District Office NOTE: If pen and ink signature required, mail to the appropriate distribution recipient.

Item #	Item Title	Instructions
1.	Division	Enter the Division where the training or drill was conducted.
2.	District	Enter the District where the training or drill was conducted.
3.	Jurisdiction	Enter a check in the box that indicates what jurisdiction the training or drill was conducted for.
4.	Description	Enter a check in the box for activity that was conducted.
	a. Type	Check box to indicate whether activity was drill or training. Then enter a check in the box(s) describing the type of activity that was conducted.
	b. Activities	Enter a check in the box(s) that apply descr bing how the training or drill was conducted.
	c. Materials Used	Enter a check in the box(s) that apply indicating what material was used in the training or drill.
	d. Attachments	Enter a check in the box indicating attachments to this form. If there are attachments check no, If there are attachments check yes and describe the attachments in 4e.
	e. Subject and Summary	Enter a description of the subject topic and a summary of the knowledge objectives covered in the training or drill.
	f. Location	Enter the name of the location where training or drills were conducted.
	g. Course Hours	Enter the course hours received for the training or drill (the amount of time taken for the training or drill).
5.	Instructor's Name Company. Date.	Enter the name of the instructor presenting the training or drill. Enter the name of the instructor's company. Enter the date the training or drill was conducted.
6.	Participants Print Name Signature Employee No.	Have each participant fill out the following. Each participant will enter their printed name.. Each participant will enter their signature. Each participant will enter their employee number.

5.9.5 Oil Spill Notification Form

NAME OF PERSON MAKING CALL:				
DATE	TIME	PERSON OR AGENCY NOTIFIED	PERSON CONTACTED POSITION	BUSINESS DISCUSSED

SECTION 6

Last Revised: January 31, 2014

SENSITIVE AREAS / RESPONSE TACTICS

SECTION 6

SENSITIVE AREAS / RESPONSE TACTICS, CONTINUED

SECTION 6
SENSITIVE AREAS / RESPONSE TACTICS, CONTINUED

6.1 AREA DESCRIPTION

Site specific maps and response tactics are included in **SECTION 6.10** and **SECTION 6.12**. 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:	West Northwest, 7 mph (according to the November 1998 Climatic Wind Data for the United States, National Climatic Data Center).
Temperature:	The average temperature is 69º.
Tides and Currents:	TIDES: Tides affect nearshore currents. The tide in Santa Barbara Channel is a mixed, simidiurnal type with a usual range of 1.5 to 2.0 meters. The peak tide time difference between the two ends of the Channel is typically one hour with the tide proceeding westward. Expected tidal-induced currents are approximately ten centimeters per second in open portions of the Channel. Constrictions between islands and regions near extensions of land (Point Conception) accelerate tidal currents (SBC, 1984b). CURRENTS: There are four major currents off the California coast. The California Current, the major southeastward flow, extends from Washington and Oregon. Its mean speed is about 15 centimeters per second. This current is found at distances greater than about 120 kilometers off northern and central California, reaches to within a few kilometers of the shore at Point Conception, and generally flows outside the Southern California Bight (Jackson, 1986). The Southern California Bight consists of 100,000 square miles of the Pacific Ocean between Point Conception and Cabo Colnett in Baja, California (and extends west to the inner boundary of the California Current). The California Undercurrent is a subsurface, northward flow. Nearer shore and beneath the California Current are two northward-flowing currents: the Davidson Current (speeds up to 15 to 30 centimeters per second), which flows north of Point Conception, and the Southern California Countercurrent (speeds up to 35 to 40 centimeters per second), which flows northward within the Southern California Bight. The strengths of all these currents vary seasonally and non-seasonally. Nearshore currents vary along the coast in response to variations in coastline orientation, bottom topography, and tides. Because some of the Southern California Countercurrent turns southward at Point Conception, there is a general counter clockwise circulation in the Santa Barbara Channel with westward flows along the mainland and eastward flows along the northern shores of the Channel Islands (Kolpack, 1971; SBC, 1985a; Jackson, 1986). Current speeds generally range from 10 to 20 centimeters per second for the predominant flows (MMS, 1983; SBC, 1985a).
Local Visibility Problems:	Storm surges along the entire California coast generally are small due to the narrow continental shelf and absence of tropical storms and hurricanes. Refer to FIGURE 6.3-3 for more information regarding waves, tsunamis and storm surges.

6.1.2 Physical Geographic Features / Navigation Hazards

PHYSICAL GEOGRAPHIC FEATURES / NAVIGATION HAZARDS	
Bathymetry:	Not Applicable
Beach Types:	Detailed geotechnical studies were conducted for all of PPLP's pipelines in Santa Barbara County by Geotechnical Consultants, Inc., in 1986, 1988 and 1990. Soils vary from sandy material to outcroppings of shale and sandstone. In the pipeline corridors, known landslides were identified and have been avoided or mitigated. Three fault crossings have been designed to mitigate potential fault movement. Detailed geologic assessments of the pipeline corridor has been conducted and recommendations based on the findings of these assessments have been incorporated in the final pipeline alignment and design.
Type of Soil and Terrain:	Characteristic soils include Ayar and Conception along the terraces and Cortina in stream valleys. Sespe and Vaqueros sandstones occur in narrow bands west of the Santa Ynez Fault. An area of sand soils occurs near the southern boundary of the Los Padres National Forest. Refer to SECTION 6.1.3 and FIGURE 6.3-3 for more information.
Buoys, Moorings or other Underwater Structures:	Normal erosion in existing waterways is evident. Construction along the pipeline alignment (including revegetation) will not aggravate or increase the normal amount of erosion or runoff. Water drainage courses have been crossed by trenching across during times of minimal flow. The burial depth is a minimum of four feet below 100-year scour level. Channel and bank contours at major streams and river crossings were restored to preconstruction conditions upon completion of pipeline installation.
Navigational Hazards:	All major road and railroad crossings included U.S. 101, State Highway 166, and all county roads have been made by boring under the road and inserting a steel casing. The one exception to this is Refugio Road which was "Slick Bored" with no casing. Existing substructures such as phone cables, gas company lines, and water lines have been crossed in most cases by trenching underneath. The pipeline has been lowered enough in the immediate area of these facilities to maintain a minimum vertical separation of 12 inches.
Traffic Patterns:	Existing public and private roads can be used for general access to the pipeline corridors. Normal access to the pipeline will take place as needed to test the cathodic protection system, maintain pipeline markers, and inspect mainline block valves. If repairs to the pipeline are necessary, access would occur along the ROW from the nearest existing road.

6.1.3 Segment Descriptions

6.1.3 SEGMENT DESCRIPTIONS
Segment 1: Las Flores Canyon to Gaviota State Park (South Coast)
Segment Description: This 8.0 mile segment parallels Highway 101 along the south coast between Exxon's Las Flores Canyon processing facility to the eastern border of Gaviota State Park (Celeron Alignment Sheets CE001 and CE002). The route is located north of Highway 101 and follows an existing powerline across coastal terraces and deeply incised canyons formed by coastal streams. Soils are derived primarily from Monterey shales, Quaternary marine terrace deposits, and alluvium in stream bottoms. Characteristic soils include Ayar and Conception along the terraces and Cortina in stream valleys. Soils do not exhibit chemical problems but have physical revegetation constraints associated with steep slopes and high coarse fragments. Slopes range from 20 to 50% with short steep areas occurring at the approaches to stream crossings. Geohazards in this segment include steep gradients which may create hazards for holding the trench backfill. Landslide hazard exists on both sides of Cañada del Refugio. Potential for extensive channel scour exists at Refugio Creek. Grazed annual grassland is the most common plant community found within this segment; coastal scrub coast live oak woodland and riparian vegetation are also crossed by the route within this segment. Coastal scrub is the only native shrub community crossed in this segment. Scattered sycamore is found in several of the drainage crossings.
Annual Grassland: Within this segment, annual grassland covers rolling uplands and gradual slopes with deep alluvial soils. Along the pipeline route the composition of this community is typical of heavily grazed annual grassland within the region. It is dominated by a mixture of fast-growing introduced annual grasses, including wild oats (Avena barbata and A. fatua), bromes (Bromus mollis, B. diandrus and others), fescues (festuca spp.) and ryes (Hordeum spp.). Also common in this community are introduced annual herbs such as black mustard (Brassica nigra) on dry slopes, and milk thistle (Silybum marianum) and poison hemlock (Conium maculatum) in moist sites.
Coastal Scrub: Within this segment coastal scrub occurs mainly on east and west-facing slopes of stream canyons. Where it is crossed by the pipeline route, the composition of this community is typical for the region. It is dominated by California sagebrush (Artemisia californica) and black sage (Salvia mellifera), with coyote brush (Baccharis pilularis), giant wild rye (Elymus condensatus), poison oak (Toxicodendron diversilobum), coast goldenbush (Haploppapus squarrosus) and lemonadeberry (Rhus integrifolia) occurring as less common associates. The regionally rare Plummer's baccharis (Baccharis pummerae), a plant of limited distribution according to the California Native Plant Society [Smith and York, 1984], occurs within this community with the pipeline right-of-way on the west-facing slope of Tajiguas Canyon.

6.1.3 Segment Descriptions

6.1.3 SEGMENT DESCRIPTIONS, CONTINUED
Segment 1: Las Flores Canyon to Gaviota State Park (South Coast), Continued
Coast Live Oak Woodland: A small patch of this community is crossed by the pipeline route in the vicinity of San Onofre Canyon. Scattered mature coast live oak (Ouerus agrifolia) trees occupy the coastal terrace upland and gradual slopes of San Onofre Canyon. The understory is open and is composed of heavily grazed annual grassland.
Riparian Vegetation: Riparian vegetation varies within this segment from coastal scrub species to well-developed riparian woodland. Trees found on the streambanks are limited to coast live oaks in Cañada de San Onofre. Stream crossing sites in most other canyons with trees (e.g., Venadito Canyon, Arroyo Quemado, Arroyo Hondo, Guillermo Canyon and others) support, in addition to coast live oak, one or more of the following species: western sycamore, white alder, black cottonwood and willows. Well-developed riparian woodland occurs at the Refugio Canyon crossing site. This community includes coast live oak, western sycamore, white alder, and willows, with a dense understory of shrubs, herbs and vines.
Segment 2: Gaviota State Park
Segment Description: This 3.2 mile segment enters Gaviota State Park approximately 0.5 mile east of Highway 101 and Cañada de la Gaviota. It proceeds westerly across the grassy shoulder of the coastal terrace before dropping into Cañada de Gaviota where it crosses Highway 101 and Gaviota Creek immediately downstream of the Cal-Trans reststop. From the Gaviota Creek crossing it continues up a broad spur ridge to the crest and westerly boundary of Gaviota State Park. At the ridgecrest, the route turn north and generally follows the ridge line until it drops down towards the west fork of Gaviota Creek near the Las Cruces Adobe and crosses under the highway at the Highway 101 and 1 intersection. Along the ridgetop the ROW follows the ridge line and crosses out of the park and onto Hollister Ranch for approximately 0.5 mile and then crosses back into the park before descending toward Las Cruces. Slopes range from 20-40%. Geohazards in this segment include slope failures on side slopes and a crossing of the Santa Ynez fault. Soils along the route are derived from Monterey shales, Quaternary marine deposits, Rincon claystone, Alegria sandstone, and Gaviota siltstone. Sespe and Vaqueros sandstones occur in narrow bands west of the Santa Ynez Fault. The soils are deep and well developed on the gentle terraces and very shallow or non-existent on the steep sedimentary rock outcrops. The shallow soil areas will require special treatment for successful revegetation. The deeper soils on the flatter slopes will readily revegetate. The dominant vegetation types along the ROW include annual grassland, coastal sage scrub, mixed chaparral, oak woodlands, and riparian habitats. The dominant habitat types are described below.

6.1.3 Segment Descriptions

6.1.3 SEGMENT DESCRIPTIONS, CONTINUED
Segment 2: Gaviota State Park, Continued
Annual Grassland: Annual Grasslands cover the rolling uplands and slopes supporting developed soil profiles. Species composition is dominated by wild oats, brome, fescue and rye grasses. Broadleaf species include black mustard, wild radish, and milk thistle which tend to invade sites after heavy grazing or disturbance to the grass cover. Much of the grassland along the ridgetop in the park is a result of a fire break cleared in the park in 1983.
Coastal Sage Scrub: The hill above the willow thicket at the Gaviota Creek crossing is covered with a coastal sage scrub/grassland community dominated by California sagebrush, coyote brush, black sage, coast goldenbush, and wild mustard.
Segment 3: Las Cruces Ranch to Santa Rosa Road (Santa Ynez Mountains)
Segment Description: This 8 mile segment follows the west side of Highway 101 through the Santa Ynez Mountains. It crosses long expanses of grassland across the Las Cruces Ranch and steep walled canyons that form part of the Nojoqui Creek watershed. North of Moonshine Creek, the route crosses ridges with rock outcroppings (Alignment Sheets CE003 and CE004). Soils are derived primarily from Sacate sandstone, Montery Shale, Rincon claystone, Matillija sandstone, Espada and Knoxville shales. Soils are generally deep except across Blanco limestones where large rock outcrops occur. Soils do not exhibit chemical problems for revegetation. Slopes range from 20 to 50%. Geohazards along this segment include two areas of moderate to steep gradients which may create hazards for holding the trench backfill. Steep slopes occur above Nojoqui Creek south of where the route approaches the crossing of Moonshine Canyon, and again near Milepost 20 on Las Cruces Ranch property near Nojoqui Creek. The route also passes near several slide areas and across two moderately-sized landslides near its approach to the Santa Ynez River (see Geotechnical Associates, 1985, Sheet 5). Within this segment, vegetation communities include annual grassland, oak woodland and savanna. Also found within this segment are smaller areas of coastal scrub, mixed chaparral and riparian vegetation.
Coastal Scrub: This community occurs mainly on south and east-facing slopes within the northern three-fourths of this segment. The dominant shrubs are black sage, California sagebrush, coyote brush and California buckwheat. In some sites, species typical of mixed chaparral, such as cnamise (Adenostoma fasciculatum) and buckbrush (Ceanothus cuneatus) occur within this community. South of Moonshine Canyon, the route follows a hogback ridge (for about 150 feet) with steep sides and rocky outcrops where an unusually diverse assemblage of native herbs occurs within the coastal scrub. Native annuals and perennials, including California fuchsia (Zauschneria californica), amriposa lily (Calochortus sp.), owls clover (Orthocarous sp.), pennyroyal (Monardella hypoleuca), rock phacelia (Phacelia imbricata), rock lettuce (Dualeya lanceolata), elongate buckwheat (Eriogonum elongatum), cudweed aster (Corethrogyne filaginifolia), bedstraw (Galium angustifolium), and penstemon (Penstemon, sp.) are among species observed in November. Ferns usually found in more shaded, protected sites occur here in rock crevices: these include maidenhair fern (Adiantum sp.) and goldback fern (Pityrogramma triangularis). The persistence of the native flora at this site is probably related to its inaccessibility to cattle, which graze freely over the broader, more gradual slopes immediately below. Unusual soil characteristics also may influence species composition here.

6.1.3 Segment Descriptions

6.1.3 SEGMENT DESCRIPTIONS, CONTINUED
Segment 3: Las Cruces Ranch to Santa Rosa Road (Santa Ynez Mountains), Continued
Mixed Chaparral: A few small patches of mixed chaparral occur on south-facing slopes and ridgetops. These are dominated by buckbrush, chamise, and greenbark ceanothus. This community makes up about one percent of the total cover within this segment.
Oak Woodland and Savannah: Oak woodland dominated by large, single-trunked coast live oak trees covers most north-facing slopes and a broad rocky upland north of Moonshine Canyon. On north-facing slopes, the trees form a continuous or nearly continuous canopy. This community is sometimes referred to as oak forest. Common associates in the shaded understory include California coffeeberry (Rhamnus californica), toyon (Heteromeles arputifolia), poison oak, bracken fern (Pterigium aquilinum) and wild blackberry. The regionally rare Plummer's baccharis occurs within the oak woodland just north of Las Cruces Ranch. On rolling uplands and more gradual slopes, often with an eastern or southern exposure, the oaks are more widely spaced, probably a result of drier soil conditions. Areas where individual trees are scattered, with spaces between their canopies, are called oak savannah. Within this segment oak savannah is dominated by coast live or valley oaks, or both. The understory of this community typically consists of introduced herbs and grasses characteristic of annual grassland.
Riparian Vegetation: Riparian vegetation at most steam crossing sites within this segment includes coast live oaks trees. Well-developed riparian woodland occurs at two crossing sites, including Moonshine Canyon and an unnamed tributary of Nojoqui Creek. This vegetation includes western sycamore trees, and willows, in addition to coast live oaks. The understory contains shrubs, herbs, and vines, including California coffeeberry, wild blackberry, poison oak, coyote brush, wild gooseberry (Ribes sp.) and wild rose (Rosa californica). The regionally rare Plummer's baccharis occurs at one stream crossing.
Annual Grassland: Grassland dominated by introduced annuals covers most of this segment south of Moonshine Canyon and occurs in scattered patches throughout the remainder. The species composition of this community is typical for the region. The most common grasses are species of wild oats, bromes, fescues, and ryes. Characteristic herbs include red-stemmed filaree (Erodium cicutarium), bur clover (Medicago polymorpha), black mustard, milk thistle, and poison hemlock. The broad expanses of grassland in the southern part of this segment appear to be under moderate grazing pressure at present, whereas those to the north are heavily to very heavily grazed.

6.1.3 Segment Descriptions

6.1.3 SEGMENT DESCRIPTIONS, CONTINUED
Segment 4: Santa Rosa Road to Sisquoc Pump Station (Purisima and Solomon Hills)
Segment Description: This 23-mile segment crosses the Santa Ynez River west of Buellton and continues north across the Purisima and Solomon Hills, it crosses the northern edge of the San Rafael Mountains and eastern edge of the Santa Maria Valley. It crosses the Sisquoc River near the Sisquoc Winery and then continues west to the Sisquoc Pump Station at the southern end of Santa Maria Canyon (Alignment sheets CE005 through CE010). The terrain is generally gently rolling grassland and oak savannah woodlands. Soils are derived from alluvium at the Santa Ynez and Sisquoc Rivers and along Zaca Creek. Other soils are formed from terrace deposits, Paso Robles gravel, silt and claystone, Careaga sands, Monterey shale and Sisquoc claystone. Slopes range from 20 to 40%. Geohazards include flood plain soils subject to liquefaction during major earthquakes, areas of soil "pop out", creep and landslides. A-soil pop out is a small slump that has rotated outwardly but has not moved downhill. Two moderate-sized landslides occur in Careaga Sands about 1 mile north of Buellton. Steep slope gradients (30% or greater) occur at about 12 locations. An old landslide area is crossed by the pipeline on the south bank of the Sisquoc River. Native vegetation crossed by the rouge within this segment includes coastal scrub, oak woodland and savannah, riparian vegetation and annual grassland.
Coastal Scrub: Small patches of coastal scrub occur within the Purisima and Solomon Hills, where this community is found on gradual slopes, often with a southern exposure. The dominant shrubs include California sagebrush, black sage and purple sage (Salvia leucophylla), with coyote brush and California buckwheat as subdominants.
Oak Woodland and Savannah: Oak woodland and savannah are the predominant native plant communities found within this segment. Oak woodland, dominated by coast live oak, or a mixture of coast live and valley oaks, covers gradually inclined north-facing slopes within the Purisima and Solomon Hills. Tree density within this community varies, but generally the trees are spaced so that most canopies of individuals do not overlap. The understory is composed mainly of annual grasses and herbs. Valley oak savannah occupies the low ground of valley bottoms and extends over the lower, gently slopes of the Purisima and Solomon Hills. Large, widely spaced valley oak trees dominate this community. Most of the trees appear old, based on diameter at breast height. Trees greater than 20 inches dbh are typical and most stands contain trees more or less evenly sized indicating that regeneration occurs infrequently. Annual grassland species make up the understory of this community. Some agricultural lands within this segment contain valley oaks that have been allowed to remain in the fields.

6.1.3 Segment Descriptions

6.1.3 SEGMENT DESCRIPTIONS, CONTINUED
Segment 4: Santa Rosa Road to Sisquoc Pump Station (Purisima and Solomon Hills), Continued
Riparian Vegetation: Two major stream crossings occur within this segment, those of the Santa Ynez and Sisquoc Rivers. Riparian woodland occurs only at the Santa Ynez River floodplain crossing site. Dense thickets of shrubby willows dominate vegetation within the floodplain. Newly deposited sediments beneath and near the willows support few other plants. The active channel of the Santa Ynez River is barren. Riparian trees found in low density within and near the crossing site include box elder (Acer negundo) and tree-sized willows. Mature trees occur on the margins of a perennial pond just south of the crossing site. Stands of native and introduced herbs and grasses occur along the northern margin of the active stream channel. Plants found here include species of Chenopodium, Epilobium, and Rumex. The floodplain of the Sisquoc River contains barren sections and areas dominated by strands of weedy herbs and grasses typical of intermittent riverbeds. A few clumps of shrubby willows occur near the banks.
Annual Grassland: Grasslands crossed by the route within this segment does not differ substantially from the annual grassland found within Segment 3, described above.
Agricultural Land: The ROW crosses an agricultural field south of the Santa Ynez River crossing. The field was fallow during the field reconnaissance but appeared to have been planted in lima beans. This route will remove less native vegetation and require less efforts in revegetation, since the road and bean field can be used for the construction ROW.
Segment 5: Sisquoc Pump Station to Buckhorn Canyon (Southern Sierra Madre Mountains)
Segment Description: This 12-mile segment follows Santa Marian Canyon after leaving the Sisquoc Pump Station, it then heads northeast towards Tepusquet Road. The route crosses relatively gentle terrain until it reaches the crest of the Sierra Madres where it descends steep slopes approaching Suey Canyon and Buckhorn Canyon. Soils are derived primarily from Monterey shales, undifferentiated sandstone and shale of Cretaceous age. Soils exhibit revegetation constraints associated with steep slopes, coarse fragment and rock. Areas of sepertine soils occur near the route in this segment but are not apparent in surface out-croppings crossed by the route. Slopes range from 20-60% with steep areas occurring primarily on north and east facing mountain ridges. Geohazards in this segment include: • Landslides near the Sisquoc Pump Station and in Suey Canyon; • Steep gradients in Santa Marian Canyon, Suey Canyon and near Buckhorn Canyon. Native plant communities crossed by the pipeline route within this segment include coastal scrub, mixed chaparral, oak woodland, riparian vegetation and annual grassland.

6.1.3 Segment Descriptions

6.1.3 SEGMENT DESCRIPTIONS, CONTINUED
Segment 5: Sisquoc Pump Station to Buckhorn Canyon (Southern Sierra Madre Mountains), Continued
Coastal Scrub: Coastal scrub occurs in patches on gradual to steep slopes, most with southern or eastern exposures. The dominant shrubs include California sagebrush and one or both of black sage and purple sage. California buchwheat and silver lupine (Lupinus albifrons) are less common associates. Coastal scrub dominants also occur within mixed chaparral within this segment.
Mixed Chaparral: Mixed chaparral covers some steep slopes and rocky ridges within this segment. It is most abundant along the pipeline route on the ridges and slopes immediately to the south and north of Suey Canyon. The species composition of this community varies from site to site. Several steep slopes, including those at both ends of Suey Canyon, are covered with nearly pure stands of buck brush. Elsewhere, this community includes a mixture of chamise, mountain mahogany, mazanita, toyon, and species more typical of coastal scrub, such as California sagebrush, black sage, California buckwheat and bush monkeyflower.
Oak Woodland: Most oak woodland within this segment is dominated by coast live oak. Blue oak woodland, found within this segment north of Suey Canyon and on the slopes above Buckhorn Canyon, is described under Segment 6. Coast live oak woodland varies in density from scattered trees that make up 30 to 60 percent of the total cover, to dense oak forest with a nearly continuous oak canopy that approaches 100 percent cover. The longest stretch of oak forest within this segment is found within a one-mile section where the pipeline passes through Suey Canyon. Here the trees include many large old specimens and fewer smaller shrubby trees 15 to 20 feet in height. The understory of coast live oak woodland consists mainly of annual grassland and coastal scrub species including in Suey Canyon: coyote brush, poison oak and California coffeeberry. Patches of less dense coast live oak woodland occur along the route north and south of Suey Canyon.
Riparian Vegetation: Riparian vegetation occurs at stream crossing sites within Suey Canyon and Buckhorn Canyon. Within Suey Canyon streambank woodland is composed of primarily coast live oak trees with a few western sycamore and valley oaks. The understory is dense and includes: large willow shrubs, coyote brush, California coffeeberry, wild blackberry and poison oak. The riparian woodland of Buckhorn Canyon is more open and includes scattered coast live oak, western sycamore, and Fremont cottonwood trees and large shrubby willows.

6.1.3 Segment Descriptions

6.1.3 SEGMENT DESCRIPTIONS, CONTINUED
Segment 5: Sisquoc Pump Station to Buckhorn Canyon (Southern Sierra Madre Mountains), Continued
Annual Grassland: This community occurs on slopes above the Sisquoc River and is typical for the region as described under Segment 3 above.
Segment 6: Buckhorn Canyon to Cuyama River (Northern Sierra Madre Mountains)
Segment Description: This 12-mile segment follows the northern edge of the Sierra Madre Mountains south of Highway 166 through the Los Padres National Forest. The route crosses rugged terrain across the crests of the Sierra Madre Mountains. It descends the mountains near Sierra Madre Ridge Road and enters the Cuyama River Valley near Gypsum Canyon. Soils are derived primarily from sandstones including Franciscan sandstone, Espada or Knoxville sandstone and undifferentiated and unnamed cretaceous sandstone and shales. County soils mapping is not available for the portion of the route across the Los Padres National Forest. Soils exhibit revegetation constraints associated with steep slopes, coarse fragment and rock. Areas of serpentine soils occur near the route in this segment but are not crossed by the route. An area of sand soils occurs near the southern boundary of the Los Padres National Forest. Slopes range from 20-60% with steep areas occurring primarily on north and east facing mountain ridges. Geohazards in this segment include landslides east of Buckhorn Canyon near Pine Canyon and at the Cuyama River crossing and steep slopes. The route also crosses two inactive fault zones (the Riconada and the South Cuyama Fault). Native plant communities crossed by the pipeline route within this segment include coastal scrub, mixed chaparral, blue oak woodland, riparian vegetation and annual grassland.
Coastal Scrub: Coastal scrub occurs on steep to gradual slopes mainly with southern and eastern exposures. The species composition of this community varies from site to site. Many sites are dominated by purple sage and California Sagebrush with one or more of black sage, chaparral yucca, and California buckwheat occurring as less common associates. A few sites are dominated by black sage and California sagebrush. On several slopes near the Cuyama River, this community is made up of purple sage, California sagebrush and chaparral yucca. Shrubs of this community occur as associates within mixed chaparral.

6.1.3 Segment Descriptions

6.1.3 SEGMENT DESCRIPTIONS, CONTINUED
Segment 6: Buckhorn Canyon to Cuyama River (Northern Sierra Madre Mountains), Continued
Mixed Chaparral: Several different associations of mixed chaparral are found within Segment 6. This community typically occurs on rocky slopes and ridges and dominates most of a rocky tableland near the southern boundary of Los Padres National Forest. Dominant species of mixed chaparral include chamise, toyon, buckbrush, and ribbonwood (Adenostoma sparsifolium). Less common species include scrub oak (Quercus dumosa), chaparral whitehorn (Ceanotnus leucodermis), and bigberry manzanitia (Arctostaphylos glauca). Coastal scrub species such as black sage, California buckwheat, California sagebrush and chaparral yucca also occur as associates. Yerba santa (Eridictyon crassifolium) and rubber rabbitbrush (Chrysothamnus nauseosus) are common along roadsides and in other disturbed sites within or near areas dominated by mixed chaparral. Many chaparral shrubs produce seeds that require heat treatment to induce germination; others possess fire-resistant root crowns (burls) that sprout back after fire. Distinctive associations include a mixture of chamise and black sage on a steep south-facing slope of Clear Creek Canyon, an association dominated by patches of chamise and ribbonwood, scattered bigberry manzanita, black sage, and a few coast live oak. The latter community covers a sandstone tableland near the southern boundary of Los Padres National Forest and extends south from there onto the Hutchings property.
Blue Oak Woodland: Most north-facing slopes and rolling uplands with well-developed soils support blue oak woodland. This community is dominated by blue oaks 20 to 30 feet in height. These trees rarely form a closed canopy, although they often occur in dense stands. Several age classes appear to be represented in most areas since the trunk diameter range from about 3 to 24 inches dbh. This size range includes many intermediates suggesting that blue oaks reproduce and regenerate relatively frequently within the region. The understory of this community is made up almost exclusively of annual grassland which is grazed by cattle. Grazing pressure appears to be moderate within Los Padres National Forest and somewhat heavier south of the Forest, as evidenced by overall species diversity and the presence of a greater number of native species within the Forest boundaries. Scattered open stands of purple sage and California sagebrush occur in association with blue oak woodland within this segment.

6.1.3 Segment Descriptions

6.1.3 SEGMENT DESCRIPTIONS, CONTINUED
Segment 6: Buckhorn Canyon to Cuyama River (Northern Sierra Madre Mountains), Continued
Riparian Vegetation: Two distinctive forms of riparian vegetation occur within this segment. Riparian woodland typical of intermittent streams of the area occurs at the Clear Creek crossing site. This vegetation includes coast live oak, western sycamore and Fremont cottonwood trees which form a narrow bank along the streambanks. A few coast live oaks extend upslope from the stream. Riparian vegetation within the floodplain of the Cuyama River is a shrub-dominated community composed of a mixture of Great Basin and salt-tolerant wetland species. At the crossing site the floodplain terrace is occupied by Great Basin sagebrush (Artemisia tridentata) shrubs that reach 9 feet in height, rubber rabbitbrush and arrow week (Pluchea sericea). Scattered shrubby willows and mule fat (Baccharis glutinosa) line the banks of the active stream channel. Trees are absent from the floodplain at this site.
Annual Grassland: Open patches of annual grassland occur within blue oak woodland and on the rounded toes of slopes covered with coastal sage and mixed chaparral. This community is not abundant within Segment 6 species composition is similar to annual grassland within other route segments. The dominant species are introduced annual grasses (e.g., Bromus, Avena, and Festuca species). Species diversity, especially with regard to native herbs, is greatest where grazing pressure is light to moderate.
24-INCH OUTSIDE DIAMETER COASTAL PIPELINE (Constructed in 1990)
Segment 1 — (b) (7)(F), (b) (3) at Refugio Creek (South Coast) This 2.6 mile segment of the 24-inch outside diameter Coastal pipeline parallels U.S. Highway 101 along the south coast between Exxon's Las Flores Canyon consolidated oil and gas processing facility and the (b) (7)(F), (b) (3). The pipeline is located north of U.S. 101 and generally follows existing powerline and/or gas pipeline rights-of-way across coastal terraces and deeply incised canyons formed by coastal streams.
Segment 2 — Refugio Creek (b) (7)(F), (b) (3) to Gaviota Pump Station This 7.9 mile segment of the 24-inch outside diameter Coastal pipeline extends west from (b) (7)(F), (b) (3), east of Refugio Creek, to its terminus at PAALP's Gaviota Pump Station. This portion of the pipeline is north of U.S. 101 and follows, where possible, existing utility service corridors across the coastal canyons, Cañada's and natural drainage's as well as coastal terraces.

6.1.3 Segment Descriptions

6.1.3 SEGMENT DESCRIPTIONS, CONTINUED
30-INCH OUTSIDE DIAMETER MAINLINE PIPELINE (Constructed in 1986)
Segment 3 — (b) (7)(F), (b) (3) (Gaviota Creek) This 2.3 mile segment extends west from (b) (7)(F), (b) (3) located east of Gaviota Creek and U.S. Highway 101. It enters Gaviota State Park approximately 0.5 miles east of U.S. 101 and extends westerly across the gently sloping coastal terrace and Cañada del Barro before dropping into the Cañada de la Gaviota drainage area. It then crosses U.S. Highway 101 and Gaviota Creek (Cañada de la Gaviota) immediately south of the U.S. Highway 101 "Caltrans" rest stop areas.
Segment 4 — Gaviota Creek (b) (7)(F), (b) (3) to Santa Ynez River (b) (7)(F), (b) (3) This 12.5 mile segment extends west and north from the Gaviota Creek (b) (7)(F), (b) (3) The pipeline continues west up a broad spur ridge to the ridge crest and the westerly boundary of Gaviota State Park. The pipeline traverses narrow ridge-crests, crosses out of the Park and onto Hollister Ranch for approximately ½ mile, and then crosses back into the Park before descending toward the west fork of Gaviota Creek (Betty Creek). The ROW passes west of the new Vista del Mar School and Las Cruces Adobe and then crosses beneath Highway 1 west of its intersection with U.S. Highway 101. The pipeline continues northward along the west side of U.S. 101 through the Santa Ynez Mountains. It crosses long expanses of grasslands across the Las Cruces Ranch and steep walled canyons that form part of the Nojoqui Creek watershed. North of Moonshine Creek, the route crosses ridges with rock out-croppings. This segment terminates at (b) (7)(F), (b) (3), approximately 0.3 miles south of the PAALP pipeline crossing beneath the Santa Ynez River.
Segment 5 — Santa Ynez River (b) (7)(F), (b) (3) Sisquoc River (b) (7)(F), (b) (3) (Purisima and Solomon Hills) This 23-mile segment crosses the Santa Ynez River west and south of Buellton and continues north across the Purisima and Solomon Hills. It crosses the northern edge of the San Rafael Mountains and the eastern edge of the Santa Maria Valley. This segment terminates the Sisquoc River (b) (7)(F), (b) (3) approximately 1.0 miles south of the pipeline crossing beneath the Sisquoc River.
Segment 6—Sisquoc River (b) (7)(F), (b) (3) (Sisquoc River Valley) This 4.3 mile segment crosses the Sisquoc River west of the Rancho Sisquoc Winery. It continues north across the River Valley, traverses moderately to severely sloping foothills at Kelly Canyon and extends west to the Sisquoc Pump Station at the southern end of Santa Maria Canyon.

6.1.3 Segment Descriptions

6.1.3 SEGMENT DESCRIPTIONS, CONTINUED
30-INCH OUTSIDE DIAMETER MAINLINE PIPELINE (Constructed in 1986), Continued
Segment 7 — Sisquoc Pump Station to Cuyama River (b) (7)(F), (b) (3) This 24-mile segment follows Santa Maria Canyon after leaving the Sisquoc Pump Station. It then extends northeast towards Tepusquet Road. The route crosses relatively gentle terrain until it reaches the crest of the Sierra Madre Mountains where it traverses steep slopes approaching Suey Canyon and Buckhorn Canyon. The pipeline follows the northern edge of the Sierra Madre Mountains south of State Highway 166 through the Los Padres National Forest. The route crosses rugged terrain across the crests of the Sierra Madre Mountains, descends the mountains, crosses the Sierra Madre Ridge Road, and enters the Cuyama River Valley near Gypsum Canyon. At the Cuyama River crossing the pipeline exits Santa Barbara County and enters San Luis Obispo County.
Pipelines — Las Flores to Cuyama River
PAALP has installed a pipeline system within Santa Barbara County extending from Las Flores Canyon to the Cuyama River and to PAALP's Gaviota Pump Station. **FIGURE 1-4** shows the overall configuration of the pipeline corridors. This section discusses the design and operating information relative to the pipeline and pump stations.
General: From Las Flores to the Cuyama River crossing, the pipeline is 72.5 miles in length with outside diameters of 30-inches (62 miles) and 24-inches (10.5 miles—coastal pipeline). All pipe meets or exceeds API specifications. The pipeline system has been built to meet or exceed all applicable codes, specifications, and requirements set forth by federal DOT regulations as well as those of state and local agencies having jurisdiction over the project. All pipeline valves and fittings have been designed to ANSI Class 600 or ANSI Class 150 pressure ratings, as appropriate and required. The elevational profile of the PAALP system in Santa Barbara County is provided at the end of this section.
Pipeline Materials: All pipe is welded steel (i.e., electric resistance weld or double submerged arc) and all girth welds have been checked by non-destructive testing (i.e., x-ray and hydrostatic testing). Pipe has been ultrasonically mill-inspected for defects. All pipe has an external protective coating to help prevent and control external corrosion. All material used in the construction of the Plains All American Pipeline meets or exceeds all DOT regulatory requirements, specifications, and/or codes (see also **APPENDIX C**).

6.1.3 Segment Descriptions

6.1.3 SEGMENT DESCRIPTIONS, CONTINUED
Pipelines — Las Flores to Cuyama River, Continued
Soils and Geology Along Alignment: Detailed geotechnical studies were conducted for all of PAALP's pipelines in Santa Barbara County by Geotechnical Consultants, Inc., in 1986, 1988 and 1990. Soils vary from sandy material to outcroppings of shale and sandstone. In the pipeline corridors, known landslides were identified and have been avoided or mitigated. Three fault crossings have been designed to mitigate potential fault movement. Detailed geologic assessments of the pipeline corridor has been conducted and recommendations based on the findings of these assessments have been incorporated in the final pipeline alignment and design. Normal erosion in existing waterways is evident. Construction along the pipeline alignment (including revegetation) will not aggravate or increase the normal amount of erosion or runoff.
Sensitive Biological Resources Along Alignment: Vegetation, habitat, and wildlife vary along the pipeline corridors. A detailed discussion of these resources is presented in **SECTION 6.**
Crossings and Substructures: All major road and railroad crossings included U.S. 101, State Highway 166, and all county roads have been made by boring under the road and inserting a steel casing. The one exception to this is Refugio Road which was "Slick Bored" with no casing. Existing substructures such as phone cables, gas company lines, and water lines have been crossed in most cases by trenching underneath. The pipeline has been lowered enough in the immediate area of these facilities to maintain a minimum vertical separation of 12 inches. Water drainage courses have been crossed by trenching across during times of minimal flow. The burial depth is a minimum of four feet below 100-year scour level. Channel and bank contours at major streams and river crossings were restored to preconstruction conditions upon completion of pipeline installation.
Access: Existing public and private roads can be used for general access to the pipeline corridors. Normal access to the pipeline will take place as needed to test the cathodic protection system, maintain pipeline markers, and inspect mainline block valves. If repairs to the pipeline are necessary, access would occur along the ROW from the nearest existing road.

6.1.3 Segment Descriptions

6.1.3 SEGMENT DESCRIPTIONS, CONTINUED
Pipelines — Las Flores to Cuyama River, Continued
Environmental Design Consideration
Valves: The pipeline has a series of valves placed at strategic locations along its alignment. Due to the method of pipeline installation and the planned maintenance (i.e., cleaning) around the valve areas, the valve system will not be affected by brush fires. Brush and debris will be removed on an as needed basis (as determined by routine maintenance inspections) from the area within the security fencing around each motor operated valve site.
Pigging and Pipeline Inspection: The pipeline was designed to allow for the routine passage of cleaning scrapers or "pigs" to maintain and monitor the condition of the pipe. Scraper pigs are used to clean the internal walls of the pipe by removing waxy or other build-ups. Instrumented pigs can be utilized to inspect and identify corrosion spots, pitting, and other structural irregularities.
Pipeline Markers, Valve and ROW Maintenance: Ground and aerial markers are utilized to delineate the pipeline corridor or route for patrolling and observation. Aerial makers have mileage indicators so that if necessary "an incident" can be pinpointed accurately and rapidly. Pipeline markers and valves will be checked routinely. Valves will be operated, cycled, and lubricated six month intervals (2 times per year, not to exceed 7 ½ month intervals). Markers and valves will be maintained as necessary.
Patrolling and Underground Service Alert: The pipeline is patrolled by aircraft as required by DOT for leakage or activity such as digging, trenching, or grading near the pipeline or in the ROW. Such activities are reported to the Oil Movement Dispatchers at the Operations Control Center, the field personnel are dispatched to observe the activity. As a practical matter PAALP routinely patrols its pipeline rights-of-way via fixed wing aircraft on an approximate weekly schedule. PAALP subscribes to and is a member of Underground Service Alert (USA) systems of northern California (Kern and San Luis Obispo Counties) and Southern California (Los Angeles, San Bernardino, Riverside and Santa Barbara Counties). The USA communications center enables excavators to call a single source to determine the location of underground facilities in the area prior to digging.

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 forested wetlands. Major vegetative types include: scrubs, shrubs, evergreen trees, and hardwood forested woodlands • Birds and mammals use swamps during feeding and breeding activities	• 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 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	• No cleanup recommended under light conditions • Under moderate to heavy accumulations, to prevent chronic oil pollution of surrounding areas placement of sorbent 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 6.10**.

FIGURE 6.3-1 - SENSITIVE AREA PROTECTION IMPLEMENTATION SEQUENCE

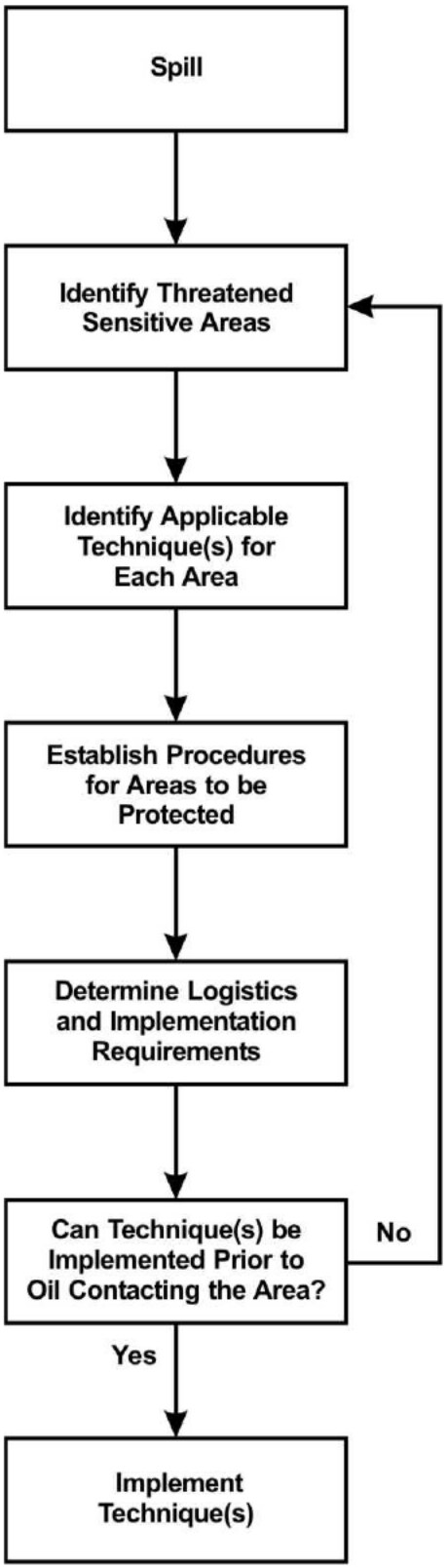


FIGURE 6.3-2 - SUMMARY OF SHORELINE AND TERRESTRIAL CLEANUP TECHNIQUES

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 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.	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 containment booms per system 1 oil recovery device per system Personnel 8-10 workers per system	• Substrates, riprap, and solid man-made structures • Oil stranded onshore • Floating oil on shallow intertidal areas	• Can impact clean downgradient areas • Will displace many surface organisms if present • Sediments 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

TECHNIQUE	DESCRIPTION	RECOMMENDED EQUIPMENT	APPLICABILITY	POTENTIAL 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 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.)	Dispersants are used to reduce the oil/water interfacial tension thereby decreasing the 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.	Dispersants Boat or aircraft	• Water bodies with sufficient depth and volume for mixing and 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	• Use in shallow water could affect benthic resources • May adversely impact 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.)

FIGURE 6.3-3 - SITE-SPECIFIC ENVIRONMENTAL PROTECTION

FIGURE 6.3-3 - SITE-SPECIFIC ENVIRONMENTAL PROTECTION
Sensitive/Protected Resources or Features at River, Stream and Natural Drainage Crossings which are Potentially at Risk
This section provides descriptions of unique and sensitive/protected biological resources and features associated with the rivers, streams and natural drainages along or near the PAALP pipeline system that could be affected by an oil spill. To the extent required, it also addresses terrestrial resources that are located on the coastal terrace areas between natural drainages.
In the event of a crude oil spill, the Environmental Team Supervisor will be responsible for ensuring that, to the extent practical, all measures are taken to protect sensitive cultural or biological resources from impacts associated with spill containment, spill clean up and site restoration activities. Relevant segments of the appropriate U.S.G.S. Topographic Quadrangle Maps have been individually reproduced for the PAALP crossing at major river, streams and natural drainages in Santa Barbara County and are included in the following pages. For reference, full size topographic maps which depict all natural drainages crossed by the PAALP pipeline system are readily available at PAALP's Bakersfield and Santa Maria offices. Complete topographic map sets are also maintained by PAALP in its emergency response trailers which are staged at Las Flores Canyon and at the PAALP Santa Maria District office.
Minimizing Impacts to Sensitive Resources
The PAALP system, including its pipelines and pump stations, traverse or are in close proximity to a variety of sensitive habitat areas and sensitive resources. This is especially true in those areas where the potential exists to impact California's marine and near shore resources. Sensitive/protected resources will be addressed in this section of this plan. These issues are also addressed in Sections 303 and 304 of the Clean Seas RRM (ENSR 1994), which is incorporated herein by reference. Every effort will be made to minimize damages to sensitive resources during all response phases including mobilization, containment, material storage, handling and transportation, and post event cleanup. Marine resources potentially at risk have been identified and their presence will be considered during the planning efforts associated with spill response.

FIGURE 6.3-3 - SITE-SPECIFIC ENVIRONMENTAL PROTECTION

FIGURE 6.3-3 - SITE-SPECIFIC ENVIRONMENTAL PROTECTION, CONTINUED
Minimizing Impacts to Sensitive Resources, Continued
Nearly the entire coast line between Cañada del Corral and Cañada de la Gaviota is occupied by State Beaches and Parks (El Capitan, Refugio and Gaviota) thus not only biological resources but also resources related to public use of the coastal areas should be considered. As such, all activities associated with an PAALP oil spill that reaches, or has the potential to reach, marine waters will be closely coordinated and planned in conjunction with State Parks personnel as well as other responding agency personnel.
Considerations for minimizing impacts to sensitive resources in the terrestrial, shore, near shore and marine environments include: recognition, identification and location; adequate planning and implementation of response activities, education for the response personnel and protection. The sensitivity of terrestrial and beach related marine resources has been addressed and PAALP personnel are aware of their presence relative to PAALP's facilities. PAALP is committed to coordinating all response efforts with the appropriate agency personnel such as OSPR, CDFG, State Parks and the County of Santa Barbara to ensure that, to the extent practicable and feasible, impacts to such resources are minimized. Pursuant to the guidelines provided in the Clean Seas RRM (Section 304), a net environmental benefit assessment (NEBA) will be completed prior to the initiation of any marine, shoreline or terrestrial spill response operation. The NEBA will include all aspects of response activities as they relate to potential resource impacts.
Education and training will be provided to all response personnel to ensure that they are cognizant of the resources at risk, where such resources may be encountered and that every effort to minimize impacts is required. Resources that have been identified and located within a response area will be discretely mapped and, to the extent feasible, will be marked (flagged or fenced) such that they are provided every possible protection. This may not always be feasible but will be given every consideration during the response efforts.
Oil Spill Response Techniques
The Company's pump station facilities and associated pipeline systems are located on, cross, or lie adjacent to a variety of different terrain that support a wide range of biological habitats. Along the 30-inch mainline these include Gaviota Creek, the Santa Ynez River, Sisquoc and Cuyama Rivers, numerous small intermittent or ephemeral streams, and different terrestrial habitats.

FIGURE 6.3-3 - SITE-SPECIFIC ENVIRONMENTAL PROTECTION

FIGURE 6.3-3 - SITE-SPECIFIC ENVIRONMENTAL PROTECTION, CONTINUED
Oil Spill Response Techniques, Continued
Within the Coastal Zone, the 24-inch coastal pipeline and feeder line are adjacent to or traverse numerous drainage's that outfall into the Pacific Ocean between 0.5 and 1.5 miles from the respective crossings. These drainages include: Cañada del Corral, Venadito Creek, Refugio Creek, Arroyo's Quemado and Hondo, Cañada del Molino, San Onofre Creek, Zorrillas Creek, and Cañada del Leon. The significance of sensitive resources associated with these habitats, as well as the minor drainage's not listed here and the coastal terraces, are discussed elsewhere in this document.
SECTION 7.1 discusses oil spill equipment available to the Company in the event of a spill and **SECTION 6** presents various site-specific response techniques utilizing the equipment which may, depending on site specific conditions, be employed in the unlikely event of an accidental oil spill at a pump station or along the pipeline routes.
Oil spill response techniques will be addressed on a site-specific basis given the terrain and surrounding habitat in the vicinity of the spill. The techniques to be employed will be decided by the PAALP Incident Commander in conjunction with other regulatory agency personnel based upon these factors, as well as consideration of any physical, environmental, or safety constraints. Incorporated herein by reference are Section 304 and Appendices A and B of the Clean Seas RMM (ENSR 1994). This document addresses all phases of spill response activities in terrestrial, near shore and marine environments.
Note: If an oil spill occurs, there is a possibility of fire due to ignition sources present at the oil spill site. Extreme caution should be used. Potential ignition sources (e.g., engines, flares, cigarettes) should be eliminated. In addition, adequate and appropriate safety provisions and protection should be used to alleviate and/or minimize, to the greatest extent possible, worker exposure to potentially harmful fumes.
Marine Spill Containment
In the unlikely event of an oil spill at any of the numerous creeks and streams between Las Flores (Cañada del Corral), and Gaviota (Gaviota Creek), oil could potentially reach marine environments off of El Capitan, Refugio or Gaviota State Beaches (see also **SECTION 3** and **APPENDIX C.1.12** of this Plan). Oil could be contained at the ocean outfalls of these drainage's. An earthen dam constructed by heavy equipment with or without pipes (to allow water flow) could be installed at the mouth of the creek. If oil reached the ocean, a containment boom could also be placed immediately offshore against the current to minimize the spread of oil to other near shore areas. Clean Seas would respond appropriately under this scenario.

FIGURE 6.3-3 - SITE-SPECIFIC ENVIRONMENTAL PROTECTION

FIGURE 6.3-3 - SITE-SPECIFIC ENVIRONMENTAL PROTECTION, CONTINUED
Tides, Waves, Tsunamis, and Storm Surges
Refer to **SECTION 6.1.1** for hdyrographic and climatic conditions.
Four types of large waves occur off the California coast, and in the larger bays and harbors. There are tsunamis, storm surges, storm swells, and wind waves. Storm swells and wind waves build on each other; they will be discussed as one in this report.
Tsunamis are long gravity waves generated by sudden movements of the ocean bottom during submarine earthquakes, landslides, or volcanic activity. Tsunamis generally are not noticeable, and their effects are nearly negligible over deep, offshore waters because their surface elevation is changed little during their passage. Potential for formation of damaging waves is related to slope of the bottom along the coastline, with steep slopes having a much higher potential than gentle slopes. The Peru-Chile Trench and the Aleutian Trench are the regions primarily responsible for the tsunamis potentially damaging to California (Houston and Garcia, 1978; Houston, 1980). Because of the configuration of the California coastline, the effects of tsunamis differ between the central and northern coast and the southern coast of California. Effects are greater north of Point Conception, as the coastline is more directly oriented toward tsunamis originating in the Aleutian Trench (Houston, 1980). Heights are predicted to be 1.3 to 2.0 meters per 100-year recurrence and 1.6 to 2.6 meters per 500-year recurrence (Houston, 1980).
Storm surge is the rise in mean water level that results from stress of the wind blowing over the water and atmospheric pressure. Unlike wind waves, including those generated during storms, storm surge is a phenomenon with such a low period that a peak in the surge can last for a day or more. Its magnitude depends on wind stress and width as well as topography of the continental shelf.
Storm surges along the entire California coast generally are small due to the narrow continental shelf and absence of tropical storms and hurricanes. Typical surge heights on the California coast are 0.3 to 1.0 meters. The topographic continental shelf is relatively narrow from Point Conception to San Diego, and the coastline is directed east and southeast. Correspondingly, storm surges are weak. Just north of Point Conception the predicted height for a 100-year event is 1.3 to 2.0 meters and for a 500-year event is 2.3 to 3.0 meters; for the coastline near San Francisco, the predicted heights are 1.3 to 2.0 meters from a 100-year event and 2.67 to 3.3 meters for a 500-year event (Williams et al., 1981).

FIGURE 6.3-3 - SITE-SPECIFIC ENVIRONMENTAL PROTECTION

FIGURE 6.3-3 - SITE-SPECIFIC ENVIRONMENTAL PROTECTION, CONTINUED
Tides, Waves, Tsunamis, and Storm Surges, Continued
Significant wind wave heights exceed 3.0 meters at least 15 percent of the time during winter months in areas south of Point Conception. Under extreme storm conditions, swells with periods of 22 seconds can reach a height of 4.7 meters (Walker et al., 1984), with shorter period wind waves superimposed upon the swells. Wind waves in Santa Barbara Channel are either locally generated or enter the Channel between the offshore Channel Islands (SBC, 1985a). Wave heights and periods range from one to five meters and 8 to 16 seconds, with averages of 1.0, meters and 12 seconds, respectively (SBC 1985a).
No sizeable islands exist along the northern coast from Point Conception to San Francisco to dampen the long period swell. The highest five-year wave is predicted to be about eight meters and the highest ten-year wave about ten meters (Seymour, 1983).
Tides affect near shore currents. The tide in Santa Barbara Channel is a mixed, semidiurnal type with a usual range of 1.5 to 2.0 meters. The peak tide time difference between the two ends of the Channel is typically one hour with the tide proceeding westward. Expected tidal-induced currents are approximately ten centimeters per second in open portions of the Channel. Constrictions between islands and regions near extensions of land (Point Conception) accelerate tidal currents (SBC, 1984b).
Clean-Up
In the event of an oil spill reaching the ocean, the Company, Clean Seas, Inc., and/or its clean-up contractors would utilize appropriate and effective oil spill response and clean-up techniques to minimize to the greatest extent feasible impacts to the beach, intertidal, and near shore areas. Protection of marine life habitat would be given high priority. The Company would contact and coordinate with the appropriate regulatory agencies to assure that the most effective clean-up techniques are used. For more information on wildlife protection, see **SECTION 6.5** of this Plan.
Marine clean-up procedures consist primarily of the use of booms and skimmers, sorbents, chemical dispersants, and collecting agents. If marine clean-up operations become necessary, the Company will rely on Clean Seas, Inc., and possibly other available contractors to provide equipment and manpower necessary for containment and clean-up. If warranted, the County's Area Oil and Gas Industry Emergency Response Plan could be activated and additional resources/manpower would be available to the Company from other participating Oil and Gas Companies.

FIGURE 6.3-3 - SITE-SPECIFIC ENVIRONMENTAL PROTECTION

FIGURE 6.3-3 - SITE-SPECIFIC ENVIRONMENTAL PROTECTION, CONTINUED
Adequacy of Shoreline Protection Strategies
To confirm and validate the adequacy of the shoreline protection strategies outlined in **FIGURE 6.3-4** to protect the environmentally sensitive sites associated with the four (4) worst case discharges along the pipeline routes in Santa Barbara County described in **APPENDIX C.1.12** and **SECTION 6.14**, the Company will conduct tabletop exercises to test the response protection strategies for these major water crossing sites. The exercises will be conducted in accordance with PHMSA and OSPR guidelines including the Area Contingency Plan. Exercises will be conducted using Plains response resources or a combination of Company resources and those of one of its contracted Oil Spill Response Organizations (OSROs).
Many areas within and along the shorelines of these major waterways (Canada del Refugio, Canada de la Gaviota, Santa Ynez River, and Sisquoc River) support aquatic and near shore species that are potentially at risk, particularly at the lagoon environments at the mouth of these waterways. Regulatory protection of threatened and endangered species, such as the Tidewater Goby, California Red-Legged Frog, and the Southwestern Pond Turtle, prevent the conduct of the shoreline protection strategies outlined in the plan along many sections of these waterways. Exercises will be planned and conducted to exercise the protection strategies to the greatest extent practical without entering areas known to be restricted for the protection of threatened or endangered species. Where exercise activities are allowed, they will be conducted in a way to protect all aquatic, flora, and fauna species to the greatest extent practicable.
It is anticipated that exercise activities will generally not be permitted at any location downstream of the pipeline crossing of Cañada de la Gaviota or the lagoon areas at the mouth of any waterway. Exercises will be conducted to test the protection strategies given in the plan in the areas that do not have restricted access. The response protection strategies for these waterways are similar; therefore, proficiencies gained through exercises conducted in permissible areas will be applicable to areas that cannot be exercised.

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS

Containment and Clean-Up

Containment and Clean-up at Major Stream CrossingsTechniques used to treat an oil spill in biologically sensitive areas will be of necessity determined during a spill episode. Response techniques used on a spill will depend on site-specific conditions at the time of the spill. The physical characteristics of the oil; viscosity, volatile fraction, temperature and volume; and seasonal stream flows will determine the extent of the spill and dictate what techniques are most appropriate. The following discussion provides general guidelines for clean-up in each sensitive stream crossing. The discussions provided below are representative of the types of considerations that would be given to a spill into any of the coastal streams and drainages between Cañada's del Corral and de la Gaviota. All spills require proper notification of involved parties and documentation of each event. See **SECTION 3** and **SECTION 5** for a discussion of these topics.

Cañada del Corral

The PAALP crosses Cañada del Corral within Las Flores Canyon approximately 1.3 miles upstream of its outfall at the Pacific Ocean. The crossing is accessible on all weather roadways via U.S. Highway 101, Calle Real (Highway 101 service road) and the network of roads within the Exxon Las Flores Canyon Consolidated Processing facilities. This intermittent stream is protected by a "sluice gate" closure system downstream of the PAALP crossing. This gate can be operated remotely by Exxon in an emergency situation, or can be closed manually by PAALP or others, if appropriate. The stream crossing is accessible on all weather roads via access to Exxon's Las Flores Canyon facility. Cañada del Corral supports vegetation typical of riparian areas. Primary species are oak and sycamore woodlands with an abundance of willow thickets interspersed throughout the drainage. Sensitive/protected resources known or expected to occur at, near or downstream of the PAALP crossing are listed below.

SENSITIVE SPECIES IN THE VICINITY OF CAÑADA DEL CORRAL

Birds	Plant	Aquatic	Animals	Other
Grasshopper Sparrow Golden Eagle Yellow Breasted Chat Bank Swallow Ferruginous Hawk Coopers Hawk Loggerhead Shr ke Purple Martin Swainson's Hawk Yellow Warbler Brown Pelican	Plummer's Baccharis (Found on ridge west of creek - not in or nearstream channel) Horestail Rush Catalina Mariposa Lily (Found on ridge west of creek - not in or near crossing)	California Red-Legged Frog Western Pond Turtle	N/A	N/A

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED
Cañada del Corral, Continued
Culturally sensitive areas along and adjacent to Cañada del Corral have been identified and will be considered when evaluating response, containment and cleanup techniques to be utilized in the event of a spill. Marine and near shore resources potentially at risk are addressed in the Clean Seas RRM, as are shoreline and terrestrial responses (ENSR, 1994). There is no vehicular access to the mouth of Cañada del Corral and its surrounding shoreline area. The nearest point from which vehicles may access the mouth of the stream is from El Capitan State Beach Park, which is approximately 2.0 miles east of its outfall at the Pacific Ocean. Vehicular access is also available from Refugio State Beach Park which is about 2.0 miles west of the stream outfall. Access to the area immediately above the outfall area may be gained via the all weather bike path between these two State Beach Parks.
If a spill occurred from the Las Flores Pump Station or the 24-inch Coastal Pipeline in Cañada del Corral Exxon would be immediately notified and requested to shut the barrier gate, thereby protecting its downstream reaches. Alternatively, as mentioned in **FIGURE 6.3-3**, this gate could also be closed manually on-site by PAALP personnel in the event of an emergency. Notifications and potential evacuations from El Capitan State Beach Park and the surrounding areas would be made pursuant to **SECTION 3** of this Plan and to provisions of the Emergency Response Plan (**SECTION 6.12**). Clean Seas, Inc. would be notified immediately of the emergency event for the purposes of setting up spill containment (protective booms) to protect near shore resources as a contingency in the event oil reached the ocean outfall. The following procedures would be followed in an effort to stop oil flow from reaching ocean outfall.
Low Flow or No Flow — If the spill occurs during low or no flow conditions the oil may be contained near the spill site since the oil will move downstream slowly and probably begin to solidify as it cools. 1. Oil can be contained in the channel using a damming device (see **FIGURE 6.2-2**). A sandbag berm or importing and dumping earthen material to contain the oil are options to be considered. Another alternative is using equipment such as backhoes and angle dozers to form a containment dike. The least intrusive yet effective technique is recommended. 2. Oil can be collected using a vacuum pump truck. Sorbents can be used to soak up remaining oil. 3. Removing oiled vegetation is generally not recommended since it will increase erosion potential in the stream. If removal is deemed necessary, vegetation should be cut at ground level to maintain root structure support in the soil and possibly encourage stump sprouting. 4. Oily substrates should be removed to an approved landfill. The site should be recontoured and armored with similar substrate (e.g., sand, gravel, cobble) to prevent erosion. 5. Revegetation should follow recommendations outlined in **SECTION 6.16** of this Plan.

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Cañada del Corral, Continued

High Flow — If the spill occurs during periods of high flow it is likely possible that, it to would reach resources downstream (if the sluice gate is not closed or does not work) including areas adjacent to El Capitan State Beach Park. Therefore, containment as close to the spill site as possible (with priority given to protecting the beach, the outfall, and riparian resources) should be attempted.

1. Protect the outfall by blocking the culvert beneath U.S. Highway 101. The culvert can be blocked with plywood or sandbags (see **FIGURE 6.2-5** and **6.2-6**). If water is flowing, the flow must be maintained. A filter fence or boom could be installed on the downstream side of the culvert to strain and contain any escaping oil.
   Underflow dams or a series of underflow dams can be constructed with or without pipes (depending on flows) above the outfall within the creek channel.
2. Protect riparian areas by directing oil to one area for containment. The riparian vegetation will provide natural entrainment of the oil and will slow its progress toward downstream resources. Oil can be directed to one part of the stream channel by using diversion dikes or booms (see **FIGURE 6.2-8**). These diversion structures can be constructed of any effective material such as plywood planks, straw dikes, sand bags, plastic tarps, or sorbent rolls. If necessary, heavy equipment may be utilized to construct structures large enough to contain a large spill. If large containment berms are constructed they must contain underflow structures to allow water movement (see **FIGURE 6.2-7**).
3. Protect the beach by blocking the existing flow at the mouth of the Creek. One alternative would be to construct a sand or sandbag dam. This should help contain oil (see **FIGURE 6.2-7**). The structure should be high enough to prevent splash over. Another alternative would be to use equipment to form a containment basin or sump. If water is flowing, an underflow dam can be used to maintain flow (see **FIGURE 6.2-7**).
4. Contained oil can be removed with vacuum pump trucks. Gentle water flushing may be necessary to move oil trapped in vegetation to containment areas. Care must be exercised to prevent use of excessive water pressure that could kill vegetation or remove bottom sediments.
5. Depending on the extent of the spill, it may be necessary or aesthetically desirable to remove oiled vegetation. Removing vegetation is generally not advised; however, if it is deemed necessary, care should be exercised to cut vegetation at ground or water level while carefully collecting released oil. Willows will resprout if the roots are left intact.
   Heavily oiled trees should not be removed unless they pose serious barriers to clean-up. They can be cleaned by hand or by using gentle hydroblasting or steam cleaning.
6. Small volumes of oil can be removed using commercial sorbent materials (such as sorbent rolls or curtains) or other materials such as feathers, woodchips, cloth or paper.
7. In-stream structures should be removed following clean-up. If stream substrates are removed they should be replaced with similar material. For example, if rocks or cobbles are removed they should be replaced to provide channel armoring and protection from future erosion.
8. Restoration should follow guidelines outlined in **SECTION 6.16**.

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Cañada del Venadito

The Cañada del Venadito crossing is located about 700 feet north of the U.S. Highway 101 culvert system beneath the highway. The crossing is readily accessible via U.S. Highway 101, the Calle Real service road and Venadito Ranch road. Venadito is an intermittent stream which is normally dry throughout the year. It supports riparian species such as willow, oak, elderberry and sycamore. Sensitive/protected resources known or suspected to occur at, near or downstream of the PAALP crossing are listed below.

SENSITIVE SPECIES IN THE VICINITY OF CAÑADA DEL VENADITO

Birds	Plants	Aquatic	Animals	Other
Golden Eagle Brown Pelican	Plummer's Baccharis (Found on ridge east and west of creek crossing) Cliff Aster (Found on sloping coasta terrace east of creek - not in or near crossing)	N/A	San Diego Desert Woodrat American Badger	N/A

Marine and near shore resources potentially at risk are addressed in the Clean Seas RRM (ENSR 1994).

There is no vehicular access to the mouth of Cañada del Venadito and its surrounding shoreline area. The nearest point from which vehicles may access to the mouth of the stream is from El Capitan State Beach Park, which is approximately 2.5 miles east of its outfall at the Pacific Ocean. Vehicular access is also available from Refugio State Beach Park which is about 1.5 miles west of the streams outfall. Access to the area immediately above the outfall area may be gained via the all weather bike path between these two State Beach parks.

Cañada del Refugio

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Cañada del Refugio, Continued

The Cañada del Refugio crossing occurs north of the U.S. Highway 101 overpass which is accessible from the Refugio Road off-ramps on U.S. Highway 101. Refugio is a perennial stream with a very large watershed and several sensitive resources downstream of the crossing. The pipeline crosses the stream in a relatively insensitive area as riparian vegetation is lacking, the crossing is rip-rapped. Refugio, upstream and to some extent downstream of the PAALP crossing, supports riparian vegetation consisting of oak, alder, willow and sycamore trees. Sensitive/protected resources known or expected to occur at, near or downstream of the PAALP crossing are listed below.

SENSITIVE SPECIES IN THE VICINITY OF CAÑADA DEL REFUGIO

Birds	Plant	Aquatic	Animals	Other
Golden Eagle Peregrin Falcon Ferruginous Hawk Osprey Brown Pelican	Cliff Aster (Species not specifically identified here but it is fairly common and could be present)	California Red-Legged Frog Southwestern Pond Turtle Tidewater Goby	San Diego Desert Woodrat	Monarch Butterfly

Marine and near shore resources potentially at risk are addressed in the Clean Seas RRM (ENSR, 1994).

The Lagoon and shoreline areas of Cañada del Refugio are accessible to vehicular traffic via the main entrance to Refugio State Beach Park.

If a spill occurred at the Refugio Creek Crossing it would be possible to use equipment at the crossing location since the crossing itself is not sensitive.

State Park personnel and Clean Seas, Inc. would be notified immediately and contingency measures to protect the beach would be initiated simultaneously with the deployment of onsite containment equipment, as necessary.

The following methods would be employed in the event of a spill at Refugio Creek:

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Cañada del Refugio, Continued

Low Flow or No Flow — If the spill occurs during low or no flow conditions the oil may be contained near the spill site since the oil will move downstream slowly, be entrained by vegetation, and probably begin to solidify as it cools.

1. Oil can be contained in the channel using a damming devices (see **FIGURE 6.2-2**). A sandbag berm or importing and dumping earthen material to contain the oil are options to be considered. Another alternative is using equipment such as backhoes and angle dozers to form a containment dike. The least intrusive yet effective technique is recommended.
2. Oil can be collected using a vacuum pump truck. Sorbents can be used to soak up remaining oil.
3. Removing oiled vegetation is generally not recommended since it may increase erosion potential in the stream. If removal is deemed necessary, vegetation should be cut at ground level to maintain root structure support in the soil and possibly encourage stump sprouting.
4. Oily substrates should be removed to an approved landfill. The site should be recontoured and armored with similar substrate (e.g., sand, gravel, cobble) to prevent erosion.
5. Revegetation should follow recommendations outlined in **SECTION 6.16** of this Plan.

High Flow — If the spill occurs during periods of high flow it is likely to reach resources downstream including Refugio State Beach Park. Therefore, containment as close to the spill site as possible (with priority given to protecting the beach, the lagoon, riparian resources downstream of the crossing and near shore resources at the ocean outfall) should be attempted.

1. Protect the beach by blocking flow at the outfall into the Ocean. One alternative would be to construct a sandbag or sand dam. This should help contain oil in the lagoon (see **FIGURE 6.2-7**). The structure should be high enough to prevent splash over. Another alternative would be to use equipment to form a containment basin or sump. If water is flowing, an underflow dam can be used to maintain flow (see **FIGURE 6.2-7**).
2. Protect the lagoon by blocking the bridge inlet under the beach park access road south of U.S. Highway 101. The inlet could be blocked with plywood or sandbags (see **FIGURES 6.2-5** and **6.2-6**). If water is flowing, the flow must be maintained. A filter fence or boom could be installed beyond the riparian vegetation on the downstream side of the bridge to strain and contain any escaping oil.
   Underflow dams or a series of underflow dams may also be constructed with or without pipes (depending on flows) above the lagoon within the creek channel below the spill.
3. Protect downstream riparian resources by directing oil to one area for containment. The riparian vegetation will provide natural entrainment of the oil and will slow its progress toward downstream resources. Oil can be directed to one part of the stream channel by using diversion dikes or booms (see **FIGURE 6.2-8**). These diversion structures can be constructed of any effective material such as plywood planks, straw dikes, sand bags, plastic tarps, or sorbent rolls. If necessary, heavy equipment may be utilized to construct structures large enough to contain a large spill. If large containment berms are constructed they must contain underflow structures to allow water movement (see **FIGURE 6.2-7**).
4. Contained oil can be removed with skimming equipment (e.g., within the lagoon) or by vacuum pump trucks. Gentle water flushing may be necessary to move oil trapped in vegetation to containment areas. Care must be exercised to prevent use of excessive water pressure that could kill vegetation or remove bottom sediments.
5. Depending on the extent of the spill, it may be necessary or aesthetically desirable to remove oiled vegetation. Removing vegetation is generally not advised; however, if it is deemed necessary, care should be exercised to cut vegetation at ground or water level while carefully collecting released oil. Willows will resprout if the roots are left intact.
   Heavily oiled trees should not be removed unless they pose serious barriers to clean-up. They can be cleaned by hand or by using gentle hydroblasting or steam cleaning.
6. Small volumes of oil can be removed using commercial sorbent materials (such as sorbent rolls or curtains) or other materials such as feathers, woodchips, cloth or paper.
7. In-stream structures should be removed following clean-up. If stream substrates are removed they should be replaced with similar material. For example, if rocks or cobbles are removed they should be replaced to provide channel armoring and protection from future erosion.
8. Restoration should follow guidelines outlined in **SECTION 6.16**.

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Tajiguas Creek

The Tajiguas Creek crossing occurs about 300 feet north of the U.S. Highway 101 culvert system beneath the highway and is accessible off of U.S. Highway 101, the Calle Real service road and the Tijiguas Ranch road. Tajiguas is an intermittent stream with major riparian vegetation comprised of willow trees, rushes, sedges and cattail. However, north of the pipeline crossing and south of the highway, oak and sycamore trees are present. Sensitive/protected resources know or expected to occur at, ear or downstream of the PAALP crossing are listed below.

SENSITIVE SPECIES IN THE VICINITY OF TAJIGUAS CREEK

Birds	Plant	Aquatic	Animals	Other
Peregrin Falcon Merlin	Plummer's Baccharis (Species has been documented on west facing terrace slope east of crossing) Cliff Aster (Species notspecifically identified here but it is fairly common and could be present)	California Red-Legged Frog	N/A	N/A

Marine and near shore resources potentially at risk are addressed in the Clean Seas RRM (ENSR, 1994).

The ocean outfall of the Tajiguas Creek is accessible to vehicular traffic via an all weather road that exits U.S. Highway 101 immediately west of the creek's highway undercrossing.

Arroyo Quemado

The PAALP crosses Arroyo Quemado, an intermittent drainage, about 200 feet north of the U.S. Highway culvert system beneath the highway. The crossing is accessible via U.S. Highway 101, the Calle Real service road and the Baron Ranch road. Major vegetation in the vicinity of the pipeline crossing consists of willow, sycamore and elderberry trees; lemonadeberry; horesetail; sedges and cattails. Sensitive/protected resources known or expected to occur at, near or downstream of the PAALP crossing are listed below.

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Arroyo Quemado, Continued

SENSITIVE SPECIES IN THE VICINITY OF ARROYO QUEMADO

Birds	Plant	Aquatic	Animals	Other
Golden Eagle	N/A	California Red-Legged Frog	San Diego Desert Woodrat	Monarch Butterfly
Yellow Breasted Chat		Tidewater Goby	American Badger	Two Striped Garter Snake

Arroyo Quemado's outfall at the Ocean forms a lagoon-like feature which may support fresh or brackish water resources. Marine and near shore resources potentially at risk are addressed in the Clean Seas RRM (ENSR, 1994).

Shoreline accessibility to the mouth of Arroyo Quemado is available via the Arroyo Quemado ranch access road off of U.S. Highway 101 which is immediately west of the streams highway undercrossing.

If a spill occurred in Arroyo Quemado hand techniques may be more appropriate and feasible than the use of equipment. Space is very constrained and limited on either side of the crossing therefore construction of containment basins or staging equipment will be moderately difficult. Since the crossing is immediately upstream of the highway culvert, a culvert blocking technique (see **FIGURE 6.2-6**) would contain the oil at or near the crossing, aid in clean-up and protect the beach and downstream resources. In the event of a spill at Arroyo Quemado, Clean Seas, Inc., would be immediately notified and requested to provide contingency spill containment at the ocean outfall to protect near shore resources in the event the spill reached the ocean. As indicated in **SECTION 3**, State Parks personnel would also be immediately notified, as would residents of the Quemado community located immediately west of the creek outfall at the ocean. (See also **SECTION 3** of this plan for notifications).

The following techniques would be employed, in whole or in part, should an oil spill occur at Arroyo Quemado:

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Arroyo Quemado, Continued

Low Flow or No Flow — If the spill occurs during low or no flow conditions the oil may be contained near the spill site since the oil will move downstream slowly and probably begin to solidify as it cools.

1. Oil can be contained in the channel using a damming device (see **FIGURE 6.2-2**) possibly at the Highway 101 culvert inlet opening. A sandbag berm or importing and dumping earthen material to contain the oil are also options to be considered. Another alternative is using equipment such as backhoes and angle dozers to form a containment dike. The least intrusive yet effective technique is recommended.
2. Oil can be collected using a vacuum pump truck. Sorbents can be used to soak up remaining oil.
3. Removing oiled vegetation is generally not recommended since it will increase erosion potential in the stream. If removal is deemed necessary, vegetation should be cut at ground level to maintain root structure support in the soil and possibly encourage stump sprouting.
4. Oily substrates should be removed to an approved landfill. The site should be recontoured and armored with similar substrate (e.g., sand, gravel, cobble) to prevent erosion.
5. Revegetation should follow recommendations outlined in **SECTION 6.16** of this Plan.

High Flow — If the spill occurs during periods of high flow it is likely to reach resources downstream including beach areas at the ocean outfall. Therefore, containment as close to the spill site as possible with priority given to protecting the beach, the lagoon, and near shore resources should be attempted.

1. Protect the beach by blocking the existing stream channel at the lagoon/mouth of Arroyo Quemado. One alternative would be to construct a sand berm or sandbag dam. This should help contain oil in the lagoon (see **FIGURE 6.2-7**). The structure should be high enough to prevent splash over. Another alternative would be to use equipment to form a containment basin or sump. If water is flowing, an underflow dam can be used to maintain flow (see **FIGURE 6.2-7**).
2. Protect the lagoon by blocking either the U.S. Highway 101 bridge or the railroad tressle. The bridges may be blocked with plywood, sandbags (see **FIGURES 6.2-5** and **6.2-6**), or by booming. If water is flowing, the flow must be maintained. A filter fence or boom could be installed on the downstream side of the bridges to strain and contain any escaping oil or as indicated in Number 1 above an underflow dam could be constructed.
   Underflow dams or a series of underflow dams can be constructed with or without pipes (depending on flows) above the lagoon within the creek channel below the spill.
3. Protect downstream riparian resources by directing oil to one area for containment. The riparian vegetation will provide natural entrainment of the oil and will slow its progress toward downstream resources. Oil can be directed to one part of the stream channel by using diversion dikes or booms (see **FIGURE 6.2-8**). These diversion structures can be constructed of any effective material such as plywood planks, straw dikes, sand bags, plastic tarps, or sorbent rolls. If necessary, heavy equipment may be utilized to construct structures large enough to contain a large spill. If large containment berms are constructed they must contain underflow structures to allow water movement (see **FIGURE 6.2-7**).
4. Contained oil can be removed with vacuum pump trucks. Gentle water flushing may be necessary to move oil trapped in vegetation to containment areas. Care must be exercised to prevent use of excessive water pressure that could kill vegetation or remove bottom sediments.
5. Depending on the extent of the spill, it may be necessary or aesthetically desirable to remove oiled vegetation. Removing vegetation is generally not advised; however, if it is deemed necessary, care should be exercised to cut vegetation at ground or water level while carefully collecting released oil. Willows will resprout if the roots are left intact.
   Heavily oiled trees should not be removed unless they pose serious barriers to clean-up. They can be cleaned by hand or by using gentle hydroblasting or steam cleaning.
6. Small volumes of oil can be removed using commercial sorbent materials (such as sorbent rolls or curtains) or other materials such as feathers, woodchips, cloth or paper.
7. In-stream structures should be removed following clean-up. If stream substrates are removed they should be replaced with similar material. For example, if rocks or cobbles are removed they should be replaced to provide channel armoring and protection from future erosion.
8. Restoration should follow guidelines outlined in **SECTION 6.16**.

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Arroyo Hondo

The Arroyo Hondo crossing occurs immediately north of the Highway 101 bridge over the Cañada and is accessible via U.S. Highway 101, and along a private ranch road. The pipeline crosses Arroyo Hondo at a narrow point in the channel immediately above the highway culvert. The crossing supports riparian vegetation such as willow, western sycamore, white alder, California bay laurel, blackberry and mugwort. Sensitive/protected resources known or expected to occur at, near or downstream of the PAALP crossing are listed below.

SENSITIVE SPECIES IN THE VICINITY OF ARROYO HONDO

Birds	Plant	Aquatic	Animals	Other
Perigrin Falcon Brown Pelican	Hoffmann's Nightshade	California Red-Legged Frog Tidewater Goby Coast Range Newt	San Diego Desert Woodrat	Monarch Butterfly

Marine and near shore resources potentially at risk are addressed in the Clean Seas RRM (ENSR, 1994).

Shoreline access is limited for the ocean outfall area at Arroyo Hondo. Ample parking at the Arroyo Hondo scenic overview on U.S. Highway 101 is available. From this parking area, access to the shoreline is available via existing trails.

If a spill occurred in Arroyo Hondo hand techniques may be preferable to using equipment. Ample space is available on either side of the crossing for construction of containment basins or staging equipment. Since the crossing is immediately upstream of the highway culvert, a culvert blocking technique (see **FIGURE 6.2-6**) would contain the oil at or near the crossing, aid in clean-up and protect the beach. In the event of a spill at Arroyo Hondo, Clean Seas, Inc., would be immediately notified and requested to provide contingency spill containment at the ocean outfall to protect near shore resources in the event the spill reached the ocean. As indicated in **SECTION 3**, State Parks personnel would also be immediately notified.

The following techniques would be employed, in whole or in part, should an oil spill occur at Arroyo Hondo:

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Arroyo Hondo, Continued

Low Flow or No Flow — If the spill occurs during low or no flow conditions the oil may be contained near the spill site since the oil will move downstream slowly and probably begin to solidify as it cools.

1. Oil can be contained in the channel using a damming device (see **FIGURE 6.2-2**). A sandbag berm or importing and dumping earthen material to contain the oil are also options to be considered. Another alternative is using equipment such as backhoes and angle dozers to form a containment dike. The least intrusive yet effective technique is recommended.
2. Oil can be collected using a vacuum pump truck. Sorbents can be used to soak up remaining oil.
3. Removing oiled vegetation is generally not recommended since it will increase erosion potential in the stream. If removal is deemed necessary, vegetation should be cut at ground level to maintain root structure support in the soil and possibly encourage stump sprouting.
4. Oily substrates should be removed to an approved landfill. The site should be recontoured and armored with similar substrate (e.g., sand, gravel, cobble) to prevent erosion.
5. Revegetation should follow recommendations outlined in **SECTION 6.16** of this Plan.

High Flow — If the spill occurs during periods of high flow it is likely to reach resources downstream including beach areas at the ocean outfall. Therefore, containment as close to the spill site as possible with priority given to protecting the beach, the lagoon, and near shore resources should be attempted.

1. Protect the beach by blocking the existing stream channel at the lagoon/mouth of Arroyo Hondo. One alternative would be to construct a sand berm or sandbag dam. This should help contain oil in the lagoon (see **FIGURE 6.2-7**). The structure should be high enough to prevent splash over. Another alternative would be to use equipment to form a containment basin or sump. If water is flowing, an underflow dam can be used to maintain flow (see **FIGURE 6.2-7**).
2. Protect the lagoon by blocking the U.S. Highway 101 road culvert. The culvert can be blocked with plywood or sandbags (see **FIGURES 6.2-5** and **6.2-6**). If water is flowing, the flow must be maintained. A filter fence or boom could be installed on the downstream side of the culvert to strain and contain any escaping oil. The old Highway 101 bridge and the railroad tressle may also present alternative locations for installing blocking and/or booming devices.
   Underflow dams or a series of underflow dams can be constructed with or without pipes (depending on flows) above the lagoon within the creek channel below the spill.
3. Protect downstream riparian resources by directing oil to one area for containment. The riparian vegetation will provide natural entrainment of the oil and will slow its progress toward downstream resources. Oil can be directed to one part of the stream channel by using diversion dikes or booms (see **FIGURE 6.2-8**). These diversion structures can be constructed of any effective material such as plywood planks, straw dikes, sand bags, plastic tarps, or sorbent rolls. If necessary, heavy equipment may be utilized to construct structures large enough to contain a large spill. If large containment berms are constructed they must contain underflow structures to allow water movement (see **FIGURE 6.2-7**).
4. Contained oil can be removed with vacuum pump trucks. Gentle water flushing may be necessary to move oil trapped in vegetation to containment areas. Care must be exercised to prevent use of excessive water pressure that could kill vegetation or remove bottom sediments.
5. Depending on the extent of the spill, it may be necessary or aesthetically desirable to remove oiled vegetation. Removing vegetation is generally not advised; however, if it is deemed necessary, care should be exercised to cut vegetation at ground or water level while carefully collecting released oil. Willows will resprout if the roots are left intact.
   Heavily oiled trees should not be removed unless they pose serious barriers to clean-up. They can be cleaned by hand or by using gentle hydroblasting or steam cleaning.
6. Small volumes of oil can be removed using commercial sorbent materials (such as sorbent rolls or curtains) or other materials such as feathers, woodchips, cloth or paper.
7. In-stream structures should be removed following clean-up. If stream substrates are removed they should be replaced with similar material. For example, if rocks or cobbles are removed they should be replaced to provide channel armoring and protection from future erosion.
8. Restoration should follow guidelines outlined in **SECTION 6.16**.

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Cañada's de la Pila and de la Huerta

These two intermittent drainages are crossed by the PAALP about 100 feet north of the U.S. Highway 101 culvert systems beneath the highway. These crossings are readily accessible via U.S. Highway 101 and the Calle Real service road. Cañada de la Pila primarily supports willow thicket riparian vegetation whereas Cañada de la Huerta supports a variety of brush species. The Santa Barbara County Tajiguas landfill is located immediately north of the Cañada de la Pila crossing and the abandoned Molino Gas Plant is located immediately north of the pipeline crossing the Cañada de la Huerta. Sensitive/protected species known or expected to occur at, near or downstream of these drainages are listed below.

SENSITIVE SPECIES IN THE VICINITY OF CAÑADA DE LA PILA AND DE LA HUERTA

Birds	Plant	Aquatic	Animals	Other
CAÑADA LE LA HUERTA				
Perigrin Falcon	Cliff Aster (Found on coastal terrace west ofcrossing)	N/A	N/A	N/A
CAÑADA DE LA PILA				
N/A	N/A	N/A	N/A	N/A

Marine and near shore resources potentially at risk are addressed in the Clean Seas RRM (ENSR, 1994).

Shoreline access to the outfall areas of these two streams limited to foot traffic, unless vehicular traffic to these areas utilizes the access point for Arroyo Quemado, which is less than one mile to the west.

Cañada's de la Gallina, de Guillermo & de la Posta

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Cañada's de la Gallina, de Guillermo & de la Posta, Continued

These three intermittent drainages are crossed by the PAALP about 200 feet north of the U.S. Highway culvert systems beneath the highway. Each crossing is readily accessible via U.S. Highway 101 and the private ranch roads that parallel the pipeline route and the highway. Major vegetation is completely lacking at Cañada de la Gallina whereas Cañada's de Guillermo and de la Posta support species such as oak, sycamore and willow. Sensitive/protected resources known or expected to occur at, near or downstream of these PAALP crossings are listed below.

Sensitive Species in the Vicinity of Cañada's de la Gallina, de Guillermo & de la Posta

Birds	Plant	Aquatic	Animials	Other
CAÑADA DE LA GALLINA				
N/A	N/A	N/A	San Diego Desert Woodrat American Badger	N/A
CAÑADA DE GUILLERMO				
N/A	N/A	N/A	N/A	N/A
CAÑADA DE LA POSTA				
N/A	N/A	N/A	N/A	N/A

Marine and near shore resources potentially at risk are identified in the Clean Seas RRM (ENSR, 1994).

There is no vehicular access to the shoreline areas adjacent to the mouths of these coastal drainages. The nearest access point is that of Arroyo Hondo, which is described above.

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Cañada del Molino

The PAALP crosses Cañada del Molino immediately east of the former site of the temporary Vista del Mar School building along Highway 101. The crossing is accessible along a private ranch road extending east from the old school site, or by traveling west along a private ranch road beginning at Cañada del Guillermo off of Highway 101. The crossing occurs across a steep banked narrow channel within a moderately broad floodplain of meandering channels. Cañada del Molino supports a relatively broad riparian zone comprised of coast live oaks, willows and western sycamores. Sensitive/protected resources known or expected to occur at, near or downstream of the PAALP crossing are listed below.

Sensitive Species in the Vicinity of Cañada del Molino

Birds	Plant	Aquatic	Animals	Other
N/A	N/A	Tidewater Goby	San Diego Desert Woodrat	N/A

Marine and near shore resources potentially at risk are identified in the Clean Seas RRM (ENSR, 1994).

There is no vehicular access to the shoreline area adjacent to the mouth of Cañada del Molino. The nearest access point would be via the Gaviota Interim Marine Terminal which is about 1.5 miles of Cañada del Molino.

If a spill occurred in Cañada del Molino it would be acceptable to use, with care, equipment for containment. Tree limbs should be trimmed with saws and not broken off by equipment. Oiled tree trunks should be gently steamed cleaned or flushed with water.

The beach is 1,500 feet from the Molino crossing and containment techniques should be implemented in the channel of the stream to prevent oil from reaching the beach. The Highway 101 and railroad culverts offer opportunities to use culvert blocking techniques (**FIGURES 6.2-5** and **6.2-9**) to protect beach and marine resources.

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Cañada del Molino, Continued

Clean Seas, Inc. would be immediately notified in the event of a spill at Cañada del Molino for the purposes of installing a containment boom to protect near shore resources should the spill reach outfall at the ocean. Pursuant to Chapter 400, State Parks would also be notified.

Other containment techniques to be employed for a spill at this crossing include the following:

Low Flow or No Flow — If the spill occurs during low or no flow conditions the oil may be contained near the spill site since the oil will move downstream slowly and probably begin to solidify as it cools.

1. Oil can be contained in the channel using a damming device (see **FIGURE 6.2-2**). Using equipment such as backhoes and angle dozers to form a containment dike would be the most effective method. Another alternative would be to utilize a sandbag berm or importing and dumping earthen material to contain the oil in the stream channel.
2. Oil can be collected using a vacuum pump truck. Sorbents can be used to soak up remaining oil.
3. Removing oiled vegetation is generally not recommended since it will increase erosion potential in the stream. If removal is deemed necessary, vegetation should be cut at ground level to maintain root structure support in the soil and possibly encourage stump sprouting.
4. Oily substrates should be removed to an approved landfill. The site should be recontoured and armored with similar substrate (e.g., sand, gravel, cobble) to prevent erosion.
5. Revegetation should follow recommendations outlined in **SECTION 6.16** of this Plan.

High Flow — If the spill occurs during periods of high flow it is likely to reach resources downstream including beach areas in the vicinity. Therefore, containment as close to the spill site as possible with priority given to protecting the beach, riparian vegetation and near shore resources should be attempted.

1. Protect the beach by blocking flow at the mouth of the Creek. One alternative would be to construct a sand berm or sandbag dam. This should help contain oil and protect near shore resources (see **FIGURE 6.2-7**). The structure should be high enough to prevent splash over. Another alternative would be to use equipment to form a containment basin or sump. If water is flowing, an underflow dam can be used to maintain flow (see **FIGURE 3.2-7**).
2. Protect the beach by blocking the U.S. Highway 101 or railroad culverts. The culverts can be blocked with plywood or sandbags (see **FIGURES 6.2-5** and **6.2-6**). If water is flowing, the flow must be maintained. A filter fence or boom could be installed on the ocean side of the culverts to strain and contain any escaping oil.Underflow dams or a series of underflow dams can be constructed with or without pipes (depending on flows) above the outfall within the creek channel below the spill.
3. Protect the riparian resources by directing oil to one area for containment. The riparian vegetation will provide natural entrainment of the oil and will slow its progress toward downstream resources. Oil can be directed to one part of the stream by using diversion dikes or booms (see **FIGURE 6.2-8**). These diversion structures can be constructed of any effective material such as plywood planks, straw dikes, sand bags, plastic tarps, or sorbent rolls. If necessary, heavy equipment may be utilized to construct structures large enough to contain a large spill. If large containment berms are constructed they must contain underflow structures to allow water movement (see **FIGURE 6.2-7**).
4. Contained oil can be removed with vacuum pump trucks. Gentle water flushing may be necessary to move oil trapped in vegetation to containment areas. Care must be exercised to prevent use of excessive water pressure that could kill vegetation or remove bottom sediments.
5. Depending on the extent of the spill, it may be necessary or aesthetically desirable to remove oiled vegetation. Removing vegetation is generally not advised; however, if it is deemed necessary, care should be exercised to cut vegetation at ground or water level while carefully collecting released oil. Willows will resprout if the roots are left intact.Heavily oiled trees should not be removed unless they pose serious barriers to clean-up. They can be cleaned by hand or by using gentle hydroblasting or steam cleaning.
6. Small volumes of oil can be removed using commercial sorbent materials (such as sorbent rolls or curtains) or other materials such as feathers, woodchips, cloth or paper.
7. In-stream structures should be removed following clean-up. If stream substrates are removed they should be replaced with similar material. For example, if rocks or cobbles are removed they should be replaced to provide channel armoring and protection from future erosion.
8. Restoration should follow guidelines outlined in **SECTION 6.16**.

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Cañada de las Zorrillas

The PAALP crosses Cañada de las Zorrillas, an intermittent coastal stream, immediately south of the confluence of its two tributaries and about 700 feet north of the U.S. Highway 101 culvert system beneath the highway. The crossing is accessible along a private ranch road extending west from the old school site, or by traveling east along a private ranch road which begins immediately east of the Cañada del Leon crossing off of Highway 101. It supports oak woodland vegetation although some willow thickets are present in the channel downstream of the PAALP crossing. The coastal terrace to the west of this crossing supports populations of Gaviota Tarplant. Any clean-up operations in this vicinity should include awareness that Tarplant populations may be present along existing access roads. Containment and clean-up staging should not, to the extent feasible, occur in Tarplant habitat (See also **APPENDIX C.1.12**).

The area surrounding the Cañada de las Zorrillas crossing is owned by the Coastal Band of the Chumash Nation and is often utilized for Native American religious purposes. As such this area is considered culturally and spiritually sensitive and all activities conducted in the area must be carefully coordinated with Tribal officials. Other sensitive/protected resources known or expected to occur at, near or downstream of the PAALP crossing are listed below.

Sensitive Species in the Vicinity of Cañada de las Zorrillas

Birds	Plant	Aquatic	Animals	Other
N/A	Gaviota Tarplant (Found on coastal terraces west of Zorrillas to its western range limit at Cañada del Barro)	N/A	San Diego Woodrat	Culturally and spiritually sensitive to Native American (Chumash-Coastal Band)

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Cañada de las Zorrillas, Continued

Marine and near shore resources potentially at risk are identified in the Clean Seas RRM (ENSR, 1994).

The nearest vehicular access point for the shoreline area of the Cañada de las Zorrillas outfall is the Gaviota Interim Marine Terminal which is about 1.25 miles to the west.

Cañada San Onofre

The PAALP crosses Cañada San Onofre about 0.5 miles east of the Gaviota Pump Station. It is accessible along a private ranch road extending east from the pump station across Cañada del Leon, or by traveling west along a private ranch road beginning at the former site of the Vista del Mar temporary school building. The San Onofre crossing occurs across a very narrow channel within a moderately broad grassland bench at the base of two slopes. San Onofre supports a relatively broad riparian zone comprised of coast live oaks, western sycamores, California bay laurel, white alder and willows. Although listed as a perennial stream, the channel is typically dry with vegetation supported by springs and groundwater. Several populations of Gaviota Tarplant occupy the coastal terraces east and west of Cañada San Onofre in the vicinity of this crossing. Any clean-up operations in this vicinity should include awareness that Tarplant populations may be present. Containment and clean-up staging should not, to the extent feasible, occur in Tarplant habitat. (See also **APPENDIX C.1.12**).

Other sensitive/protected resources known or expected to occur at near or downstream of the PAALP crossing are listed below.

Sensitive Species in the Vicinity of Cañada San Onofre

Birds	Plant	Aquatic	Animals	Other
N/A	Gaviota Tarplant (Found on coastal terraces east and west of crossing) Catalina Mariposa Lily (Found on the coastal terrace west of the crossing)	Southwestern Pond Turtle Tidewater Goby	San Diego Desert Woodrat	N/A

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED
Cañada San Onofre, Continued
Marine and near shore resources potentially at risk are identified in the Clean Seas RRM (ENSR, 1994). The nearest vehicular access point to the shoreline area adjacent to the outfall of Cañada San Onofre is the Gaviota Interim Terminal, which is about 0.75 miles to the west.
If a spill occurred at Cañada San Onofre it would be acceptable to use, with care, equipment for containment. Tree limbs should be trimmed with saws and not broken off by equipment. Oiled tree trunks should be gently cleaned or flushed with water.
In the event of a spill entering Cañada San Onofre, Clean Seas, Inc. would be contacted immediately and requested to install adequate spill containment booms to protect near shore resources in the event the spill reached its outfall at the Pacific Ocean. Containment techniques to be implemented near the spill site also include the immediate blocking of the U.S. Highway 101 or railroad culverts. Other techniques that may be employed include the following:
Low Flow or No Flow — If the spill occurs during low or no flow conditions the oil may be contained near the spill site since the oil will move downstream slowly and probably begin to solidify as it cools. 1. Oil can be contained in the channel using a damming device (see **FIGURE 6.2-2**). One alternative is using equipment such as backhoes and angle dozers to form a containment dike. A sandbag berm or importing and dumping earthen material to contain the oil are also options to be considered. 2. Oil can be collected using a vacuum pump truck. Sorbents can be used to soak up remaining oil. 3. Removing oiled vegetation is generally not recommended since it will increase erosion potential in the stream. If removal is deemed necessary, vegetation should be cut at ground level to maintain root structure support in the soil and possibly encourage stump sprouting. 4. Oily substrates should be removed to an approved landfill. The site should be recontoured and armored with similar substrate (e.g., sand, gravel, cobble) to prevent erosion. 5. Revegetation should follow recommendations outlined in **SECTION 6.16** of this Plan.
High Flow — If the spill occurs during periods of high flow it is likely to reach resources downstream including the San Onofre Public Beach Area. Therefore, containment as close to the spill site as possible (with priority given to protecting the beach, near shore resources, and riparian vegetation should be attempted.

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Cañada San Onofre, Continued

1. Protect the beach by blocking flow at the mouth of the Creek. One alternative would be to construct a sand berm or sandbag dam. This should help contain oil at the beach (see **FIGURE 6.2-7**). The structure should be high enough to prevent splash over. Another alternative would be to use equipment to form a containment basin or sump. If water is flowing, an underflow dam can be used to maintain flow (see **FIGURE 6.2-7**).
2. Protect the beach by blocking the U.S. Highway 101 culverts or railroads. The culverts can be blocked with plywood or sandbags (see **FIGURES 6.2-5** and **6.2-6**). If water is flowing, the flow must be maintained. A filter fence or boom could be installed on the ocean side of the culvert to strain and contain any escaping oil.
   Underflow dams or a series of underflow dams can be constructed with or without pipes (depending on flows) above the beach within the creek channel below the spill.
3. Protect the riparian resources by directing oil to one area for containment. The riparian vegetation will provide natural entrainment of the oil and will slow its progress toward downstream resources. Oil can be directed to one part of the stream channel by using diversion dikes or booms (see **FIGURE 6.2-8**). These diversion structures can be constructed of any effective material such as plywood planks, straw dikes, sand bags, plastic tarps, or sorbent rolls. If necessary, heavy equipment may be utilized to construct structures large enough to contain a large spill. If large containment berms are constructed they must contain underflow structures to allow water movement (see **FIGURE 6.2-7**).
4. Contained oil can be removed with vacuum pump trucks. Gentle water flushing may be necessary to move oil trapped in vegetation to containment areas. Care must be exercised to prevent use of excessive water pressure that could kill vegetation or remove bottom sediments.
5. Depending on the extent of the spill, it may be necessary or aesthetically desirable to remove oiled vegetation. Removing vegetation is generally not advised; however, if it is deemed necessary, care should be exercised to cut vegetation at ground or water level while carefully collecting released oil. Willows will resprout if the roots are left intact.
   Heavily oiled trees should not be removed unless they pose serious barriers to clean-up. They can be cleaned by hand or by using gentle hydroblasting or steam cleaning.
6. Small volumes of oil can be removed using commercial sorbent materials (such as sorbent rolls or curtains) or other materials such as feathers, woodchips, cloth or paper.
7. In-stream structures should be removed following clean-up. If stream substrates are removed they should be replaced with similar material. For example, if rocks or cobbles are removed they should be replaced to provide channel armoring and protection from future erosion.
8. Restoration should follow guidelines outlined in **SECTION 6.16**.

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Cañada del Leon

The PAALP crosses Cañada del Leon, an intermittent coastal drainage, about 1000 feet north of the U.S. Highway 101 culvert system beneath the highway. The crossing is readily accessible via U.S. Highway 101 and Chevron's Gervey Access road No. 3 which is located immediately east of the abandoned Vista del Mar Union School. The oak woodland dominated stream channel also supports sycamore and cottonwood trees. Several populations of Gaviota Tarplant occupy the coastal terraces east and west of the stream. Any clean-up operations in this vicinity should include awareness that Tarplant populations may be present. Containment and clean-up staging should not, to the extent feasible, occur in Tarplant habitat (See also **APPENDIX C.1.12**). Other sensitive/protected resources known or expected to occur at, near or downstream of the PAALP crossing are listed below.

Sensitive Species in the Vicinity of Cañada del Leon

Birds	Plant	Aquatic	Animals	Other
Merlin Perigrin Falcon	Gaviota Tarplant (Found on coastal terraces east and west of crossing)	N/A	N/A	N/A

Marine and near shore resources potentially at risk are identified in the Clean Seas RRM (ENSR, 1994).

The shoreline area adjacent to the Cañada del Leon outfall is accessible via the Gaviota Interim Marine Terminal which is about 0.25 miles to the west.

Cañada's Alcatraz, del Cementario & del Barro

The PAALP crosses these intermittent coastal drainages about 1200 feet north of the U.S. Highway 101 culvert systems beneath the highway. These crossings are accessible via U.S. Highway 101 at Chevron's Gervey access road No. 3 discussed above (Cañada Alcatraz) and at the main access road to Santa Barbara County Fire Station 18 (Cementario and del Barro). Cañada's Alcatraz and Cementario are crossed at the base of Santa Ynez Mountain Range and both support oak woodland vegetation species. The Cañada Alcatraz stream channel passes through the Gaviota Oil and Gas Plant and the Gaviota Interim Marine Terminal. Along this reach of the stream, Eucalyptus groves have been preserved which support migratory populations of Monarch Butterflies. Cañada del Cementario flows along the western edges of the facilities referenced above and along this reach of the stream channel Eucalyptus groves, intermixed with oak woodland vegetation have been preserved. These groves support migratory populations Monarch Butterflies. Cañada del Barro is largely void of major vegetation, although some willow thickets are located downstream of the PAALP crossing. All of these crossings are within the known range of Gaviota Tarplant. Any clean-up operations in this vicinity should include awareness that Tarplant populations may be present. Containment and clean-up staging should not, to the extent feasible, occur in Tarplant habitat (See also **APPENDIX C.1.12**). Other sensitive/protected resources known or expected to occur at, near or downstream of these PAALP crossings are listed below.

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Cañada's Alcatraz, del Cementario & del Barro, Continued

Sensitive Species in the Vicinity of Cañada's Alcatraz, del Cementario & Del Barro

Birds	Plant	Aquatic	Animals	Other
CAÑADA ALCATRAZ				
Merlin Perigrin Falcon Loggerhead Shr ke	Gaviota Tarplant (Found on coastal terraces east and west of crossing)	N/A	N/A	Monarch Butterfly
CAÑADA DEL CEMENTARIO				
N/A	Gaviota Tarplant (Found on coastal terraces east and west of crossing)	N/A	N/A	N/A
CAÑADA DEL BARRO				
N/A	Gaviota Tarplant (Found on coastal terraces east and west of crossing)	N/A	N/A	N/A

Marine and near shore resources potentially at risk are identified in the Clean Seas RRM (ENSR, 1994).

The shoreline areas adjacent to the outfall of two of these coastal drainages (Alcatraz and del Cementario) is via the Gaviota Interim Marine Terminal, through which they flow. Access to the shoreline area at the Cañada del Barro outfall is via the Gaviota Interim Marine Terminal which is about 0.25 miles to the east.

Cañada de la Gaviota, Betty Creek & Las Cruces Creek (Tributaries)

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Cañada de la Gaviota, Betty Creek & Las Cruces Creek (Tributaries), Continued

The pipeline crosses Cañada de la Gaviota approximately 0.5 miles upstream of the creek's mouth. The crossing is accessible via U.S. Highway 101, the Gaviota State Beach Park roadway, the roadway leading to Hollister Ranch and the Chevron valve vault access roadway. The pipeline also crosses two tributaries to Gaviota Creek (Betty Creek and Las Cruces Creek), approximately two miles above its mouth. These crossings are accessible via State Highway 1 (west of U.S. Highway 101), San Julian Road and an access road to Las Cruces Ranch which extends beneath State Highway 1. Gaviota Creek enters the Pacific Ocean at Gaviota State Beach Park where the creek creates a lagoon.

Cañada de la Gaviota is one of the larger coastal streams in Santa Barbara County. It is a perennial stream with flows estimated to range from 6.5 to 12 cfs. The pipeline crosses the main channel above a large willow thicket and stream gradient below this pipeline crossing is relatively gentle. The lower section of the creek is characterized by long, shallow pools with bottom substrates of sand and fine gravel. Fish habitat in the creek is good relative to many of the other coastal streams.

The crossing of Betty Creek, a tributary of Cañada de la Gaviota, occurs south of Highway 1 and north of San Julian Road, all within Gaviota State Park. The crossing occurs in a relatively narrow channel within a moderate stream gradient. Fish and wildlife habitat is present along this segment of the creek with several pools and riffles as well as cover from riparian trees such as oak, willow and sycamore as well as a variety of shrubs.

The PAALP crossing of Las Cruces Creek, the other Cañada de la Gaviota tributary, occurs north of State Highway 1 on the Las Cruces Ranch. Stream gradient is moderate. Fish and wildlife habitat are limited by low and intermittent flows and sparse vegetation which is dominated by willow thickets. Sensitive/protected resources known or expected to occur at, near or downstream of these PAALP crossings are listed below.

Sensitive Species in the Vicinity of Cañada de la Gaviota, Las Cruces Creek and Betty Creek

Birds	Plant	Aquatic	Animals	Other
Golden Eagle Perigrin Falcon Yellow Breasted Chat Bank Swallow Bald Eagle Ferruginous Hawk Least Bell's Vireo Northern Harrier So. Cal. Rufuous Creel Sparrow Loggerhead Shr ke Brown Pelican Least Bittern Willow Flycatcher	Hoffman's Nightshade Catalina Mariposa Lily Refugio Manzanita (Plant species are located on high ridges west and north of the creek crossing)	California Red- Legged Frog Southwestern Pond Turtle Tidewater Goby Steelhead	Mountain Lion	Monarch Butterfly Two Stripped Garter Snake Globose Dune Beetle

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED
Cañada de la Gaviota, Betty Creek & Las Cruces Creek (Tributaries), Continued
The mouth of Cañada de la Gaviota contains a freshwater/brackish lagoon that provides habitat for a variety of aquatic species. The Clean Seas RRM provides marine and near shore resources that are potentially at risk (ENSR, 1994).Shoreline access to the Lagoon and ocean outfall at Cañada de la Gaviota is via the main entrance to the Gaviota State Beach Park, through which this coastal stream flows.
Gaviota Creek
If a spill occurred in Gaviota Creek or at its upstream tributaries (Betty Creek or Las Cruces Creek), the following actions are recommended. Generally, hand techniques or techniques minimizing disturbance to surrounding areas are desirable for clean-up in this biologically sensitive area. The photos depict potential access and locations for containment structures. Final techniques will be determined at the time of the spill in consultation with appropriate authorities.
In the event of a spill at Gaviota Creek or its tributaries, Clean Seas, Inc., would be immediately notified and requested to provide adequate containment either immediately upstream of the Gaviota creek lagoon or immediately offshore to protect near shore resources. Gaviota State Park personnel would also be immediately notified consistent with **SECTION 3** of this plan as would the Hollister Ranch gate house.
State Parks personnel at both the District and Regional office have been consulted regarding the containment and clean-up techniques specific to Gaviota Creek. No clean-up action would be initiated without notification/consultation of State Parks personnel.
Low Flow or No Flow — If the spill occurs during low or no flow conditions the oil may be contained near the spill site since the oil will move downstream slowly and probably begin to solidify as it cools. 1. Oil can be contained in the channel using a damming device (see **FIGURE 6.2-2**). A sandbag berm or importing and dumping earthen material to contain the oil are options to be considered. Another alternative is using equipment such as backhoes and angle dozers to form a containment dike. The least intrusive yet effective technique is recommended. 2. Oil can be collected using a vacuum pump truck. Sorbents can be used to soak up remaining oil. 3. Removing oiled vegetation is generally not recommended since it will increase erosion potential in the stream. If removal is deemed necessary, vegetation should be cut at ground level to maintain root structure support in the soil and possibly encourage stump sprouting. 4. Oily substrates should be removed to an approved landfill. The site should be recontoured and armored with similar substrate (e.g., sand, gravel, cobble) to prevent erosion. 5. Revegetation should follow recommendations outlined in **SECTION 6.16** of this Plan.

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Gaviota Creek, Continued

High Flow — If the spill occurs during periods of high flow it is likely to reach resources downstream including Gaviota State Beach. Therefore, containment as close to the spill site as possible (with priority given to protecting the beach, the lagoon, and the willow thicket) should be attempted.

1. Protect the beach by fortifying the existing natural sandbar at the outfall of the Gaviota Creek Lagoon. One alternative would be to construct a sandbag dam to raise the existing sandbar. This should help contain oil to the immediate areas (see **FIGURE 6.2-7**). The structure should be high enough to prevent splash over. Another alternative would be to use equipment to form a levee between the lagoon and the ocean. If water is flowing, an underflow dam can be used to maintain flow (see **FIGURE 6.2-7**). Immediate notification would be made to Clean Seas, Inc., that a spill has occurred and that equipment, manpower and resources at their disposal should be immediately dispatched.
2. Protect the lagoon by blocking the inlet to the road culvert beneath the beach access road. The culvert can be blocked with plywood or sandbags (see **FIGURES 6.2-5** and **6.2-6**). If water is flowing, the flow must be maintained. A filter fence or boom could also be installed on the lagoon side of the culvert to strain and contain any escaping oil.
   Underflow dams or a series of underflow dams can be constructed with or without pipes (depending on flows) above the lagoon within the creek channel below the spill.
3. Protect the willow thicket and riparian resources by directing oil to one area for containment. The willows will provide natural entrainment of the oil and will slow its progress to downstream resources. Oil can be directed to one part of the willows by using diversion dikes or booms (see **FIGURE 6.2-8**). These diversion structures can be constructed of any effective material such as plywood planks, straw dikes, sand bags, plastic tarps, or sorbent rolls. If necessary, heavy equipment may be utilized to construct structures large enough to contain a large spill. If large containment berms are constructed they must contain underflow structures to allow water movement (see **FIGURE 6.2-7**).
4. Contained oil can be removed with vacuum pump trucks. Gentle water flushing may be necessary to move oil trapped in vegetation to containment areas. Care must be exercised to prevent use of excessive water pressure that could kill vegetation or remove bottom sediments.
5. Depending on the extent of the spill, it may be necessary or aesthetically desirable to remove oiled vegetation. Removing vegetation is generally not advised; however, if it is deemed necessary, care should be exercised to cut vegetation at ground or water level while carefully collecting released oil. Willows will resprout if the roots are left intact.
   Heavily oiled trees should not be removed unless they pose serious barriers to clean-up. They can be cleaned by hand or by using gentle hydroblasting or steam cleaning.
6. Small volumes of oil can be removed using commercial sorbent materials (such as sorbent rolls or curtains) or other materials such as feathers, woodchips, cloth or paper.
7. In-stream structures should be removed following clean-up. If stream substrates are removed they should be replaced with similar material. For example, if rocks or cobbles are removed they should be replaced to provide channel armoring and protection from future erosion.
8. Restoration should follow guidelines outlined in **SECTION 6.16**.

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Santa Ynez River and Lagoon

The pipeline crosses the Santa Ynez River southwest of Buellton, California approximately 0.5 miles west of the U.S. 101 Bridge. The crossing is accessible via U.S. Highway 101 and either State Highway 246 west (access to north bank of the river) or Santa Rosa Road (access to the south bank of the river). The channel is broad, about 0.25 miles wide. Flows gauged 7 miles downstream at Coopers Reef averaged 27 cfs for the 22-year period of 1954 to 1976. Maximum flows in this period were recorded for January 1969 at 81,000 cfs. Flows are normally perennial but the main channel may stop flowing in dry years. Higher flows are maintained in the dry season by periodic releases from Cachuma Lake. Scour potential is good as evidenced by the braided channel and size of bed material, which at the PAALP crossing, ranges from sand to cobble. The Santa Ynez River supports a large underground basin used for public water supply and irrigation. The pipeline crossing is 24 miles above the river's mouth and the Santa Ynez Estuary.

The Santa Ynez River contains the well-developed and prolific riparian zone of any stream crossed by the pipeline in Santa Barbara County, although in recent years considerable riparian vegetation has been removed from the river bed to reduce the potential for over-bank flooding.

Still, the Santa Ynez River contains much of the riparian habitat present in Santa Barbara County. This is due in part to the continuous flows in the river maintained by water releases from Cachuma Lake and most recently because of excessive winter rainfall patterns. Major vegetation at the PAALP crossing and occurring in the immediate vicinity of the pipeline includes willow scrubland and willow, cottonwood, and sycamore woodlands. Common scrub species include arroyo willow, red willow and Baccharis glutinosa. Common trees include western sycamore and Fremont cottonwood. The high banks contain thickets of elderberry, willow, and poison oak. Immediately downstream of the PAALP pipeline crossing, the main channel of the river forms a lagoon which is fed by both surface and groundwater flows. The lagoon is believed to be a permanent feature of the river bed even during low flows.

Several of these lagoons and pools occur downstream of the crossing along the main channel of the Santa Ynez River. These permanent ponds and lagoons provide habitat for a variety of species including several species that are regionally or locally rare and are known to occur. These include the willow flycatcher, tree swallow, Swainson's thrush, warbling vireo, yellow warbler, Wilson's warbler, yellow-breasted chat, blue grosbeak, black-shouldered kite, Cooper's hawk, western gray squirrel, western pond turtle, and California red-legged frog (Collins, 1986, personal communication). Common fish species include arroyo chub, mosquito fish, and stickleback. During high water periods, gamefish from Cachuma Lake may be washed into the upper portions of the river. These species include rainbow trout, channel catfish, sunfishes, and crappies. Steelheads are though to spawn in the lowest reaches of the river. Other sensitive/protected resources known or expected to occur at, near or downstream of the PAALP crossing, as identified in several recently completed EIR documents, are listed below.

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Santa Ynez River and Lagoon, Continued

Sensitive Species in the Vicinity of Santa Ynez River

Birds	Plant	Aquatic	Animals	Other
Golden Eagle Perigrin Falcon Yellow Breasted Chat Bank Swallow Bald Eagle Ferruginous Hawk Least Bell's Vireo Long Eared Owl Northern Harrier Coopers Hawk Purple Martin Yellow Warbler Brown Pelican Willow Flycatcher	Monterey Spineflower Shagbark Manzanita La Graciosa Thistle Seaside Birds Beak Black Flowered Figwort Crisp Monardella San Luis Obispo County Monardella	California Red- Legged Frog Southwestern Pond Turtle Tidewater Goby Steelhead Unarmored Three Spine Stickleback	American Badger Lump Nose Bat	California Tiger Salamander Arroyo Toad Spadefoot Toad

The Clean Seas RRM (ENSR, 1994) provides details of marine and near shore species that are potentially at risk.

Shoreline access to the Santa Ynez River estuary and Pacific Ocean outfall area is via Ocean Avenue through the City of Lompoc.

Containment and clean-up techniques used at the Santa Ynez River will depend on flow characteristics at the time of the spill. FThe photos depict potential access and locations for containment structures. The Santa Ynez River is a large river with a wide braided channel. If a spill occurs during low flow conditions, the oil can be contained within the river channel. For low or no flow conditions, the following techniques are recommended:

Low Flow or No Flow - Note (b) (7)(F), (b) (3) [redacted]

1. The first priority biologically is to protect the lagoon on the north bank of the river downstream of the pipeline crossing. Construct diversion dikes/berms around the lagoon to prevent or minimize oil from entering the lagoon. Use diversion dikes to divert oil to cleared and open areas within the riverbed. Berms can be formed with sandbags or with heavy equipment utilizing available riverbed materials.
2. "Corral" spilled oil using heavy equipment to construct berm around spill.
3. Depending on flow conditions, one or a series of underflow blocking dams with pipes may be necessary to maintain flow in the main channel(s). These structures could be constructed with equipment or sandbags depending on site conditions.
4. If a sump pit is necessary to contain oil, it should have a plastic liner to prevent oil from seeping into streambed gravels. Ideally, and if possible, sump pits should be located outside of alluvial gravels on relatively impervious substrates.
5. Remove oil with vacuum pump trucks and/or skimmers.
6. Use sorbents to remove small amounts of pooled oil.
7. If necessary, water flushing may be used to remove residual oil from the lagoon and riparian vegetation. Care should be taken to ensure oil flushed from vegetation is contained.
8. If deemed necessary, oiled shrubs and willow vegetation should be cut at ground level or water level. Heavily oiled trees may be cleaned by hand or by using gentle hydroblasting or steam cleaning.
9. Interceptor barriers to keep oil from reaching streambed and aquifer gravels may also be needed.
10. Oiled rocks and structures can be cleaned with steam cleaning. If oiled substrate materials are removed for disposal they should be replaced with similar size and type of material (e.g., sand, gravel, cobble).
11. Restoration should follow clean-up (see **SECTION 6.16**).

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Santa Ynez River and Lagoon, Continued

High Flow — During high flows, spilled oil could move a considerable distance downstream. Therefore, containment a distance downstream is advised. A possible location for containment is located off of Mail Road five miles downstream of the pipeline crossing.

1. Booms will be necessary at high flows. Booms could be placed along the river's edge to protect stream banks. Booms and skimmers could be used for controlling and cleaning up oil.
2. A boom should be located at the beginning of the lagoon to minimize oil contamination. If this is not possible a boom could be placed below the lagoon, thus containing oil within the lagoon and protecting other lagoon and stream resources below the crossing.
3. A diversion dike and containment berm should be constructed downstream of the crossing near Mail Road. This area of the river has a controlled channel and is near pastureland that could be converted into a containment pond/sump pit. It also has good access for large equipment and could contain any oil not contained near the crossing. This final containment structure should be constructed large enough to contain all spilled oil and prevent it from reaching Lompoc or the Santa Ynez River Estuary.
4. If a sump pit is necessary to contain oil, it should have a plastic liner to prevent oil from seeping into streambed gravels. Ideally, sump pits should be located outside of alluvial gravels on relatively impervious substrates.
5. Remove oil with vacuum pump trucks and/or skimmers.
6. Use sorbents to remove small amounts of pooled oil.
7. If necessary, water flushing may be used to remove residual oil from the lagoon and from riparian vegetation. Care should be taken to ensure oil flushed from vegetation is contained.
8. If deemed necessary, oiled shrubs and willow vegetation should be cut at ground or water level. Heavily oiled trees may be cleaned by hand or with gentle hydroblasting or steam cleaning.
9. Interceptor barriers to keep oil from reaching streambed and aquifer gravels may be needed.
10. Oiled rocks and structures can be cleaned with steam cleaning. If oiled substrate materials are removed for disposal they should be replaced with similar size and type of material (e.g., sand, gravel, cobble).
11. Restoration should follow clean-up (see **SECTION 6.16**).

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Sisquoc - Cuyama - Santa Maria River System

The Sisquoc-Cuyama-Santa Maria River System includes the Sisquoc River from its origin in the San Rafael Mountains and the Cuyama River from its origin in the Cuyama Valley and the adjacent Caliente Hills. The pipeline crossing is accessible via existing County roads. (Foxen Canyon and Tepesquet) and the Sisquoc Ranch/Winery road. The confluence of Sisquoc and Cuyama Rivers, which collectively form the Santa Maria River to its outfall at the Pacific Ocean, is located about 8 miles downstream of the PAALP crossing of the Sisquoc River Channel. At this confluence, the Sisquoc River becomes more or less a natural river, not subject to mining activities described below. The natural flow of the Cuyama River has been altered by the construction and utilization of the Twitchell Reservoir which is located about 6 miles upstream along the Cuyama River from its confluence with the Sisquoc River. The Sisquoc River, from the PAALP crossing downstream to near the river's confluence with the Cuyama River, is actively mined for naturally occurring sand and gravel deposits. Sensitive/protected resources known or expected to occur at, near or downstream of the PAALP crossing, as identified in several recently completed EIR documents, are listed below.

Sensitive Species in the Vicinity of Sisquoc, Cuyama, Santa Maria River System

Birds	Plant	Aquatic	Animals	Other
	Monterey Spineflower			
	Shagbark Manzanita			
	La Graciosa Thistle			
Yellow Breasted Chat	Seaside Birds Beak	California Red- Legged Frog		Two Stripped Garter Snake
	Black Flowered Figwort			
Bank Swallow	Crisp Monardella			
	San Luis Obispo	Southwestern Pond Turtle		Silvery Legless Lizard
Least Bell's Vireo	County Monardella		N/A	
	Lompoc Santa Yerba	Tidewater Goby		
Loggerhead Shr ke	Soft Leaved Indian Paintbrush			Arroyo Toad
		Unarmored Three Spine		
Willow Flycatcher	Surf Thistle	Stickleback		Spadefoot Toad
	Beach Spectacle Pod			
	San Luis Obispo Bushmallow			

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED
Sisquoc - Cuyama - Santa Maria River System, Continued
The Clean Seas RRM (ENSR, 1994) provides details of marine and near shore species that are potentially at risk. Shoreline access to the Santa Maria River is via West Main Street through the City of Guadalupe.
Sisquoc River
The Sisquoc River is a large river with a wide accessible channel. The channel has been disturbed by historical and ongoing gravel operations at the pipeline crossing. Little or no riparian vegetation is present at the crossing but some sensitive resources may occur a few miles downstream. The following techniques are recommended for the Sisquoc River. The photos depict access and locations for containment structures.
Low Flow or No Flow 1. Diversion dikes should be located at the crossing to direct oil into the depression immediately adjacent to the pipeline crossing or to other disturbed areas such as depressions formed from gravel operations. If oil escapes from the immediate crossing location, it can be contained at Tepusquet Road or by diverting it into gravel operations below the road crossing. 2. Oil should be removed with vacuum trucks, skimmers, and sorbents as appropriate. 3. Oiled rocks and structures can be cleaned with steam cleaning. If oiled substrate materials are removed from the natural stream bed below the gravel operation, they should be replaced with similar material.
High Flow 1. An underflow blocking dam should be constructed downstream in a narrow location such as at the Tepusquet Road crossing. 2. Alternately, a containment boom could be deployed at this location as well as other locations downstream. 3. In extreme flow conditions, a boom could be deployed and anchored by the abutments of the Garey Bridge, about two miles downstream of the pipeline crossing. (See also **Section 903-4**, Santa Ynez River discussion).
Tepusquet Creek
The following techniques are recommended for the Tepusquet Creek Crossing. The photo depicts access and potential locations for containment structures.
Low Flow or No Flow — The Tepusquet Creek Crossing is located north of the Sisquoc River Valley floodplain, east of Santa Maria and west of Tepusquet Road crossing. The creek, at this location, is a narrow channel with good access off Tepusquet Road. The gradient of the creek is fairly gentle at this location and containment conditions are good unless flows are unusually high. The pipeline crosses the creek approximately 0.7 miles north of the creek outfall at the Sisquoc River. 1. Oil can be contained on site: by constructing an earthen dike with heavy equipment. Further, given the distance of its outfall at the Sisquoc River, there are opportunities to block flow downstream of the crossing or even within the river bed north of the typically flowing river channel. 2. Oil can be removed with vacuum trucks, skimmers, and sorbents as necessary. 3. Oiled rocks and structures can be cleaned with steam cleaning. If oiled substrate materials are removed from the natural streambed, they should be replaced with similar size and type of material (e.g., sand, gravel, and cobble). 4. Removing oiled vegetation is generally not recommended since it will increase erosion potential in the stream. If removal is deemed necessary, vegetation should be cut at ground level to maintain root structure support in the soil and possibly encourage stump sprouting. 5. Oily substrates should be removed to an approved landfill. The site should be recontoured and armored with similar substrate (e.g., sand, gravel, cobble) to prevent erosion. 6. Revegetation should follow recommendations outlined in **SECTION 6.16** of this Plan.

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Tepusquet Creek, Continued

High Flow

1. Depending on flows, oil can be contained by placing underflow blocking dams or booms downstream from the spill. Booms can be deployed off of Tepusquet Road to contain oil or divert it away from stream banks, if possible.
2. Another alternative would be to construct a sandbag dam to raise the riverbed to help contain oil within the immediate area (see **FIGURE 6.2-7**). The structure should be high enough to prevent splash over. Depending upon timing and availability equipment could be used to form a containment basin or sump. If water is flowing, an underflow dam can be used to maintain flow (see **FIGURE 6.2-7**). Immediate notification would be made to Clean Seas, Inc., that a spill has occurred and that equipment, manpower and resources at their disposal should be immediately dispatched.
3. Protect the lagoon by blocking the road culvert under Tepusquet road. The culvert could be blocked with plywood or sandbags (see **FIGURES 6.2-5 and 6.2-6**). If water is flowing, the flow must be maintained. A filter fence or boom could be installed on the downstream side of the road culvert to strain and contain any escaping oil.
   Underflow dams or a series of underflow dams can be constructed with or without pipes (depending on flows) above the Sisquoc River within the creek channel below the spill.
4. Protect the riparian vegetation by directing oil to one area for containment. The vegetation will provide natural entrainment of the oil and will slow its progress to downstream resources. Oil can be directed to one part of the riparian area by using diversion dikes or booms (see **FIGURE 6.2-8**). These diversion structures can be constructed of any effective material such as plywood planks, straw dikes, sand bags, plastic tarps, or sorbent rolls. If necessary, heavy equipment may be utilized to construct structures large enough to contain a large spill. If large containment berms are constructed they must contain underflow structures to allow water movement (see **FIGURE 6.2-7**).
5. Contained oil can be removed with vacuum pump trucks. Gentle water flushing may be necessary to move oil trapped in vegetation to containment areas. Care must be exercised to prevent use of excessive water pressure that could kill vegetation or remove bottom sediments.
6. Depending on the extent of the spill, it may be necessary or aesthetically desirable to remove oiled vegetation. Removing vegetation is generally not advised; however, if it is deemed necessary, care should be exercised to cut vegetation at ground or water level while carefully collecting released oil. Most vegetation, especially willow trees, will resprout if the roots are left intact.
   Heavily oiled trees should not be removed unless they pose serious barriers to clean-up. They can be cleaned by hand or by using gentle hydroblasting or steam cleaning.
7. Small volumes of oil can be removed using commercial sorbent materials (such as sorbent rolls or curtains) or other materials such as feathers, woodchips, cloth or paper.
8. In-stream structures should be removed following clean-up. If stream substrates are removed they should be replaced with similar material. For example, if rocks or cobbles are removed they should be replaced to provide channel armoring and protection from future erosion.
9. Restoration should follow guidelines outlined in **SECTION 6.16**.

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Cuyama River

The crossing of the Cuyama River occurs at the western edge of the Cuyama Valley near the Highway 166 Bridge. The pipeline crossing is accessible immediately off of State Highway 166 about 20 miles west of Cuyama, California. The crossing occurs in pasturelands which are bordered on the south by a steep ridge of the Sierra Madre Mountains. The crossing is not biologically sensitive with habitat consisting primarily of scrubland species such as Baccharis glutinosa, arrow weed, and rabbit brush. Fish habitat quality is poor in most of the Cuyama River because of the lack of pools, minimal cover, and extensive sedimentation. Fish species potentially occurring in the Cuyama River include arroyo chub, California roach, and speckled dace.

Downstream of the PAALP crossing, riparian vegetation primarily consists of willows, cottonwood, and sycamore occur. The river extends west to the Twitchell Reservoir which is about 20 miles downstream of the PAALP crossing. If crude oil reached Twitchell Reservoir it could be cleaned up using traditional freshwater techniques (see **SECTION 6.2**), after consulting with the appropriate agency personnel. Sensitive/protected resources known or expected to occur at, near or downstream of the PAALP crossing are listed below.

Sensitive Species in the Vicinity of Cuyama River

Birds	Plant	Aquatic	Animals	Other
Golden Eagle Bald Eagle California Condor Perigrin Falcon	N/A	N/A	Mountain Lion Blunt Nose Leopard Lizard Giant Kangaroo Rat	N/A

The following techniques are recommended for the Cuyama River. The photos depict access and locations for containment structures.

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED
Cuyama River, Continued
Low Flow or No Flow — The Cuyama River Crossing is located in the western end of the Cuyama Valley near the old Highway 166 bridge crossing. The river at this location is a wide silty channel with good access off Highway 166. The gradient of the river is fairly gentle at this location and containment conditions are good unless flows are unusually high. 1. Oil can be contained on site by constructing an earthen dike with heavy equipment. 2. Oil can be removed with vacuum trucks, skimmers, and sorbents as necessary. 3. Oiled rocks and structures can be cleaned with steam cleaning. If oiled substrate materials are removed from the natural streambed, they should be replaced with similar size and type of material (e.g., sand, gravel, and cobble). 4. Oily substrates should be removed to an approved landfill. The site should be recontoured and armored with similar substrate (e.g., sand, gravel, cobble) to prevent erosion. 5. Revegetation should follow recommendations outlined in **SECTION 6.16** of this Plan.
High Flow 1. Depending on flows, oil can be contained by placing underflow blocking dams or booms downstream from the spill. Booms can be deployed off of Highway 166 bridges to contain oil or divert it away from stream banks. 2. If oil reaches Twitchell Dam it can be contained by boats and booms (see **FIGURES 6.2-9** and **6.2-10**). Oil should be removed with skimmers and vacuum pumps.

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Click here to view - Potential Access and Location For Containment at the Canada Del Corral Crossing

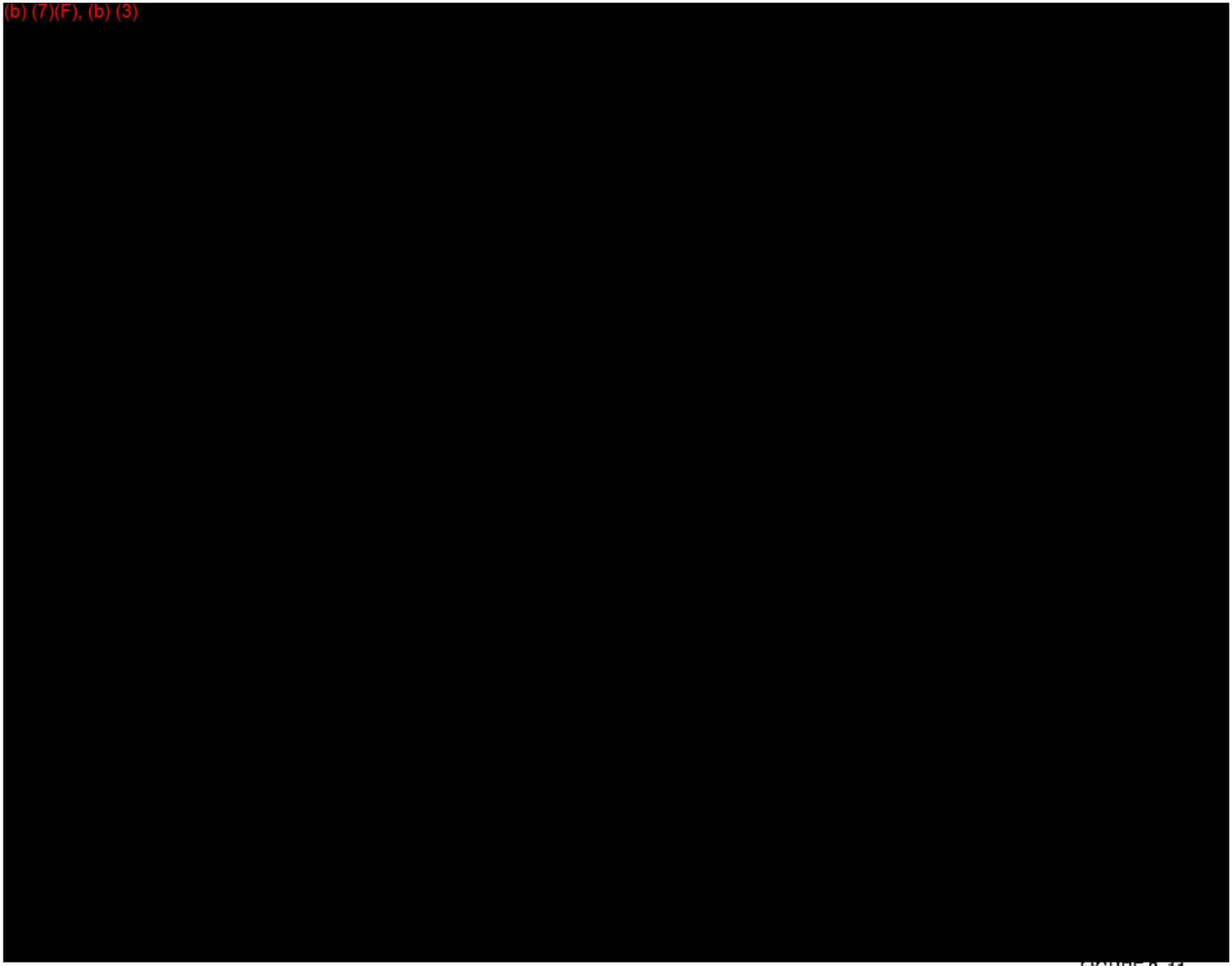


FIGURE 9-11

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Click here to view - Potential Access and Location For Containment at the Canada Del Refugio Crossing

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

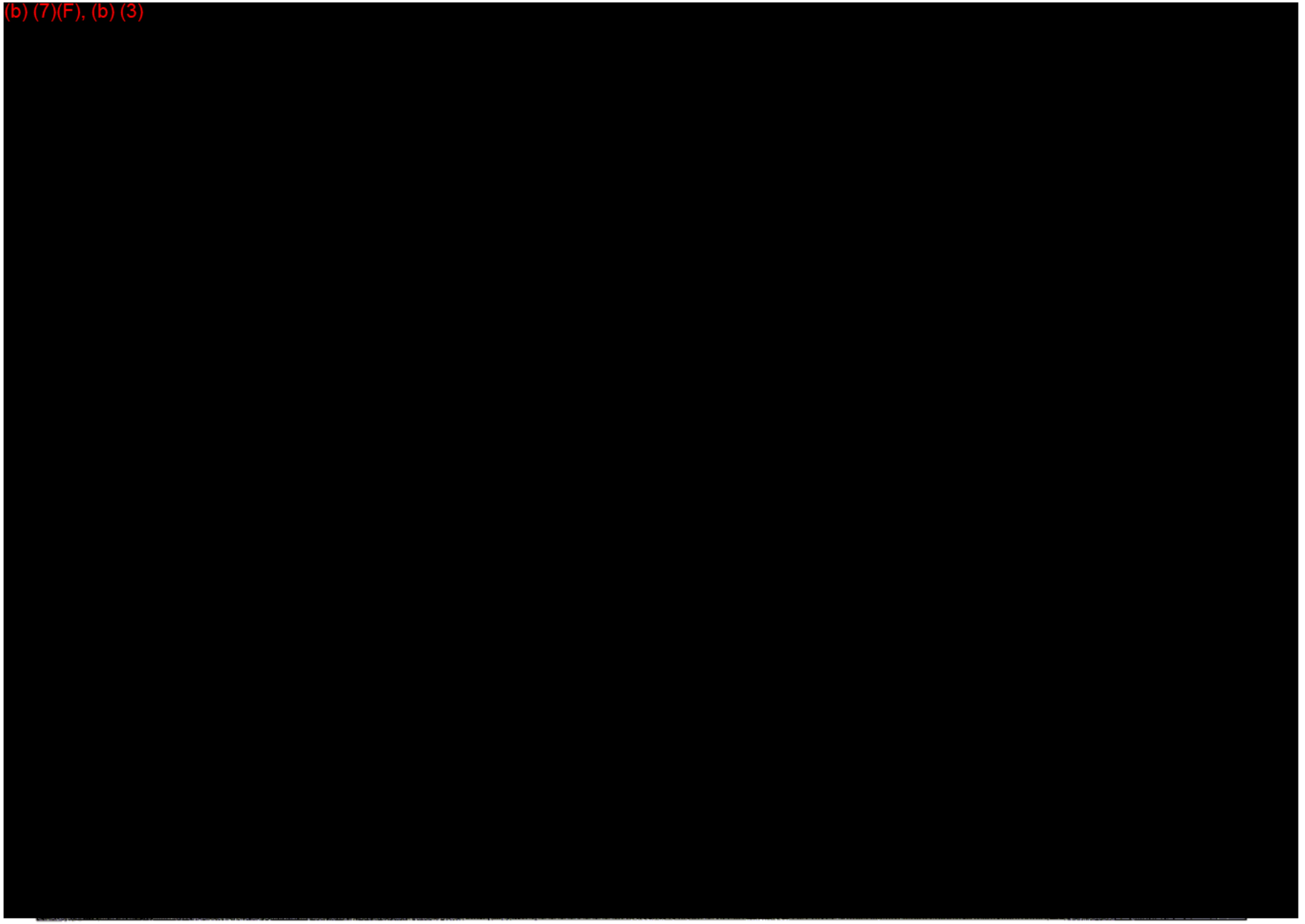


FIGURE 9-12

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Click here to view - Potential Access and Location For Containment at the Arroyo Quemado Crossing

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

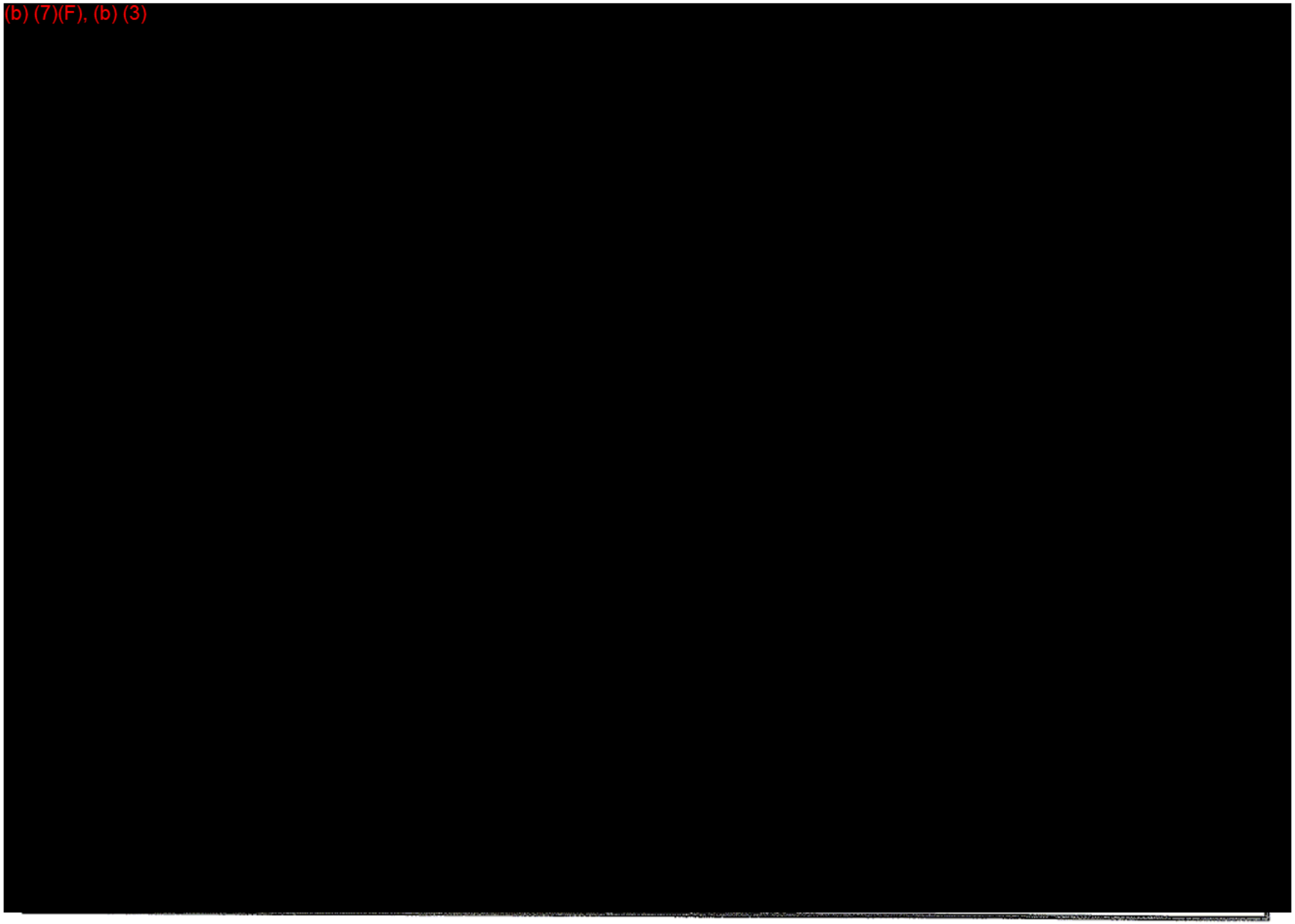


FIGURE 9-12A

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Click here to view - Potential Access and Location For Containment at the Arroyo Hondo Crossing

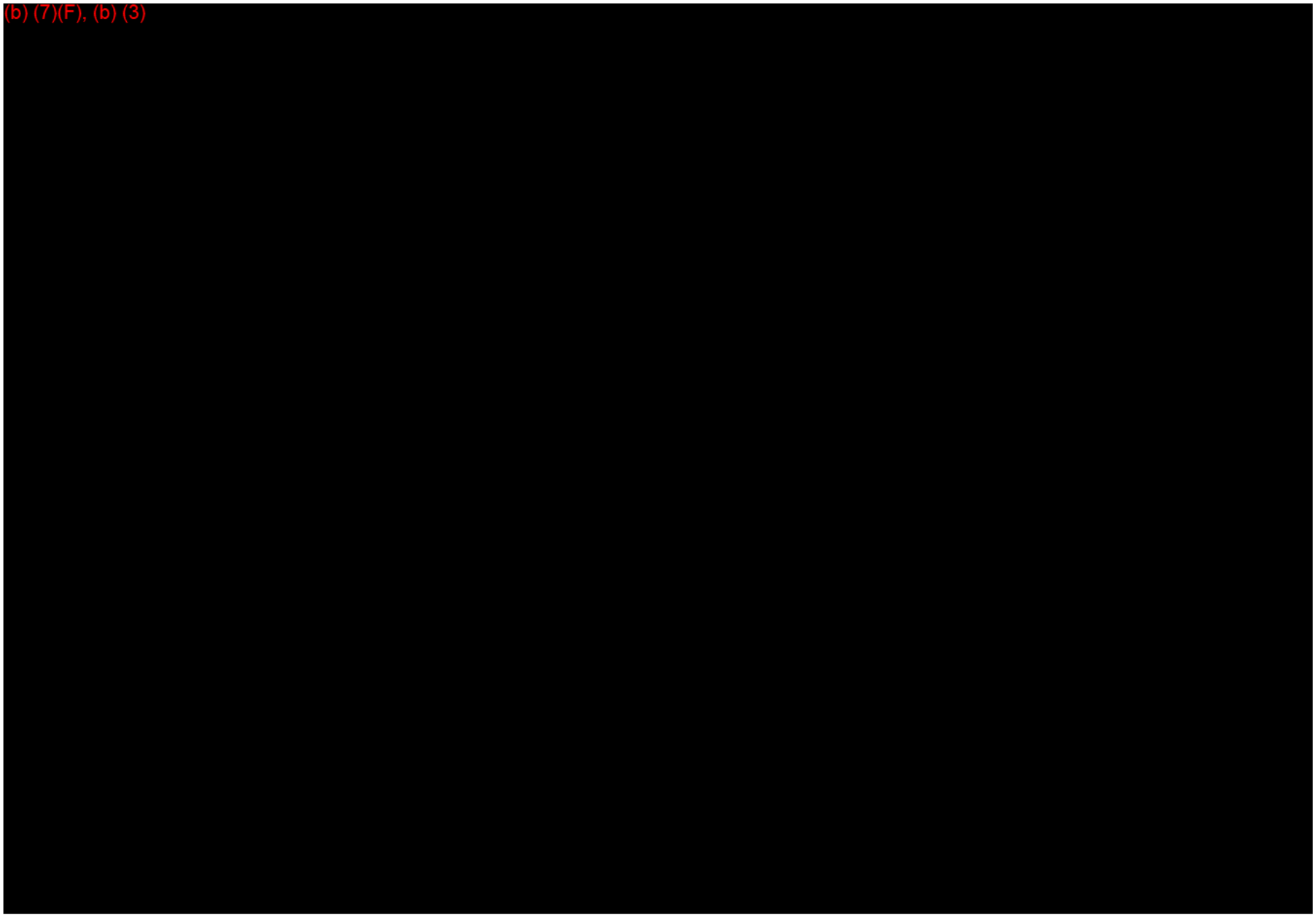


FIGURE 9-13

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Click here to view - Potential Access and Location For Containment at the Canada del Molino Crossing

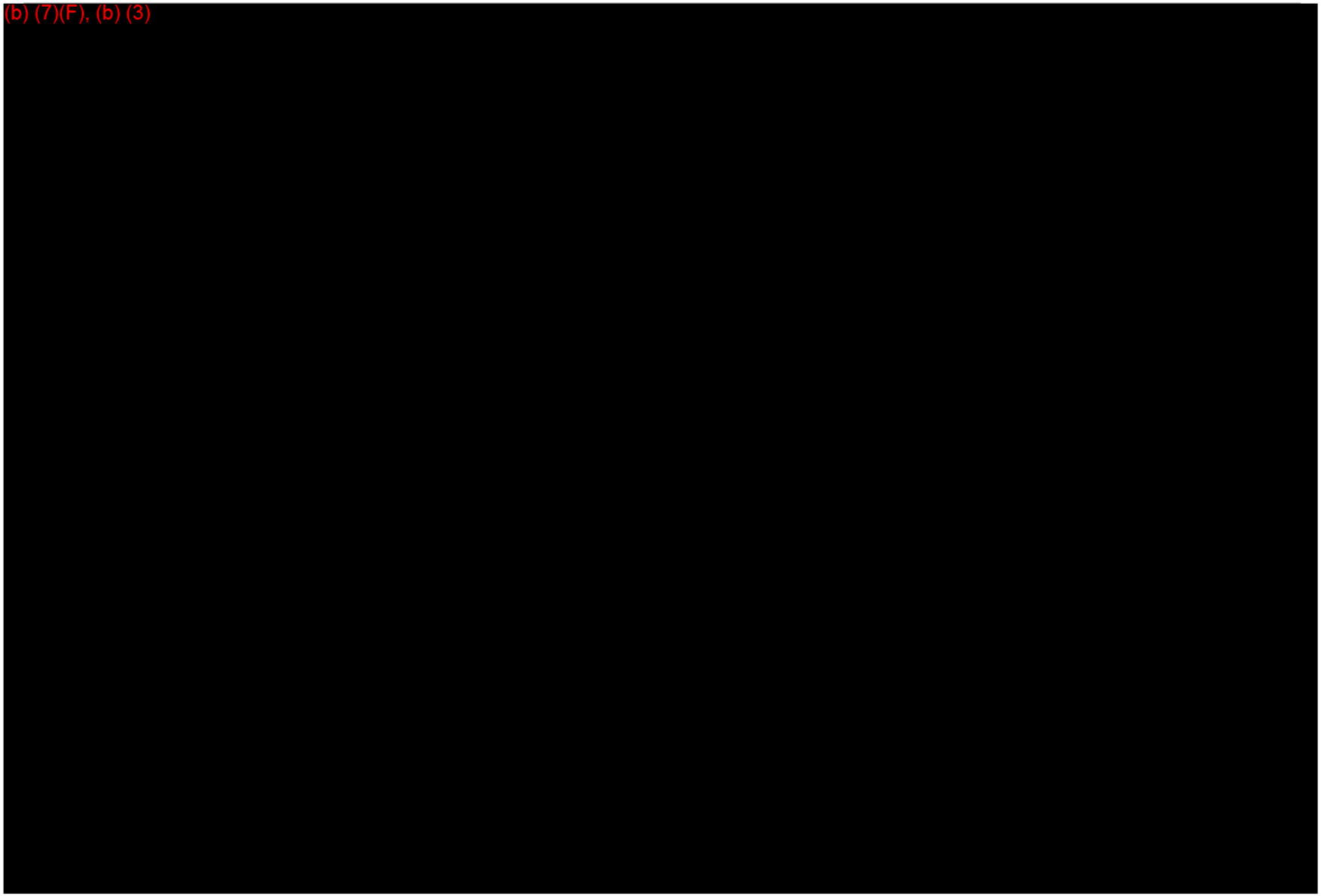


FIGURE 9-14

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Click here to view - Potential Access and Location For Containment at the Canada San Onofre Crossing

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

FIGURE 9-15

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Click here to view - Potential Access and Location For Containment Prior To Gaviota Crossing

FIGURE 9-16A

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Click here to view - Potential Access and Location For Containment at Gaviota Creek and Lagoon

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

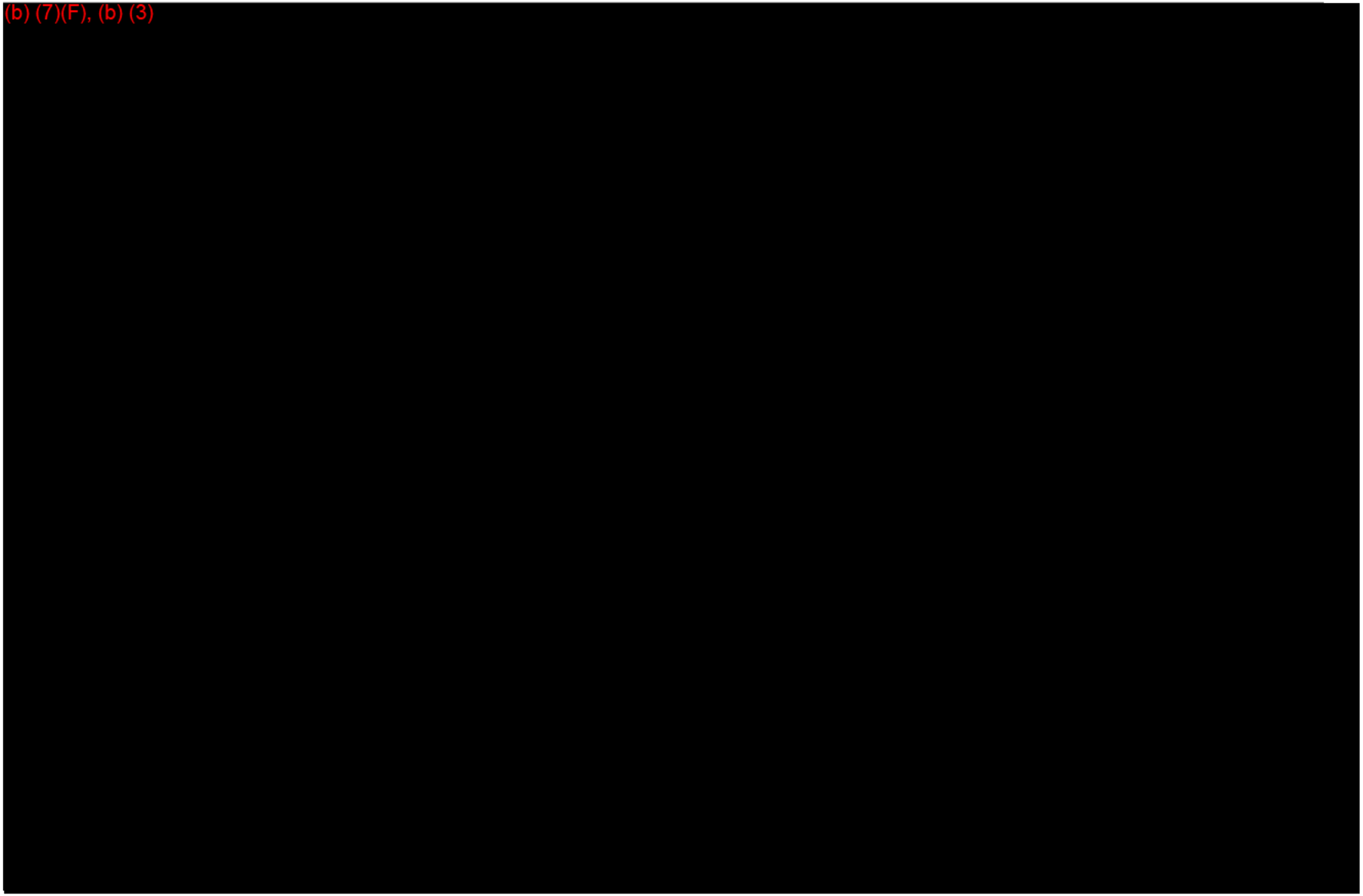


FIGURE 9-16B

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Click here to view - Potential Access and Location For Containment at Santa Ynez River Crossing

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

FIGURE 9–17A

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Click here to view - Potential Access and Location For Containment Downstream of Santa Ynez River Crossing

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

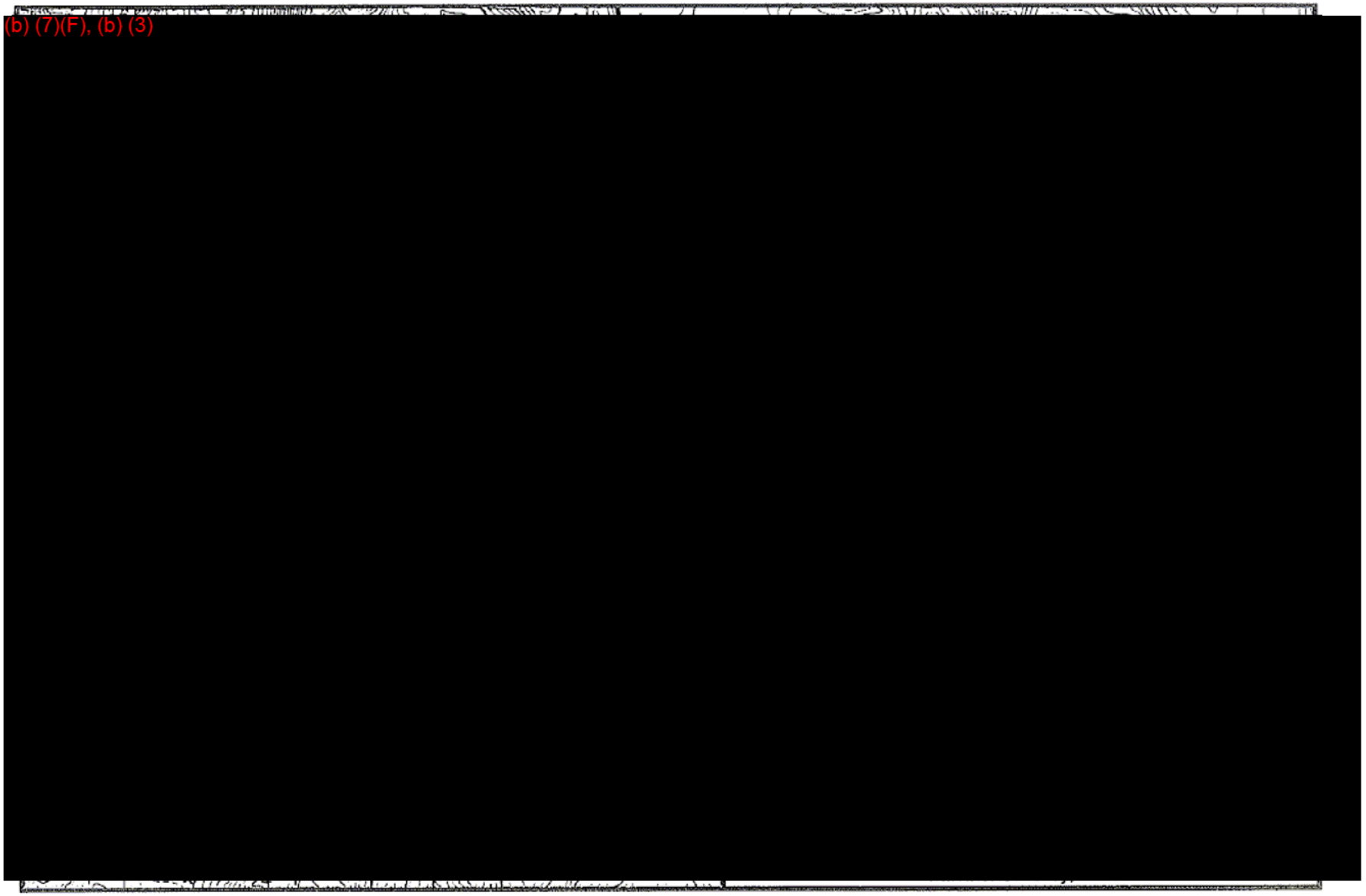


FIGURE 9–17B

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Click here to view - Potential Access and Location For Containment at Sisquoc River Crossing

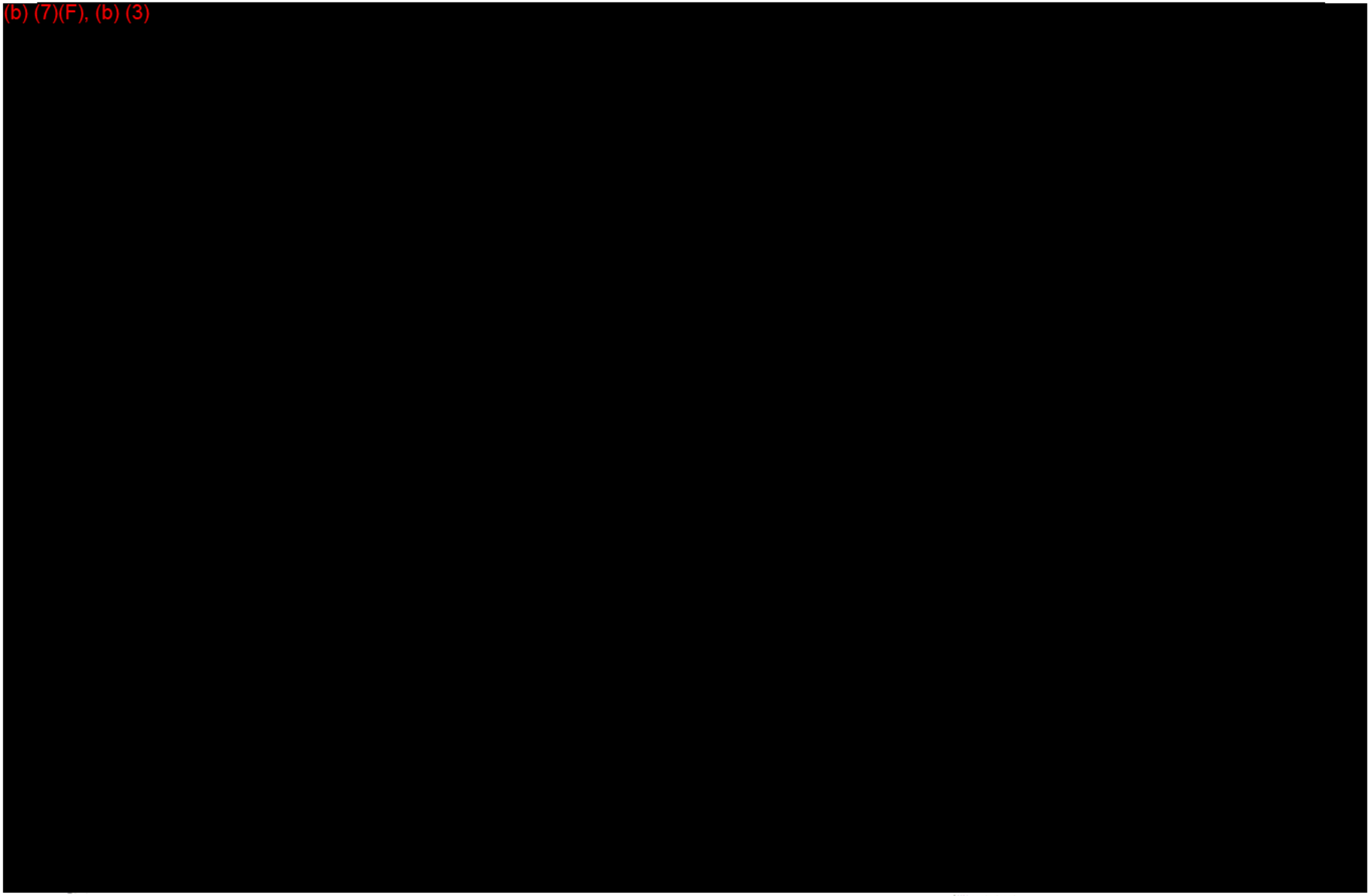


FIGURE 9–18A

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Click here to view - Potential Access and Location For Containment Downstream of Sisquoc River Crossing

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

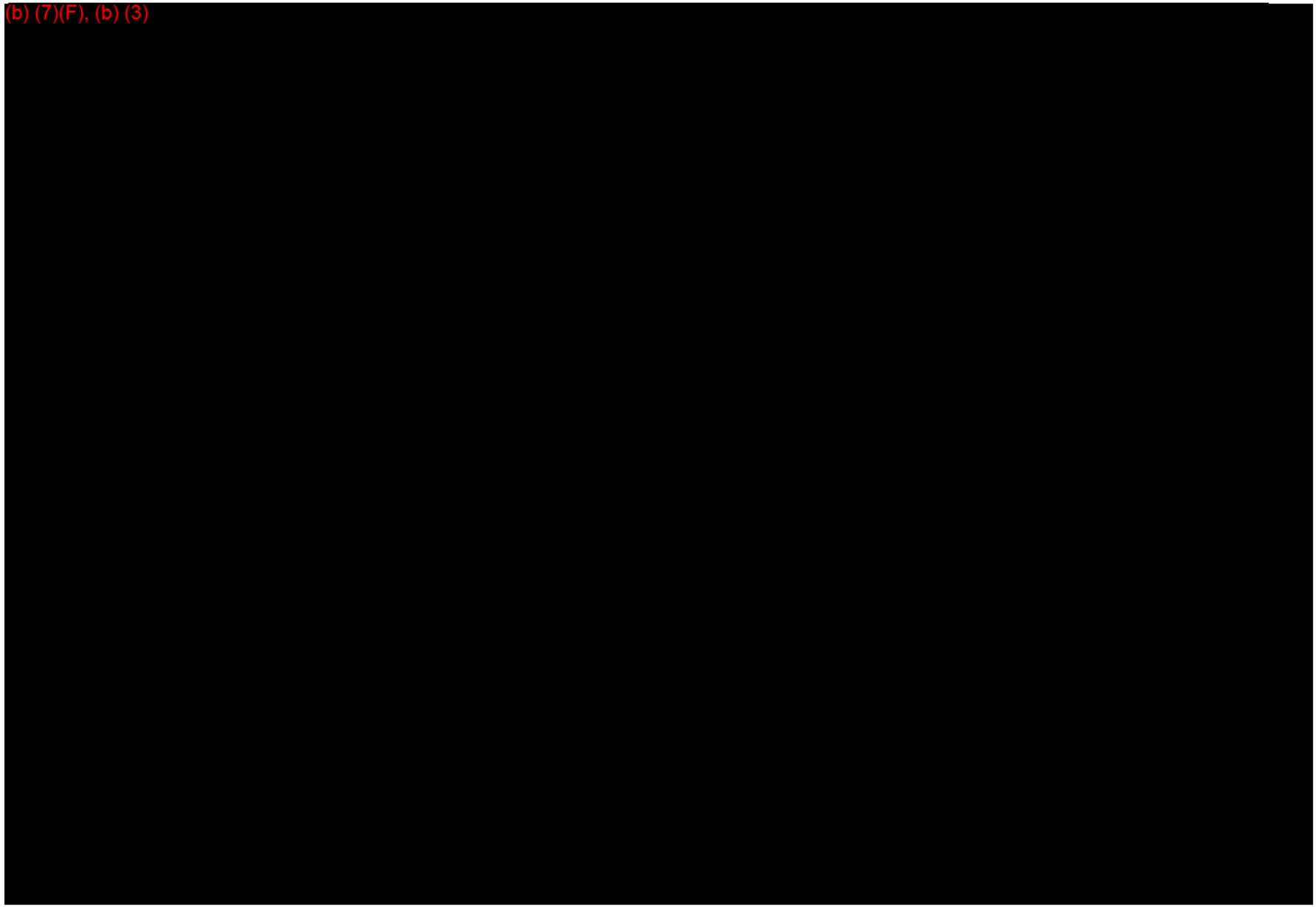


FIGURE 9-18B

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Click here to view - Potential Access and Location For Containment Downstream of Tepusquet Creek Crossing

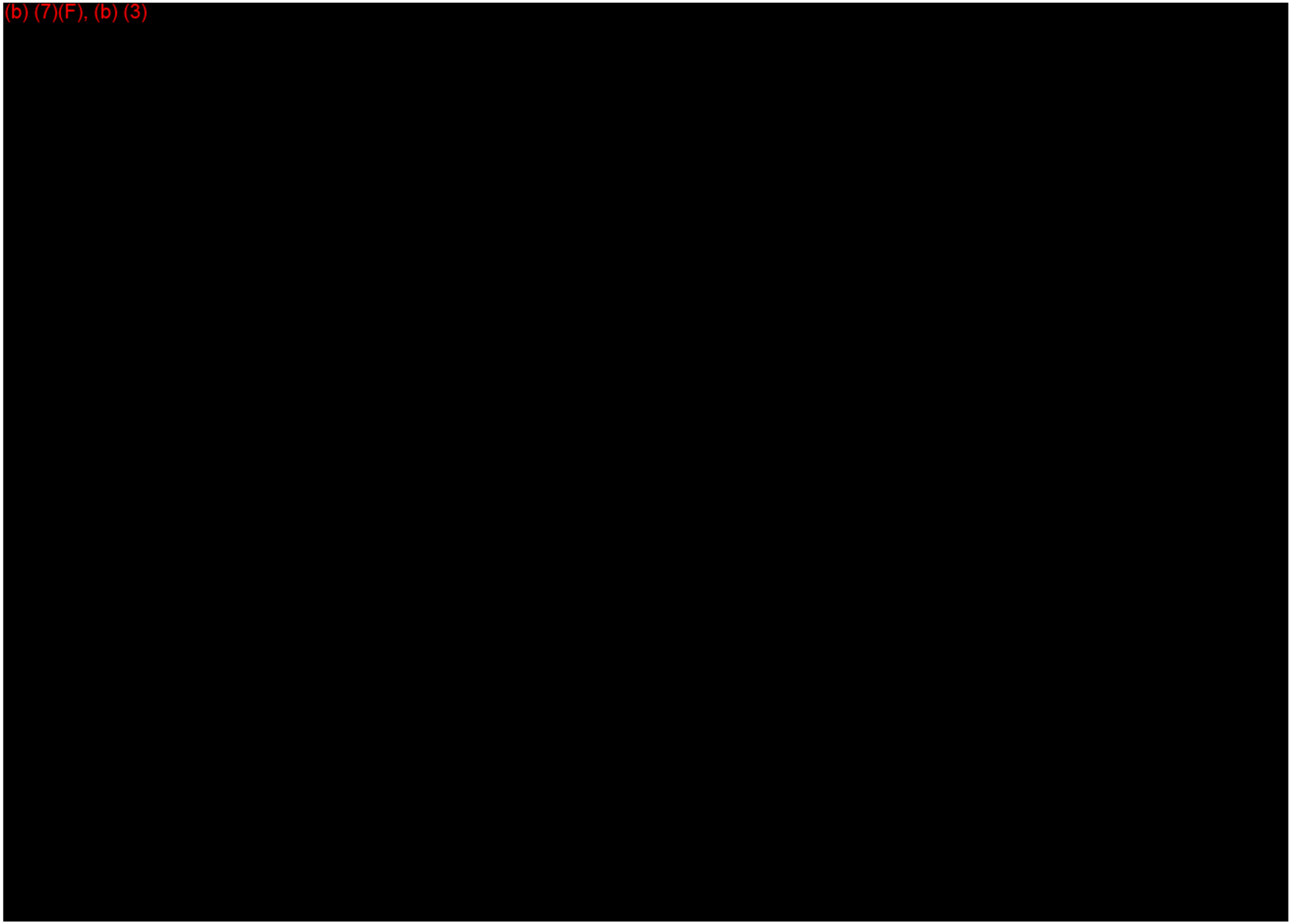


FIGURE 9–19

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Click here to view - Potential Access and Location For Containment at Cuyama River Crossing

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

FIGURE 9-20A

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Click here to view - Potential Access and Location For Containment Downstream of Cuyama River Crossing

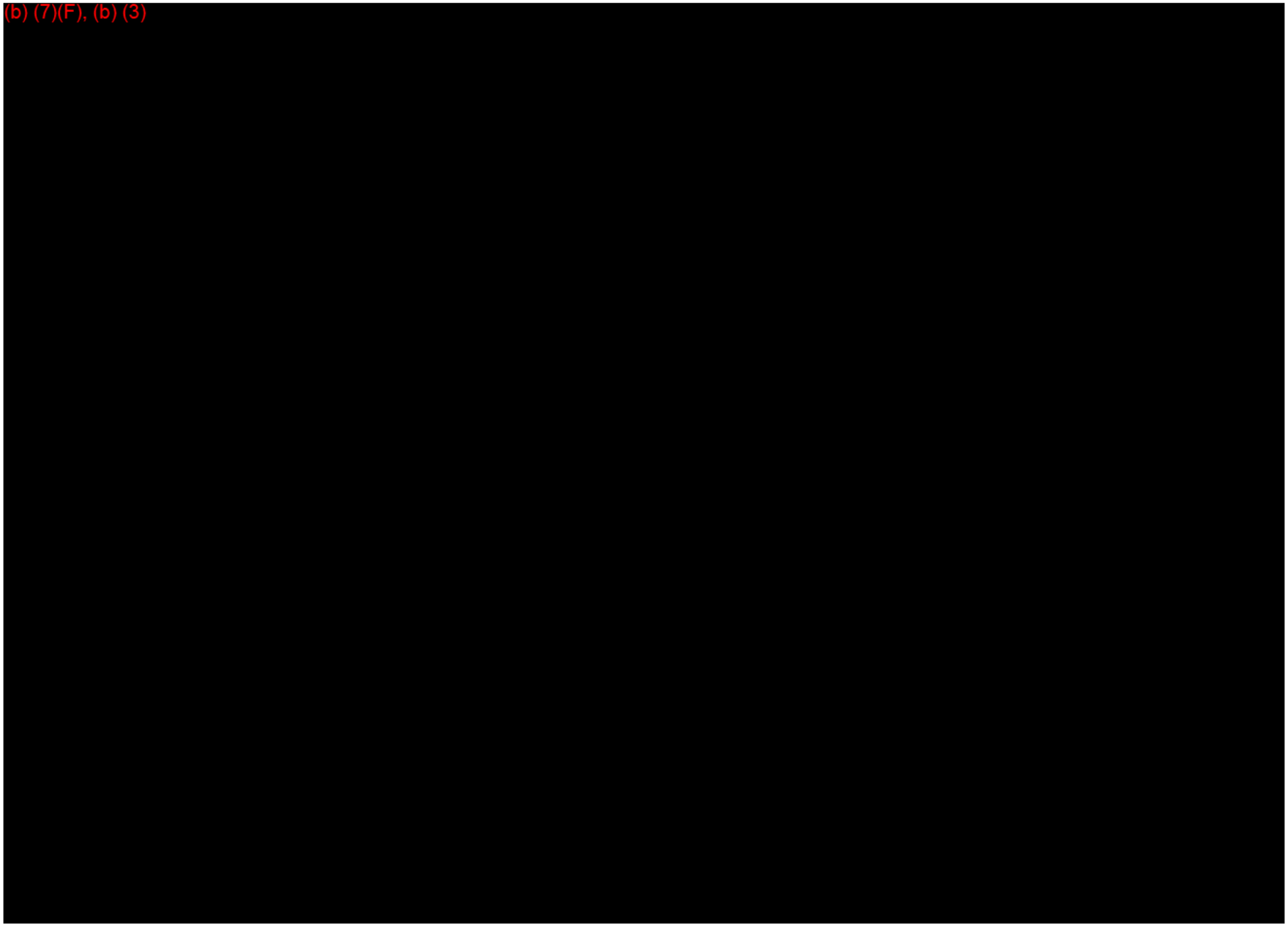


FIGURE 9–20B

FIGURE 6.3-4 - MAJOR STREAM CROSSINGS, CONTINUED

Click here to view - Distance of Coastal Pipeline Creek Crossings to US Highway 101 Access Points

TABLE B-2
DISTANCE OF COASTAL PIPELINE
CREEK CROSSINGS TO US HIGHWAY 101 ACCESS POINTS

Distance/Direction to Stream Crossing From 101 Access Points	De Leon	San Onofre	Zorrillas	Molino	De La Posta	Quillermo	Hondo	De La Huerta	De La Pila	Quermado	Tajiqual	Refugio	Venadito	Corral
Calle Mariposa Reina (East /South in Miles)	0.6	1.0	1.5	2.1	2.6	3.1	3.8	4.1	4.6	5.0	6.2	8.1	9.1	9.6
El Capitan State Beach Park (West/North in Miles)	10.0	9.6	9.1	8.5	8.0	7.5	6.8	6.5	6.0	5.6	4.4	2.5	1.5	1.0

6.4 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 6.4-1**.

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 6.4-2** provides a federal decision guide for bioremediation consideration.

In-Situ Burn

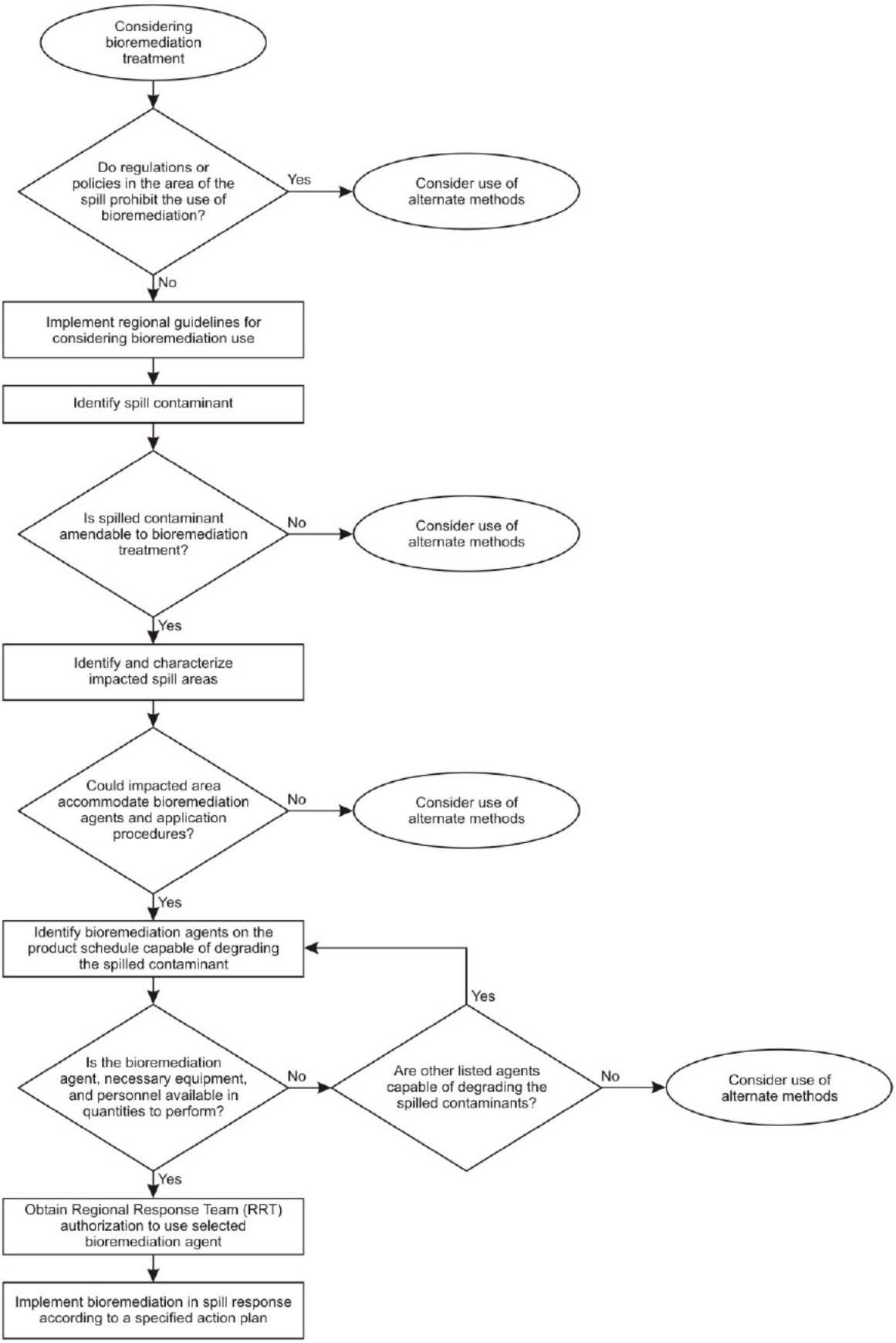
"In-Situ" burning has been successfully used as a viable technique for mitigating oil spills off shore and in a marsh type environment. This is especially true of areas that have mostly grassy vegetation with little or no woody vegetation. In a grassy marshland environment, an "In-Situ" burn may produce 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 6.4-1 - 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 6.4-2 - DECISION GUIDE FOR THE FEDERAL BIOREMEDIATION APPROVAL PROCESS



6.5 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 3.1-6**.
- 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 utilize the California Oiled Wildlife Care Network (OWCN) and other resources to meet oiled wildlife care requirements. Refer to **FIGURE 3.1-6** for contact information.

FIGURE 6.5-1 - WILDLIFE REHABILITATION CONTRACT

Click here to view - International Bird Rescue Research Center Contract 06/30/2011

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.

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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.

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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

6.6 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, 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 buxifolium*	Sea cliffs, bluffs, and dry, rocky slopes in coastal sage scrub	E	California

E - Endangered
T - Threatened

Kern Counties)		

6.6 ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
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
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

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T - Threatened

6.6 ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
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
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

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6.6 ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
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
Crownscale, San Jacinto Valley	*Atriplex coronata var. notatior*	Playas, vernal-pools	E	California
Cypress, Santa Cruz	*Cupressus abramsiana*	Coastal chaparral communities	E	California

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6.6 ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
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

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6.6 ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
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
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

E - Endangered
T - Threatened

6.6 ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
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
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, San Francisco	*Lessingia germanorum (=L.g. var. germanorum)*	Dune scrub	E	California

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6.6 ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
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
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

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6.6 ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
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
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

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6.6 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-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
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

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6.6 ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
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, 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

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6.6 ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
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
Salamander, Santa Cruz long-toed	*Ambystoma macrodactylum croceum*	Chaparral and pine-oak 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
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

E - Endangered
T - Threatened

6.6 ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
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
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

E - Endangered
T - Threatened

6.6 ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
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

E - Endangered
T - Threatened

6.6 ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
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

E - Endangered
T - Threatened

6.6 ENDANGERED AND THREATENED SPECIES BY STATE

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 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
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

E - Endangered
T - Threatened

6.6 ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
Baccharis, Encinitas	*Baccharis vanessae*	Steep slopes, sandstone and volcanic substrates	T	California
Beetle, valley elderberry longhorn	*Desmocerus californicus dimorphus*	Elderberry trees in California	T	California
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
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

E - Endangered
T - Threatened

6.6 ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
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
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

E - Endangered
T - Threatened

6.6 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 (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
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

E - Endangered
T - Threatened

6.6 ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
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
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

E - Endangered
T - Threatened

6.6 ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
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
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

E - Endangered
T - Threatened

Kern Counties)		

6.6 ENDANGERED AND THREATENED SPECIES BY STATE

COMMON NAME	SCIENTIFIC NAME	HABITAT	STATUS	STATE
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
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
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

E - Endangered
T - Threatened

6.7 INVENTORIES FOR STATE-LISTED SPECIES

INVENTORIES FOR STATE-LISTED SPECIES
Objectives
Conduct surveys of 100-foot right-of-way (ROW) for state-listed species and develop additional mitigation measures if deemed necessary by the Resource Management Department.
Background
Ten species of plants and animals listed by the California Department of Fish and Wildlife (CDF&W) were identified in the project EIR/EIS as potentially occurring along the Plains Pipeline (PPLP) ROW in Santa Barbara County. Thirteen "species of special concern" were reported as potentially occurring in site-specific data on occurrence of these species was not available in the EIR, and since several species were reported to occur along the proposed Getty route (now the Southern California Pipeline System route), additional site-specific studies were required as part of PPLP's Final Development Plan. Biologist approval to conduct study was granted on June 6, 1985, July 2, 1985 and June 30, 1988.
Studies were conducted in 1988 and again in April and May of 1990. Seventeen plant species and five animal species were identified as potentially occurring on the coastal segment. Of these, one animal and four plant species were found along the alignment corridor.
State Listed Species - Methods
Information from various sources was gathered to determine what types of site-specific studies may be necessary for state-listed species. These sources includes the EIR/EIS, other development applications, the Bureau of Land Management (BLM) Biological Assessment addressing federally-listed endangered species, contacts with CDF&W personnel, and contacts with Santa Barbara Botanic Garden personnel. This approach is consistent with the provisions of the California Endangered Species Act (Assembly Bill 3309) which states that survey and mitigation for impacts to state-listed species by conducted using existing information.
Specific surveys and mitigation plans for American peregrine falcon, least Bell's vireo, and Parish's checkermallow were completed prior to construction in the spring of 1986.
Specific mitigation plans for Refugio manzanita, Hoffman's nightshade, and Catalina lily were also completed pursuant to FDP Condition H-9, H-10 and H-11.

6.7 INVENTORIES FOR STATE-LISTED SPECIES

INVENTORIES FOR STATE-LISTED SPECIES, CONTINUED
State Listed Species - Methods, Continued
As part of updating information for the 10-mile coastal segment of the pipeline, a complete re-evaluation of rate species was undertaken. The CDF&W was consulted regarding the potential for state-listed species along the route (Kimple 1988 and Sasaki 1988,personal communication). The Natural Heritage Diversity Data Base was contacted for recent reports for rare species along the pipeline (Hanby 1988, personal communication). Local botanists and regional experts were also contacted regarding species of special concern (Junak 1988 and Ferren 1988, personal communication).
A Mitigation plan for Gaviota Tarplant, a state-listed endangered species, is in revision and will be submitted separately.
Finally, an on-ground survey of the 10-mile coastal segment was conducted. Surveys were conducted through April, May, June and July 1988 and April and May 1990. These studies were conducted by Ms. Germaine Reyes-French and Ms. Kathy Rindlaub. The results of past and current field surveys, literature review, and contacts with local experts were summarized in **FIGURE 6.7-1**.
A discussion of species which may occur along the coastal segment of the pipeline are discussed below according to their protected status.
Results
American peregrine falcon (Falco peregrinus anatum) is listed as endangered by the State of California and the federal government. The peregrine falcon may occur in and around Gaviota State Park. Young birds have been released from Santa Ynez ridge in recent years in an attempt to reestablish a population of falcons in the Gaviota Pass area. To date, there are no reports of nesting birds (Harlow 1985 and Freel 1988). U.S. Fish and Wildlife Service required that surveys for nesting peregrine falcon be conducted prior to construction. Fifteen captive-bred peregrines have been released from near Gaviota Peak from 1983 through 1988. Birds have also been cross-fostered with prairie falcon nests. While the observance of peregrine falcon have been increasing along the mainline of Santa Barbara County, no recent nesting attempts are known (Freel 1990).
Surveys for peregrine falcon were conducted in February 1986. Survey techniques included a helicopter flight of potential nesting habitat and ground surveys to identify flight patters to possible feeding areas. The surveys were conducted by PPLP and biologists from the Predatory Bird Group from the University of California at Santa Cruz. No evidence of peregrine falcon activity within 0.5 mile of the ROW was detected. Most suitable nesting habitat is more than 0.5 mile from the coastal pipeline.

6.7 INVENTORIES FOR STATE-LISTED SPECIES

INVENTORIES FOR STATE-LISTED SPECIES, CONTINUED
Other Species of Special Concern - Methods
Information form the EIR/EIS, other development applications, field surveys of the ROW in suitable habitats and discussions with local botanists (Smith 1985, Ferren 1985, Fisher 1988, Rindlaub 1988, Bornstein 1988, and Junak 1988) were used to determine the occurrence Barbara County.
Prior to conducting any field surveys, route maps for the Celeron route and the Southern California Pipeline System route (in Gaviota State Park) were compared with recent publications on endangered plants (Smith and York 1984, Strong 1985, and Fletcher 1986, and the Santa Barbara Natural History Museum's herbarium records (Smith 1985), as well as Mr. Smith's and Ms. Rindlaub's personal experience with rare plant occurrence in the County. Based on a review of this information, several species (24 plants and 4 animals) were identified as potentially occurring along the route in Santa Barbara County. This information was updated in June and July 1988 and April and Map 1990 for the 10-mile coastal segment. Information from the 1988 Santa Barbara County (Junak 1988, personal communication) was incorporated into this submittal. This information includes several species not originally included in Appendix Table B-6 of the DEIR/EIS. This current review was more comprehensive and site-specific than the review in the DEIR/EIS. Appendix Table B-6 (of the DEIR/EIS) was generated from the California Natural Diversity Data Base and reported all siting on the same 7-1/2 minute quadrangle map as the proposed ROW for 1985. **FIGURE 6.7-1** includes updated information from 1988, 1989 and 1990.
Results
On-ground surveys for the coastal segment and feeder line route were conducted for the 100-foot ROW, proposed realignments, proposed extra work space areas, and the Gaviota Pump Station between April and May 1990. **FIGURE 6.7-1** summarizes the result of both past and current investigations.
A discussion of those species of local concern found along the coastal segment is provided below.
Plummer's baccharis (Baccharis Plummerae) Gray is listed by CNPS as a List 4, watch list species. This leafy, suffructescent, white-flowered perennial is scattered in rocky locations in canyons on both sides of the Santa Ynez Mountains. It extends up Miranda Pine Creek and in the lower Cuyama River canyon in the Santa Barbara region as well as through to Los Angeles County and Santa Cruz Island on the coast (Smith, 1976).

6.7 INVENTORIES FOR STATE-LISTED SPECIES

INVENTORIES FOR STATE-LISTED SPECIES, CONTINUED
Results, Continued
Although it may be frequently encountered locally, its restricted distribution has qualified it for CNPS List 4.
Most easily seen in June through October, when it flowers, it is often unobtrusive the rest of the year. It was reported from five locations o the ROW, Tajiguas Canyon and a small drainage somewhat west of Tajiguas. During the walkover in summer 1988 it also was found in Arroyos Quemado and Hondo as well as in Cañada Venadito on the ROW and/or proposed work space (Rindlaub 1988(). The reroute on the MAZ property will avoid a drainage containing Plummer's baccharis. However, it is present on the preferred Exxon route.
Although the Santa Barbara Botanic Garden has never tried to propagate Plummer's baccharis, the Botanic Garden's ALL horticulturist (Carol Bornstein), is of the opinion that it should be easy to dig up, propagate and following construction, replant. It apparently has never been grown from seed, and the germination requirements of the seeds are unknown (Bornstein 1988). To mitigate impacts to this species, AAPL will salvage plants on the pipeline corridor. Carol Bornstein, Santa Barbara Botanic Garden and John Blech, University of California, both have agreed to maintain the salvaged plants and to attempt to propagate material taken from salvaged plants or from others adjacent tot the right-of-way. Seed will also be collected and stored. There is no evidence of variation among the wind-dispersed Plumer's baccharis populations in the Gaviota area, nor is there any record of introgression with any other species in Santa Barbara County (Junak, 1988). However, at the specific request of Santa Barbara County, Celeron will label all materials (salvaged and propagated plants and seed) by Cañada of origin. When construction has been completed the following the first soaking rains, salvaged and propagated plants will be planted out on the ROW in the Cañada of origin. Seed also will be sown onto the ROW in Cañada of origin.
Gaviota tarplant (Hemizonia increscens villosa) is listed as endangered by the State of California and is currently a CNPS 1B species. Gaviota tarplant is a local endemic with a restricted range.
The small to medium-sized (up to three or five decimeters), branched yellow-flowered annual composite has been historically recorded only from the area around Gaviota, especially near the Chevron and Texaco plant sites (Tanowitz, 1988). Usually it is associated with sandy clay soils of the Milpitas-Positas-Concepcion formations (Tanowitz, 1988; URS 1987 and Rindlaub 1988).

6.7 INVENTORIES FOR STATE-LISTED SPECIES

INVENTORIES FOR STATE-LISTED SPECIES, CONTINUED
Results, Continued
The tarplant has been recorded on the pump station site, proposed feeder line routes (to Texaco facility), and on the corridor for the propsoed 24-inch pipeline to Las Flores Canyon. A mitigation plan has been submitted to the County of Santa Barbara pursuant to FDP Conditions H-23 (Celeron, 1988).
Cliff-aster (Malacothrix saxatilis var.) is listed by the Santa Barbara Botanic Garden (1988) as a local concern species. Cliff-aster is a suffructescent, pink-streaked, white-flowered member in the chicory tribe of the composite family. It ranges from west of Gaviota to northern Ventura county. A colonizer of disturbed habitats and ocean bluffs, it is often found on roadcuts. Mostly coastal, it also ranges inland to Santa Rosa Road near Lompoc and north of Casmalia. It flowers from March to September (Smith, 1976). Although relatively well distributed within its range, it is endemic to the coastal part of the Santa Barbara region. Because of its limited distribution and restricted habitat (i.e., bluffs, canyon walls, roadcuts in shale) it is on local "watch lists.
The cliff-aster has been found along the coastal pipeline near Cañada de la Huerta, Arroyo Quemado, Tajiguas Creek and along the Exxon preferred alternative.
A colonizing species, this cliff-aster is a good candidate for propagation and replanting from stock along the ROW (Bornstein, 1988). Seeding might also be successful if enough seed can be obtained.
Typical M. s. saxatilis has broad basal leaves that are more or less entire, and linear stem leaves. Typical M. s. tenuifolia, on the other hand, has narrow leaves with divided margins and the side shoot leaves are very long. The inflorescence is more open and with smaller heads than var. saxatilis. Var. tenuifolia branches from a rootstock, where saxatilis grows form rhizomes.
Considerable variability was observed among populations in different Cañada's. The Gaviota area has been noted as one where Malacothrix saxatilis var. tenuifolia (and ssp. Implicata) are hybridizing or "introgressing" with the variety saxatilis (Smith, 1976). The species tolerates disturbance and it is quite likely the introduction of var. tenuifolia to the Goleta region is relatively recent, and dut to disturbance corridors such as roadcuts and the railroad (Smith, 1980; Davis, 1988). Dr. Stan Davis (1988), who specializes in Malacothrix taxonomy, has confirmed the presence of hybrids between the varieties saxatilis and tenuifolia in the area, but has seen no material attributable to implicata. Since the two former varieties are of concern, revegetation will be accomplished using propagated stock (where possible) that will be replanted in the area of origin. Seed will be collected and stored in separate lots by Cañada's and sown only into areas where it was collected. Seed will be collected in late summer and early fall, stored dry, and sown following the first soaking rains. The few data that are immediately available regarding dormancy mechanisms and germination percentages for this species suggest it, like many colonizers, germinates relatively readily.

6.7 INVENTORIES FOR STATE-LISTED SPECIES

INVENTORIES FOR STATE-LISTED SPECIES, CONTINUED

Results, Continued

Catalina Mariposa Lily (Calochortus catalinea) is regarded as a species of local concern. It has been evaluated by California Native Plant Society, which put it in their Appendix 1: species too common for listing. This lily is a perennial that grows from bulbs in heavy soils and produces pale lavender chalice-shaped flowers in March-May. It ranges from southern San Luis Obispo to San Diego counties.

This lily has been reported from the western shoulder of San Onofre Canyon (URS, 1988), where a toe of clay soil overlaps the sandy soils more typical of the area. It is also present along the Exxon preferred route. To salvage bulbs, a lift of about 18" of soil will be salvaged and stockpiled nearby. The pile of soil and bulbs will be protected from wind erosion. When construction has been completed in the area, the soil (with bulbs) will be replaced.

Summary

Surveys for nesting peregrine falcon were conducted prior to construction pursuant to U.S. Fish and Wildlife Service Biological opinion and Santa Barbara County FDP Condition H-17. No evidence of peregrine falcon within 0.5 mile of the ROW has be detected.

Surveys for rare plants along the 10-mile coastal segment revealed four species of special concern. These species include the Gaviota tarplant (Hemizonia increscens villosa), Plummer's baccharis (Baccharis plummerae), Catalina Mariposa Lily (Calochortus catalinea), and Cliff-aster (Malacothrix saxatilis saxatilis). Specific mitigation for the Gaviota tarplant is addressed in the plan as required by Condition H-23.

Impacts to Plummers baccharis and Cliff-Aster will be mitigated using a three-pronged approach: salvage, propagation, and seed collection. All material for both species will be collected and labeled separately by Cañada of origin. The material will be planted or sown back into those sites after the first soaking rains following construction. Impacts to Catalina Mariposa Lily will be mitigated by salvaging the soil containing the bulbs and replacing it following construction.

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6.7 INVENTORIES FOR STATE-LISTED SPECIES

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6.7 INVENTORIES FOR STATE-LISTED SPECIES

INVENTORIES FOR STATE-LISTED SPECIES, CONTINUED

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FIGURE 6.7-1 - SPECIES OF SPECIAL CONCERN

Species	[1]Status (CNSP/State/Fed)	Potential Occurrence Reported in EIR	Method of Confirming Occurrence	Results	Recommendations
Arctostaphylos purissima (Purisima manzanita)	Plants considered (APP 1) [too common for listing]	Nor reported in EIR (Flowers November - March)	Survey in Gaviota State Park	Purisima manzanita occurs with Refugio manzanita	Occurs on Southern California Pipeline System ROW, no recommendations
Arctgostaphylos refugioensis (Refugio manzanita)	Rare and Endangered List (1B)/_/C3c	Gaviota Pass (Flowers November - March)	Aerial and ground survey in suitable habitat	Found during construction in Gaviota State Park, replanted winter of 1987	See Condition H-11
Baccharis plummerea* (Plummer's baccharis)	Watch List (4)	Gaviota State Park (Flowers June - October)	Ground Survey	Found in Gaviota Park, near Tajiguas Creek, Arroyo Quemado, Venadito Canyon and Arroyo Hondo	Collect and propagate plants; collect seed; transplant and reseed following construction
Calochortus catalinea* (Catalina mariposa lily)	Plants considered (APP 1) [too common for listing]	Gaviota Pass (Flowers March - May)	Ground Surveys	Field survey confirmed in Gaviota State Park. Reported at San Onofre Canyon	See Condition H-10. Soil with bulbs will be salvaged, stockpiled and replaced
Caulanthus amplexicaulis barbarae (Santa Barbara flower or caulanthus)	Rare List (1B)/C2	Zaca Lake Serpentire Bluffs (Flowers May - July)	Aerial survey for serpentine soils, ground at Alliso Creek	None Found	None
Erlodictyon capitatum (Lompoc yerba santa)	Rare and Endangered List (1B)/ST/C1	Gaviota Pass (Flowers May- June)	Found on Hollister Ranch by Fletcher (1983 conducted surveys in suitable habitat in Gaviota State Park)	None Found	None

* Found on or near ROW during 1988 survey for 10-mile coastal segment.
Local Concern Lists Santa Barbara Botanic Garden Staff (1988)

[1]**Status from California Native Plant Society (Smith and Berg, 1988)** List 1A - Plants presumed extinct in California. List 1B - Plants rare and endangered in California and elsewhere. List 2 - Plants rare or endangered in California, but more common elsewhere. List 3 - Plants about which more information is needed. List 4 - Plants of limited distribution (A Watch List). Appendix 1 - Plants considered but not included.

State Listed (California Department of Fish & Wildlife 1987) ST - State Listed, Threatened; SE - State Listed, Endangered; SR - State Listed, Rare; SC - Candidate for State Listing

Federally Listed U.S. Fish & Wildlife Service - Federal Register Volume 48, No. 145 and 229. Category 1 - Data available to support threatened or endangered status. Category 2 - Further research needed to support threatened or endangered status. Category 3 - Species no longer considered for listing as threatened or endangered.

FIGURE 6.7-1 - SPECIES OF SPECIAL CONCERN

Species	[1]Status (CNSP/State/Fed)	Potential Occurrence Reported in EIR	Method of Confirming Occurrence	Results	Recommendations
Eryslumum suffretescens grandiflorum (Large-leaved wallflower)	Watch List (4)	Nor reported in EIR. (Flowers February - July)	Conducted survey. In suitable habitat in Gaviota State Park	None Found	None
Galium cliftonsmithii (Santa Barbara bedstraw)	CNPS-1	Not reported in EIR. (Flowers June - September)	Ground Survey	None Found	None
Grindelia latifolia latifolia (Coastal gumplant)	CNPS-4	Non reported in EIR. (Flowers June - September)	Ground Survey	None Found	None
Hemizonia increscens villosa* (Gaviota tarplant)	State Listed CNPS 1B List 1\(1B)/SC/	Not reported in EIR. (Flowers June - October)	Ground Survey	Present at Gaviota Pump Station. Feederline area between Cañada de la Cementaria and Cañada de las Zorrillas	1. Collect Seed 2. Salvage topsoil 3. Replant & monitor See H-23
Malacothrix saxatllis* (Cliff-aster)	Local Concern Botantic Garden List	Not reported in EIR. (Flowers March - September)	Ground Survey	Occasional in most drainages	Salvage and propagate plants. Replant following construction; collect seed; include seed in mix for Monterey shale slopes
Ribes amarum hoffmannli (Bitter gosseberry)	Information List (3)	Not reported in EIR. (Flowers February - July)	Known to occur at Las Cruces Hot Springs. None found in Gaviota State Park or coastal segment	None Found	None

* Found on or near ROW during 1988 survey for 10-mile coastal segment.
Local Concern Lists Santa Barbara Botanic Garden Staff (1988)

[1]**Status from California Native Plant Society (Smith and Berg, 1988)** List 1A - Plants presumed extinct in California. List 1B - Plants rare and endangered in California and elsewhere. List 2 - Plants rare or endangered in California, but more common elsewhere. List 3 - Plants about which more information is needed. List 4 - Plants of limited distribution (A Watch List). Appendix 1 - Plants considered but not included.

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FIGURE 6.7-1 - SPECIES OF SPECIAL CONCERN

Species	[1]Status (CNSP/State/Fed)	Potential Occurrence Reported in EIR	Method of Confirming Occurrence	Results	Recommendations
Sanicula hoffmanii (Hoffman's sanicle or snakeroot)	Watch List (4)	Gaviota State Park (Flowers April - June)	Conducted survey in Gaviota State Park and on coastal segment	Found on Celeron ROW, replanted Spring of 1987. None found of coastal segment.	See Condition H-9
Scrophularia atrata (Black-flowered figwort)	Information List (3)/_/C2	Gaviota State Park (Flowers April - June)	Conducted ground survey in Gaviota State Park and along coastal segment	Hybirds found off the ROW. None found on coastal segment.	None
Sidalces hickmanni parishii (Parish's sidalcea or checkermallow)	List 1B/SR/_	Sierra Madre Mountains	Gound Sruvey in Los Padres National Forest	None Found	None
Solanum xantii hoffmanni (Hoffman's nightshade)	Watch List (4)	Gaviota List (4)	Gaviota Pass (Flowers February - July)	Conducted survey in Gaviota State Park and along coastal segment.	See Condition H-9
Thermopsis macrophyiia agina (Santa Ynez or Santa Barbara false lupine)	Rare List (2)/ST/C2	Solvang Area (Flowers April - July)	Conducted ground survey in suitable habitat in Gaviota State Park.	None Found	None
Clemmys marmorata pallida (Southern pond turtle)	Federal List, Category 2 candidate	Riparian Area	Historic record for Refugio Creek	No habitat at crossing	None

* Found on or near ROW during 1988 survey for 10-mile coastal segment.
Local Concern Lists Santa Barbara Botanic Garden Staff (1988)

[1]**Status from California Native Plant Society (Smith and Berg, 1988)** List 1A - Plants presumed extinct in California. List 1B - Plants rare and endangered in California and elsewhere. List 2 - Plants rare or endangered in California, but more common elsewhere. List 3 - Plants about which more information is needed. List 4 - Plants of limited distribution (A Watch List). Appendix 1 - Plants considered but not included.

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FIGURE 6.7-1 - SPECIES OF SPECIAL CONCERN

Species	[1]Status (CNSP/State/Fed)	Potential Occurrence Reported in EIR	Method of Confirming Occurrence	Results	Recommendations
Encyclogoblus newberryi (Tidewater goby)	Federal List, candidate	Coastal lagoons	FWS, Bio opinion Gaviota Creek	No significant impacts	None
Falcon peregrinus anatum (American peregrine falcon)	Federal List, endangered	Cliffs and lagoons	Ground and aerial survey in 1986	Reintroduced near Gaviota Pass, none found on ROW	None
Rana aurora (Red-legged frog)	California State "protected species"	Non reported in EIR	Known from Gaviota Creek (Dames & Moore 1985), possible in Refugio Creek, possible in Arroyo Hondo	Rerouted to minimize impacts to willow habitat	Rerouted stream crossings at Gaviota, Refugio Creeks; rehabilitation existing willow habitat.
Vireo bellil pusillus (Least Bell's vireo)	SE/Forest ServiceSensitive Species	Riparian areas. Willow thickets	Nesting suspected in Gaviota Creek	5/86 surveys reported no birds at Gaviota Creek or Santa Ynez River	Rerouted stream crossing at Gaviota Creek

* Found on or near ROW during 1988 survey for 10-mile coastal segment.
Local Concern Lists Santa Barbara Botanic Garden Staff (1988)

[1]**Status from California Native Plant Society (Smith and Berg, 1988)** List 1A - Plants presumed extinct in California. List 1B - Plants rare and endangered in California and elsewhere. List 2 - Plants rare or endangered in California, but more common elsewhere. List 3 - Plants about which more information is needed. List 4 - Plants of limited distribution (A Watch List). Appendix 1 - Plants considered but not included.

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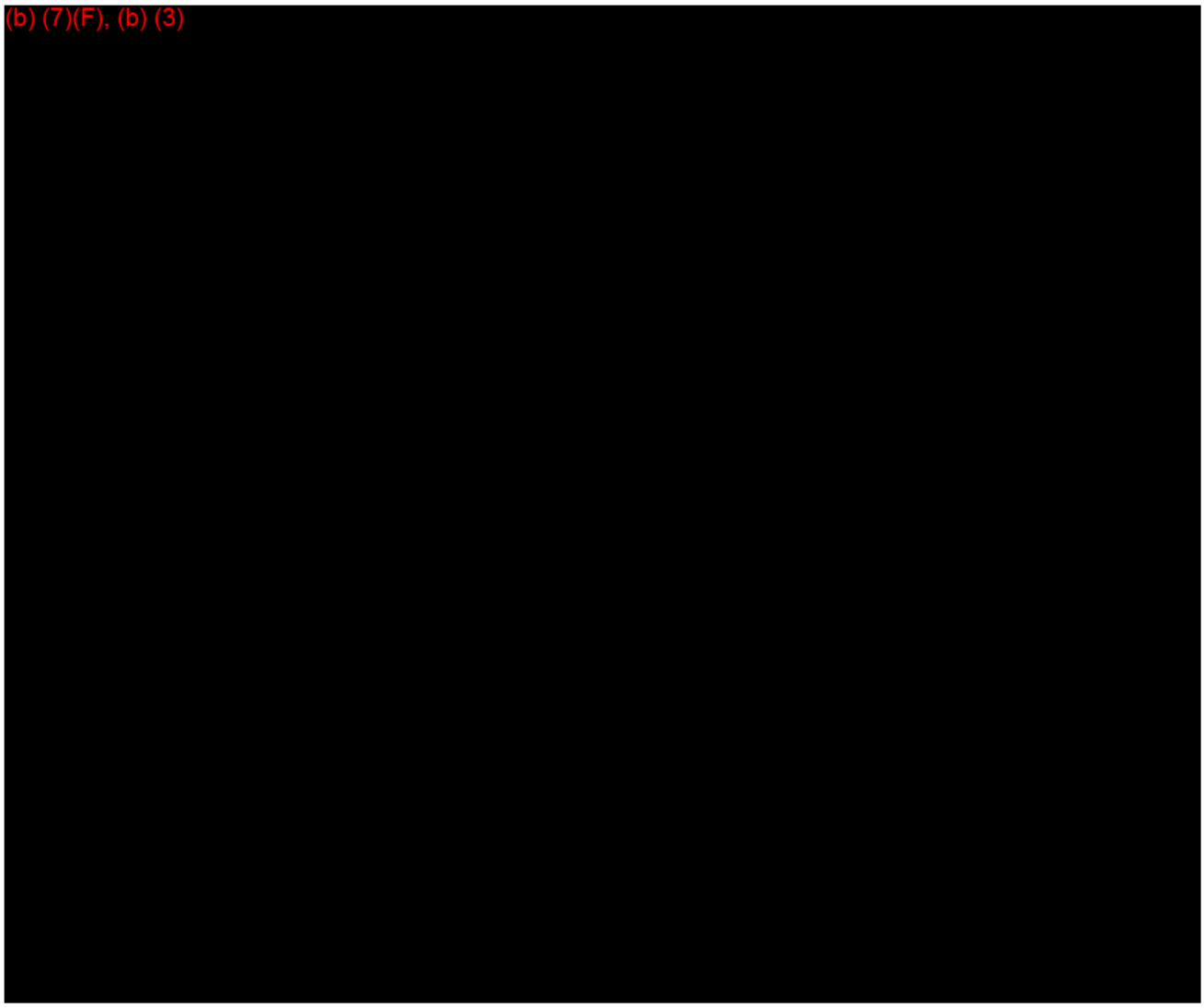
6.8 PUMPING STATION AND VALVE FACILITY LOCATIONS

Immediate response locations and a list of pumping stations and mainline gate valves are listed below, followed by maps of each location. Station and valve map locations are not immediate response locations, but are included for directions to facilities only.

Because of its general sensitivity of proximity to the Pacific Ocean, a table also has been provided herein to reflect the distance, in miles, from the El Capitan State Beach Park and Calle Mariposa Reina exit/entrance ramps on US Highway 101 to each of the 14 stream and Cañada crossings along the Coastal Pipeline route. This table should assist when providing location and/or directional information on potential responders.

6.8 PUMPING STATION AND VALVE FACILITY LOCATIONS, CONTINUED

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



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

6.8 PUMPING STATION AND VALVE FACILITY LOCATIONS, CONTINUED

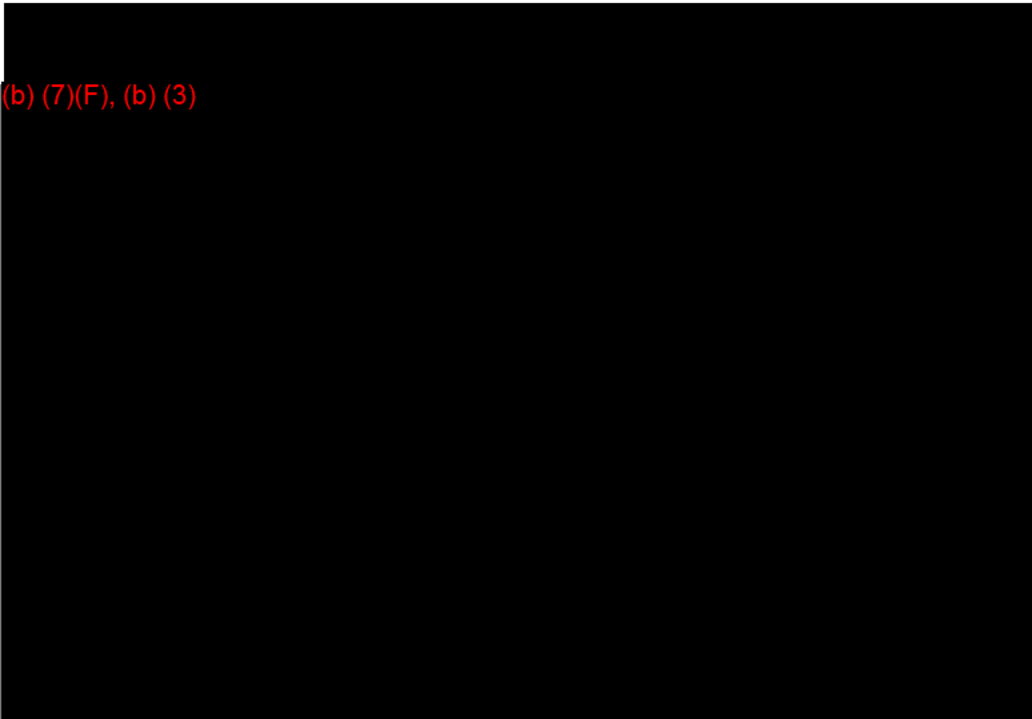
Click here to view - Las Flores Pump Station

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

6.8 PUMPING STATION AND VALVE FACILITY LOCATIONS, CONTINUED

Click here to view - Crude Oil Flowpath from Las Flores and Gaviota Origin, Receipt Locations

Crude Oil Flowpath Diagram From
Las Flores and Gaviota Origin, Receipt Locations

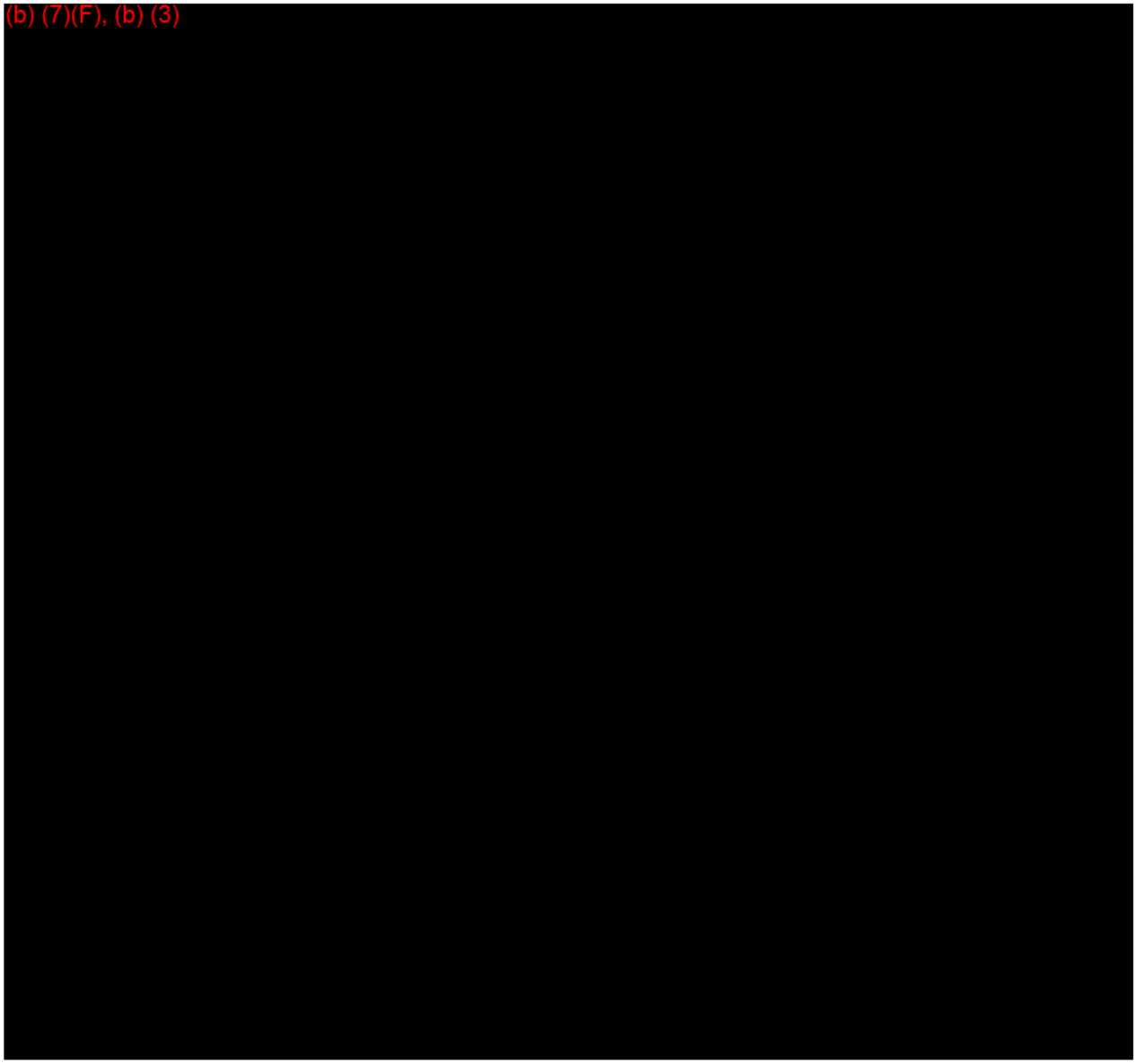


6.8 PUMPING STATION AND VALVE FACILITY LOCATIONS, CONTINUED

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

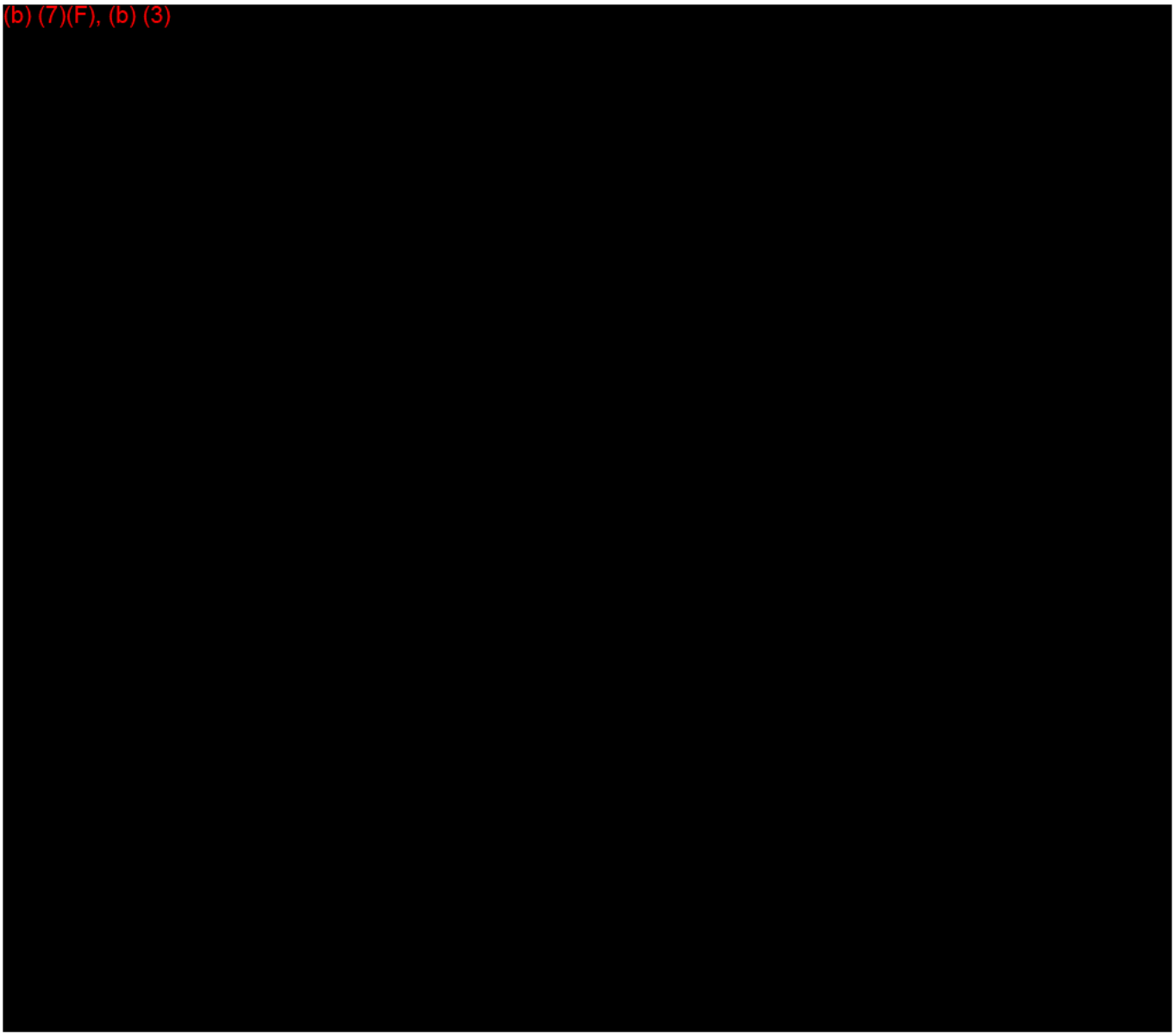
6.8 PUMPING STATION AND VALVE FACILITY LOCATIONS, CONTINUED

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



6.8 PUMPING STATION AND VALVE FACILITY LOCATIONS, CONTINUED

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



6.8 PUMPING STATION AND VALVE FACILITY LOCATIONS, CONTINUED

6.8 PUMPING STATION AND VALVE FACILITY LOCATIONS, CONTINUED

Click here to view - Gaviota Pump Station

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

[redacted]

6.8 PUMPING STATION AND VALVE FACILITY LOCATIONS, CONTINUED

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

[redacted]

6.8 PUMPING STATION AND VALVE FACILITY LOCATIONS, CONTINUED

6.8 PUMPING STATION AND VALVE FACILITY LOCATIONS, CONTINUED

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

[redacted]

6.8 PUMPING STATION AND VALVE FACILITY LOCATIONS, CONTINUED

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

6.8 PUMPING STATION AND VALVE FACILITY LOCATIONS, CONTINUED

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

[redacted]

6.8 PUMPING STATION AND VALVE FACILITY LOCATIONS, CONTINUED

6.8 PUMPING STATION AND VALVE FACILITY LOCATIONS, CONTINUED

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

6.8 PUMPING STATION AND VALVE FACILITY LOCATIONS, CONTINUED

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

6.8 PUMPING STATION AND VALVE FACILITY LOCATIONS, CONTINUED

Click here to view - Sisquoc Pump Station

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

6.8 PUMPING STATION AND VALVE FACILITY LOCATIONS, CONTINUED

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

6.8 PUMPING STATION AND VALVE FACILITY LOCATIONS, CONTINUED

6.9 LANDOWNER LISTINGS

Mile Post No.	Landowner	Phone Number
3	FREEMAN, LESLIE DAVID AND GAIL ANN (355 REFUGIO RD, GOLETA CA 93117-8738) APN 081-210-051	(805) 968-1460
10-11	STATE OF CALIFORNIA (17620 GAVIOTA STATE PARK, GAVIOTA CA 93117) APN 081-270-003	(805) 968-1033
(b) (7)(F), (b) (3)		(661) 336-7906
22-23	BOROWSKI STANLEY (2675 DAYSTAR CIR, PARK CITY UT 84060-8818) APN 083-180-016	unlisted
(b) (7)(F), (b) (3)		unlisted
0	EXXON CORPORATION (PO BOX 53, HOUSTON TX 77001-0053) APN 081-220-014	(800) 537-5200
41-43	FLOOD RANCH COMPANY (870 MARKET ST #1100, SAN FRANCISCO CA 94102-2920) APN 133-010-015	(805) 937-3616
44	FESLER JOHN A (270 ANCHOR CT, BOULDER CREEK CA 95006-9363) APN 129-260-004	(831) 338-1775
0-1	EXXON CORPORATION (PO BOX 53, HOUSTON TX 77001-0053) APN 081-220-019	(800) 537-5200
9	RICHARD WOODALL INC (PO BOX 9513, BAKERSFIELD CA 93389-9513) APN 081-130-068	unlisted

6.9 LANDOWNER LISTINGS

Mile Post No.	Landowner	Phone Number
22-23	VALLEY MOBILE PARK INVESTMENTS (1933 CLIFF DR #2, SANTA BARBARA CA 93109) APN 099-690-001	unlisted
47	TEPUSQUET RANCH LLC (5555 SANTA MARIA MESA RD, SANTA MARIA CA 93454-9638) APN 129-005-014	(805) 937-5250
11	STATE OF CALIFORNIA (17620 GAVIOTA STATE PARK, GAVIOTA CA 93117) APN 083-650-011	(805) 968-1033
3	FREEMAN, LESLIE DAVID AND GAIL ANN (355 REFUGIO RD, GOLETA CA 93117-8738 (No Mail)) APN 081-210-050	(805) 968-1460
3	VARGAS FAMILY (6830 ARTESIA BLVD, BUENA PARK CA 90620-1015) APN 081-210-046	unlisted
11-12	PARCEL 123 PTSHP (125 HARBOR WAY #11, SANTA BARBARA CA 93109-2352 C/O BRIAN CORYAT) APN 083-700-019	(805) 962-8195
48	ACQUISTAPACE RANCHES (290 FOXENWOOD DR, SANTA MARIA CA 93455-4231) APN 131-130-016	(805) 937-4957
22-23	VALLEY MOBILE (1933 CLIFF DR #2, SANTA BARBARA CA 93109) APN 099-670-005	unlisted
9	ARGUELLO INC/K E ANDREWS & COMPANY (PO BOX 870849, MESQUITE TX 75187-0849 C/O LEAH PROKOP) APN 081-130-076	unlisted
1-2	TAUTRIM, MARK W (12750 CALLE REAL, GOLETA CA 93117-8706) APN 081-230-021	(805) 968-9398

6.9 LANDOWNER LISTINGS

Mile Post No.	Landowner	Phone Number
45	DONOVAN DAN & MARNIE (5051 TEPUSQUET CANYON RD, SANTA MARIA CA 93455) APN 129-260-030	(805) 937-1695
9-10	COUNTY OF SANTA BARBARA (1100 ANACAPA ST, SANTA BARBARA CA 93101-2099 C/O REAL PROPERTY/GENERAL SERVICES) APN 081-130-075	Elsa Arndt (805) 560-1081
23	VALLEY MOBILE PARK INVESTMENTS (1933 CLIFF DR #2, SANTA BARBARA CA 93109) APN 099-670-004	unlisted
49	PERRETT H D & CAROL M (2491 BULL CANYON RD, SANTA MARIA CA 93454-9507) APN 131-090-089	(805) 925-6850
11-12	VEREUCK JOHN T & JANET M (2041 W MOUNTAIN ST, GLENDALE CA 91201-1259) APN 083-700-023	(805) 962-9712
3	BEAN BLOSSOM LLC (14000 CALLE REAL,GOLETA CA 93117-9730 C/O DAVID TRESIZE) APN 081-210-047	unlisted
3	MAZ PROPERTIES INC (14000 HWY 101, GOLETA CA 93117) APN 081-200-028	(805) 685-6619
12	STATE OF CALIFORNIA (17620 GAVIOTA STATE PARK, GAVIOTA CA 93117) APN 083-650-009	(805) 968-1033
50	MUNGER MICHAEL R/MUNGER JASON A (5458 LANCER AVE, SANTA MARIA CA 93455-4917) APN 131-141-001	(805) 937-1726
23-24	TRINITY PARTNERS (1168 OAK GLEN RD, SANTA YNEZ CA 93460-9606) APN 099-750-001	(805) 688-8395

6.9 LANDOWNER LISTINGS

Mile Post No.	Landowner	Phone Number
9-10	COUNTY OF SANTA BARBARA (1100 ANACAPA ST, SANTA BARBARA CA 93101-2099 C/O REAL PROPERTY/GENERAL SERVICES) APN 081-130-074	Elsa Arndt (805) 560-1081
10	ARGUELLO INC/K E ANDREWS & COMPANY (PO BOX 870849, MESQUITE TX 75187-0849 C/O LEAH PROKOP) APN 081-130-076	unlisted
23-24	PALIUS DEAN MORRISON KIMBERLY ANNE (320 DOGWOOD DR, BUELLTON CA 93427-6809) APN 099-750-14	(805) 688-4198
50-51	USA (6755 HOLLISTER AVE. #150GOLETA, CA 93117) APN 131-090-023	(805) 968-6640
12-13	STATE OF CALIFORNIA (17620 GAVIOTA STATE PARK, GAVIOTA CA 93117) APN 083-650-008	(805) 968-1033
3	BEAN BLOSSOM LLC (14000 CALLE REAL,GOLETA CA 93117-9730 C/O DAVID TRESIZE) APN 081-200-032	unlisted
3	MAZ PROPERTIES INC (14000 HWY 101, GOLETA CA 93117) APN 081-200-033	(805) 685-6619
12-13	STATE OF CALIFORNIA (17620 GAVIOTA STATE PARK, GAVIOTA CA 93117) APN 083-650-009	(805) 968-1033
51	MUNGER MICHAEL R/MUNGER JASON A (5458 LANCER AVE, SANTA MARIA CA 93455-4917) APN 131-090-024	(805) 937-1726
23-24	SIGNA FAMILY (331 VALLEY DAIRY RD,BUELLTON CA 93427-6807) APN 099-750-018	unlisted

6.9 LANDOWNER LISTINGS

Mile Post No.	Landowner	Phone Number
23-24	ISLANDIA 29 (2716 OCEAN PARK BLVD #3006, SANTA MONICA CA 90405-5299) APN 099-800-023	unlisted
52	PERRETT H D & CAROL M (2491 BULL CANYON RD, SANTA MARIA CA 93454-9507) APN 131-090-089	(805) 925-6850
12-13	STATE OF CALIFORNIA (17620 GAVIOTA STATE PARK, GAVIOTA CA 93117) APN 083-590-011	(805) 968-1033
4	ANTOLINI JOAN I & ERNESTINE J (120 E HERMOSA ST, SANTA MARIA CA 93454-3726) APN 081-150-007	(805) 925-7016
4-6	MAZ PROPERTIES INC/HEARST CORP THE (14000 HWY 101,GOLETA CA 93117) APN 081-150-006	(805) 685-6619
12-13	STATE OF CALIFORNIA (17620 GAVIOTA STATE PARK, GAVIOTA CA 93117) APN 083-590-003	(805) 968-1033
52-53	BENNETT GERALDINE A (PO BOX 1265, SANTA YNEZ CA 93460-1265) APN 131-090-073	(805) 937-6873
24	BUELLTON RANCH/BUELLTON DEVELOPMENT PROPERTIES (834 22ND ST, SANTA MONICA CA 90403-2009) APN 099-400-069	(310) 453-2274
24-25	KELLER BRIAN T & KAREN LEE (80 BOBCAT SPRINGS RD, BUELLTON CA 93427-9793) APN 099-400-090	unlisted
53	GILL BILL & MARY (542 E CLARK AVE, SANTA MARIA CA 93455-4873) APN 131-090-075	(805) 938-9871

6.9 LANDOWNER LISTINGS

Mile Post No.	Landowner	Phone Number
13	STATE OF CALIFORNIA (17620 GAVIOTA STATE PARK, GAVIOTA CA 93117) APN 083-590-016	(805) 968-1033
6	COUNTY OF SANTA BARBARA (14550 HWY 101, GOLETA CA 93117) APN 081-150-032	Elsa Arndt (805) 560-1081
6	HART FAMILY (494 N LA CUMBRE RD, SANTA BARBARA CA 93110-1511) APN 081-150-033	(805) 569-2613
14-16	LLOYDS BANK CALIFORNIA/SC-MPK-03-M (PO BOX 54400, LOS ANGELES CA 90054-0400 C/O BANK OF THE WEST) APN 083-500-029	(800) 232-2430
53-54	GILL BILL & MARY (542 E CLARK AVE, SANTA MARIA CA 93455-4873) APN 131-200-025	(805) 938-9871
25	ZACA PRESERVE LLC (1800 AVENUE OF THE STARS #310, LOS ANGELES CA 90067-4205 C/O FORTUNE LAND CO) APN 099-400-017	Agent for Service: Lew Eisaguirre (805) 888-8005
25-26	DEANEROW LLC/BUELL JIM (4970 CAUGHLIN PKWY #518, RENO NV 89519) APN 099-630-001	(775) 826-2209
54	ROSS SIVERT O /TR & BARBARA G (3661 LOS PADRES RD, SANTA MARIA CA 93455-2920) APN 131-200-013	(805) 937-2805
17	LLOYDS BANK CALIFORNIA/SC-MPK-03-M (PO BOX 54400, LOS ANGELES CA 90054-0400 C/O BANK OF THE WEST) APN 083-430-034	(800) 232-2430
6	COUNTY OFSANTA BARBARA (120 CREMONA DR #C, GOLETA CA 93117-5564) APN 081-150-042	Elsa Arndt (805) 560-1081

6.9 LANDOWNER LISTINGS

Mile Post No.	Landowner	Phone Number
6-7	AERA ENERGY LLC (PO BOX 11164, BAKERSFIELD CA 93389-1164) APN 081-150-041	(661) 665-5000
17-18	REID BRYAN FRANK & KAY JOANN (PO BOX 253, BUELLTON CA 93427-0253) APN 083-430-033	unlisted
54-55	DELORENZI LENO LOUIS JR (7670 BLAZING SADDLE DR, SANTA MARIA CA 93454-9601) APN 131-200-014	unlisted
26	BUELLTON SPORTSMENS ASSOCIATION LLC (PO BOX 333, BUELLTON CA 93427-0333) APN 099-630-008	unlisted
26-27	BUELLTON SPORTSMENS ASSOCIATION LLC (PO BOX 333, BUELLTON CA 93427-0333) APN 099-630-007	unlisted
54-55	LIBBEY TRUST 12/17/90/LIBBEY ERIC D (630 LORRAINE AVE, SANTA BARBARA CA 93110-1032) APN 131-200-012	unlisted
18	GRAHAM JOHN R & ELEANOR JEAN (5741 E ORCHARD DR, GREENWOOD VILLAGE CO 80111) APN 18	unlisted
7	LAND TRUST/SANTA BARBARA COUNTY (PO BOX 91830, SANTA BARBARA CA 93190-1830) APN 081-150-002	(805) 966-4520
7	SIMON RICHARD A & ANNE-MARIE (2960 S KIHEI RD #601, KIHEI HI 96753-6284 C/O EKAHI 9B) APN 081-150-028	(808) 879-3591
18-19	PAULSEN PATRICIA A TRUST (PO BOX 2008, BUELLTON CA 93427-2008) APN 083-430-031	unlisted

6.9 LANDOWNER LISTINGS

Mile Post No.	Landowner	Phone Number
54-55	BENNETT TIMOTHY A & KARISA (7515 BLAZING SADDLE DR, SANTA MARIA CA 93454-9601) APN 131-200-001	(805) 934-2142
26-27	DEANEROW LLC/BUELL JIM (4970 CAUGHLIN PKWY #518, RENO NV 89519) APN 099-630-003	(775) 826-2209
27	MCGEE MARIA R (2051 JONATA PARK RD, BUELLTON CA 93427-9457) APN 099-640-003	(805) 693-0764
55	KRAMER WERNER NICK & MARIA F (PO BOX 2125, MENLO PARK CA 94026-2125) APN 131-200-003	(650) 369-3525
18-19	SATTERTHWAITE FAMILY (1561 US HIGHWAY 101, BUELLTON CA 93427) APN 083-430-030	(805) 688-1053
8-9	BROWN FAMILY (15550 CALLE REAL, GOLETA CA 93117-9729) APN 081-140-019	unlisted
9	BRINKMAN, JEANNE CRAIN FAMILY (PO BOX 999, SANTA BARBARA CA 93102-0999) APN 081-140-025	unlisted
18-19	WILLIAMS HOWARD F (PO BOX 968, BUELLTON CA 93427-0968) APN 083-430-022	unlisted
56-57	PERRETT CAROL M & HEBER D (2491 BULL CANYON RD, SANTA MARIA CA 93454-9507) APN 131-190-004	(805) 925-6850
28	RANCHO LA PURISIMA (2085 JONATA PARK RD, BUELLTON CA 93427-9457 C/O PAUL MCENROE) APN 099-640-006	(805) 686-8986

6.9 LANDOWNER LISTINGS

Mile Post No.	Landowner	Phone Number
29	RANCHO JONATA (PO BOX 5, BUELLTON CA 93427-0005) APN 099-040-019	(805) 688-5606
58	TREMPER TRUST (1381 CIELO LN, NIPOMO CA 93444-9753) APN 131-030-048	(805) 929-3209
19	JONES ORGANIZATION (1501 US HIGHWAY 101, BUELLTON CA 93427) APN 083-330-024	(805) 688-0337
9	COASTAL BAND OF THE CHUMASH NATION USA (610 DEL MONTE AVE, SANTA BARBARA CA 93101-4414 C/O BRENDA PRESTON) APN 081-140-023	unlisted
9	CHEVRON U S A INC/KE ANDREWS & CO (PO BOX 870849, MESQUITE TX 75187-0849) APN 081-140-024	(800) 231-0623
19-20	LIVE OAK RANCH (1059 VERONICA SPRINGS RD, SANTA BARBARA CA 93105-4531) APN 083-330-012	unlisted
58-59	HAYES JERRY & LISA (8320 HIGHWAY 166, SANTA MARIA CA 93454-9554) APN 131-030-053	unlisted
30	RANCHO JONATA (PO BOX 5, BUELLTON CA 93427-0005) APN 099-040-009	(805)688-5606
31-32	CHAMBERLIN WILLIAM B TRUSTEES/CHAMBERLIN RANCH THE LTD PARTN (PO BOX 218, LOS OLIVOS CA 93441-0218) APN 133-151-058	(805) 688-4461
58-59	TREMPER TRUST (1381 CIELO LN, NIPOMO CA 93444-9753) APN 131-030-049	(805) 929-3209

6.9 LANDOWNER LISTINGS

Mile Post No.	Landowner	Phone Number
20	LLOYDS BANK CALIFORNIA/SC-MPK-03-M (PO BOX 54400, LOS ANGELES CA 90054-0400 C/O BANK OF THE WEST) APN 083-330-032	(800) 232-2430
9	RICHARD WOODALL INC (PO BOX 9513, BAKERSFIELD CA 93389-9513) APN 081-130-068	unlisted
21	MOSBY WILLIAM M & GERALDINE G (PO BOX 1849, BUELLTON CA 93427-1849) APN 083-190-012	(805) 688-2415
58-59	QUINONES VICTOR D & DOLORES (1213 TOPAZ WAY, SANTA MARIA CA 93454-3269) APN 131-030-043	(805) 922-2460
33	RANCHO SAN JUAN INC (115 E MICHELTORENA ST #200, SANTA BARBARA CA 93101-1905) APN 133-110-062	unlisted
34-35	NOLAN RANCH LLC (11111 SANTA MONICA BLVD, LOS ANGELES CA 90025-3333) APN 133-110-061	unlisted
59	HUTCHINGS RALPH L & AUDREY E/HUTCHINGS (604 N BEVERLY DR, BEVERLY HILLS CA 90210-3320 C/O R L & A E HUTCHINGS TR (No Mail)) APN 131-030-059	(805) 938-0371
21-22	HECK DEAN C & CHRISTIANNE N/HECK RONALD G & SHIRLEY W (9450 SANTA ROSA RD, BUELLTON CA 93427-9482) APN 083-190-013	unlisted
21-22	ACIN FAMILY (5199 E HIGHWAY 246, LOMPOC CA 93436-9613) APN 083-190-004	(805) 736-3694
60	HUTCHINGS RALPH L & AUDREY E/HUTCHINGS (604 N BEVERLY DR, BEVERLY HILLS CA 90210-3320 C/O R L & A E HUTCHINGS TR (No Mail)) APN 131-030-021	(805) 938-0371

6.9 LANDOWNER LISTINGS

Mile Post No.	Landowner	Phone Number
36	NOLAN RANCH LLC (11111 SANTA MONICA BLVD, LOS ANGELES CA 90025-3333) APN 133-070-015	unlisted
37	NOLAN RANCH LLC (11111 SANTA MONICA BLVD, LOS ANGELES CA 90025-3333) APN 133-070-016	unlisted
61	HUTCHINGS RALPH L & AUDREY E/HUTCHINGS (604 N BEVERLY DR, BEVERLY HILLS CA 90210-3320 C/O R L & A E HUTCHINGS TR (No Mail)) APN 131-030-019	(805) 938-0371
21-22	ACIN FAMILY (5199 E HIGHWAY 246, LOMPOC CA 93436-9613) APN 083-190-010	(805) 736-3694
21-22	ACIN FAMILY (5199 E HIGHWAY 246, LOMPOC CA 93436-9613) APN 083-190-011	(805) 736-3694
61-62	TOWLE ROSEMARIE (1187 COAST VILLAGE RD #295, SANTA BARBARA CA 93108-2737) APN 131-030-018	(805) 478-1484
37-38	JTMT LLC (5235 FOXEN CANYON RD, SANTA MARIA CA 93454-9550) APN 133-070-009	(805) 937-5075
38-40	FLOOD RANCH COMPANY (870 MARKET ST #1100, SAN FRANCISCO CA 94102-2920) APN 133-070-027	(805) 937-3616
62-63	HUTCHINGS RALPH L & AUDREY E/HUTCHINGS (604 N BEVERLY DR, BEVERLY HILLS CA 90210-3320 C/O R L & A E HUTCHINGS TR (No Mail)) APN 131-030-003	(805) 938-0371
63-64	USA (6755 HOLLISTER AVE. #150GOLETA, CA 93117) APN 131-010-030	(805) 968-6640

6.9 LANDOWNER LISTINGS

Mile Post No.	Landowner	Phone Number
40-41	NUEVO TINEQUAC LLC/AMALFI INVESTMENT PROPS LLC (2275 E 37TH ST, VERNON CA 90058-1427) APN 133-070-004	(323) 588-0000
40-41	FLOOD RANCH COMPANY (870 MARKET ST #1100, SAN FRANCISCO CA 94102-2920) APN 133-040-011	(805) 937-3616
64	USA (6755 HOLLISTER AVE. #150GOLETA, CA 93117) APN 131-010-029	(805) 968-6640
65	USA (6755 HOLLISTER AVE. #150GOLETA, CA 93117) APN 131-010-027	(805) 968-6640
65-66	GARCIN GENE J/GARCIN SHARI J (10616 E HWY 166, SANTA MARIA CA 93454) APN 131-010-026	(805) 934-2752
66	USA (6755 HOLLISTER AVE. #150GOLETA, CA 93117) APN 131-010-016	(805) 968-6640
67	PRATT FREDERIC J/PRATT FAMILY TRUST (1800 W BALBOA BLVD, NEWPORT BEACH CA 92663-4515 C/O BAY SHORES INN) APN 131-010-066	(949) 675-3463
68	USA (6755 HOLLISTER AVE. #150GOLETA, CA 93117) APN 131-020-003	(805) 968-6640
69	USA (6755 HOLLISTER AVE. #150GOLETA, CA 93117) APN 131-020-009	(805) 968-6640
69-70	RINCONADA RANCH ASSOCIATION LLC (1625 STATE ST #4-A, SANTA BARBARA CA 93101-2547) APN 131-020-005	Unlisted

6.9 LANDOWNER LISTINGS

Mile Post No.	Landowner	Phone Number
70	N/A - Milepost 70 is across the border in San Luis Obispo County.	N/A
-	Notifications within the hazardous zone will be notified by the Plains Environment, Health & Safety Department.	-

6.10 TACTICAL OVERVIEW MAP

Not Available Currently

6.11 TACTICAL PLAN INDEX

SITE NAME
Cañada del Corral
Refugio Road/Creek
Arryo Quemado
Arroyo Hondo
Cañada del Molino
Cañada San Onofre
Cañada del Leon
Cañada Alcatraz
Cañada del Cementario
Cañada del Barro
Highway 101 (b) (7)(F), (b) (3)
Cañada de la Gaviota ((b) (7)(F), (b) (3)
Highway 1
Cañada de la Gaviota (b) (7)(F), (b) (3)
Cañada de las Cruces
Santa Rosa Road
Santa Ynez River
Town of Buellton
Highway 246
Bobcat Springs Road
Highway 101 (b) (7)(F), (b) (3)
Alisos Canyon Road
Foxen Canyon Creek (b) (7)(F), (b) (3)
Asphaltum Creek
Foxen Canyon Road (b) (7)(F), (b) (3)
Sisquoc River
Tepusquet Road (b) (7)(F), (b) (3)
Tepusquet Road
Cuyama River (b) (7)(F), (b) (3)

6.11 TACTICAL PLAN INDEX

SITE NAME
Cuyama River (b) (7)(F), (b) (3)
Soda Lake Road
Highway 166/33
Western Mineral Road
Short Road
Pentland Road
Highway 16 (b) (7)(F), (b) (3)
California Aqueduct
Interstate 5
Highway 166 (b) (7)(F), (b) (3)
Highway 99
7th Standard Road
LoKern Road
Town of McKittrick
Highway 33 (b) (7)(F), (b) (3)
Highway 58
Reserve Road (b) (7)(F), (b) (3)
Reserve Road
Reserve Road
Highway 33 (b) (7)(F), (b) (3)
Shale Road
Randall Road
Mocal Road
Midway Road
Town of Fellows
Midoil Road
Town of Taft
Hill Road
Town of Maricopa

6.11 TACTICAL PLAN INDEX

SITE NAME
Highway 33 (b) (7)(F), (b) (3)
Sunset Railroad (b) (7)(F), (b) (3)
Kerto Road
Sunset Railroad (b) (7)(F), (b) (3)
Highway 166 (b) (7)(F), (b) (3)

6.12 TACTICAL PLANS

The Department of Transportation (DOT) Code of Federal Regulations (CFR) Title 49, Part 195 describes the guidelines pertaining to the transportation of hazardous liquids by pipeline. Section 195.402 (C4) states that a procedural manual for operations, maintenance, and emergencies must include the location of area that would require an immediate response by the operator to prevent hazards to the public if the facilities failed or malfunctions.

If a leak is detected by the Oil Movements Control Center at night or when visibility limits aerial inspection, local response personnel will be dispatched to these areas to determine if a hazard to the public exists. If good weather exists during daylight hours, an aerial patrol will be dispatched to locate the leak, in addition to local response personnel.

First responders will typically be attempting to locate a release based upon information obtained from the Oil Movements Control Center. Subsequent responders will be dispatched by the Incident Commander or Operations personnel to clear immediate response locations as they proceed toward the suspected location.

It is the intent of this requirement to communicate with involved employees the need to **consider public and personal safety as the number one priority**. **SECTION 6.8** depicts the Company pipeline routes, pump stations and valve locations, as well as representative milepost locations, in Santa Barbara County, California.

When the location or the extent of an emergency situation is unknown, it is the Incident Commander's responsibility to assure that immediate response locations have been checked and cleared before concentrating search or response efforts in other areas.

The immediate response locations (as described above) have been identified based on their strategic location and/or sensitive nature relative to the Company pipeline and its associated facilities in Santa Barbara County. The following lists show three different classifications of locations.

Class I Areas

Locations which require identification under 49 CFR 195.402 (C4) are identified as areas of public exposure, such as:

- Well traveled road crossings,
- Near places of public gatherings,
- Dwellings,
- Railroad crossings, and
- Bodies of water used for recreation.

Class II Areas

Class II areas are located where the potential exists for spilled oil to enter a canal or waterway not specifically used for recreation, but may be the source of a public water supply.

Class III Areas

Class III areas are locations known to contain environmental sensitive resources and/or habitats.

6.12 TACTICAL PLANS, CONTINUED

Cañada del Corral

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin Destination

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ° ' "/ ° ' "

Location: No. 1 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post LF 0.07

Map Reference: PPLP Map Ref. CE001A, Thomas Page No. 981, Thomas Grid No. G2 G3 G4

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Stream Crossing

Description of Worksite: Class 2/3

Critical Response Information:

Date Last Revised:

6.12 TACTICAL PLANS, CONTINUED

Refugio Road/Creek

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin Destination

DRIVING DIRECTIONS

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ° ' "/ ° ' "

Location: No. 4 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post LF 2.8

Map Reference: PPLP Map Ref. CE001B, Thomas Page No. 981, Thomas Grid No. D4

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Road/Stream Crossing

Description of Worksite: Class 1/2

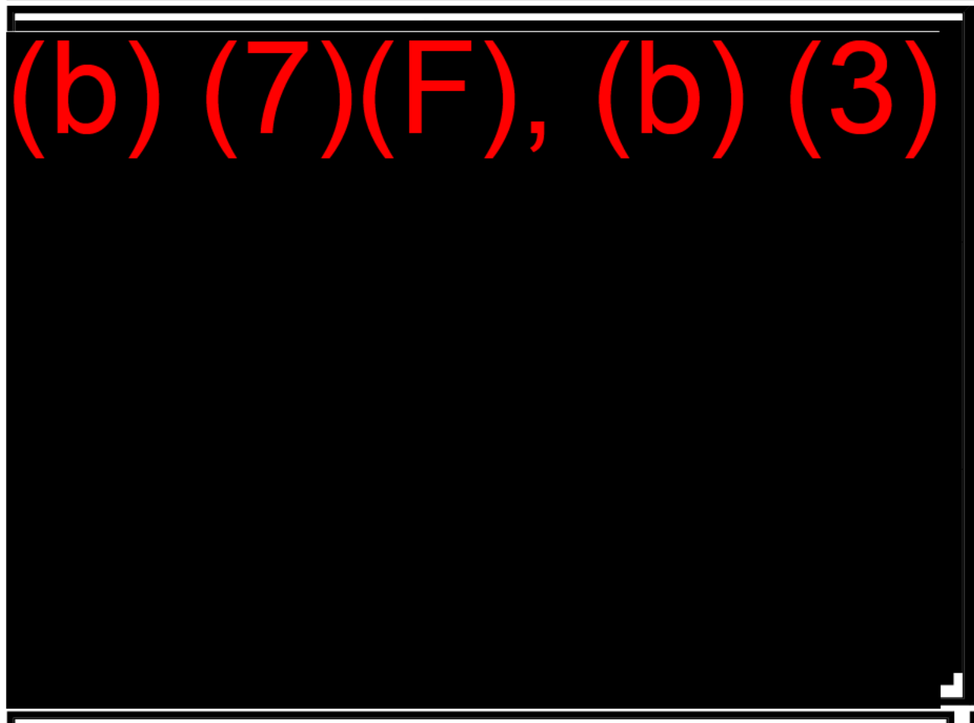
Critical Response Information:

Date Last Revised:

6.12 TACTICAL PLANS, CONTINUED

Arryo Quemado

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)



RESPONSE STRATEGY

Latitude/Longitude: ° ' "/ ° ' "

Location: No. 6 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post LF 6.0

Map Reference: PPLP Map Ref. CE001C, Thomas Page No. 365, Thomas Grid No. J7

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Road/Stream Crossing

Description of Worksite: Class 2/3

Critical Response Information:

Date Last Revised:

LEGEND Origin Destination

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

6.12 TACTICAL PLANS, CONTINUED

Arroyo Hondo

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin Destination

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ° ' "/ ° ' "

Location: No. 7 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post LF 7.5

Map Reference: PPLP Map Ref. CE001D, Thomas Page No. 365, Thomas Grid No. J7

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Stream Crossing

Description of Worksite: Class 3

Critical Response Information:

Date Last Revised:

6.12 TACTICAL PLANS, CONTINUED

Cañada del Molino

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

RESPONSE STRATEGY

Latitude/Longitude: ° ' "/ ° ' "

Location: No. 8 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post LF 9.25

Map Reference: PPLP Map Ref. CE001D, Thomas Page No. 365, Thomas Grid No. J7

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Stream Crossing

Description of Worksite: Class 3

Critical Response Information:

Date Last Revised:

LEGEND Origin Destination

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

6.12 TACTICAL PLANS, CONTINUED

Cañada San Onofre

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 9 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post LF 10.27

Map Reference: PPLP Map Ref. CE001E, Thomas Page No. 365, Thomas Grid No. H7

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Stream Crossing

Description of Worksite: Class 3

Critical Response Information:

Date Last Revised:

6.12 TACTICAL PLANS, CONTINUED

Cañada del Leon

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 10 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post LF 10.5

Map Reference: PPLP Map Ref. CE001E, Thomas Page No. 365, Thomas Grid No. H7

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Stream Crossing

Description of Worksite: Class 3

Critical Response Information:

Date Last Revised:

6.12 TACTICAL PLANS, CONTINUED

Cañada Alcatraz

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 1 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 8.5

Map Reference: PPLP Map Ref. CE002, Thomas Page No. 365, Thomas Grid No. J7

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Stream Crossing

Description of Worksite: Class 3

Critical Response Information:

Date Last Revised:

6.12 TACTICAL PLANS, CONTINUED

Cañada del Cementario

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 2 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 8.8

Map Reference: PPLP Map Ref. CE002, Thomas Page No. 365, Thomas Grid No. H7

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Stream Crossing

Description of Worksite: Class 3

Critical Response Information:

Date Last Revised:

Cañada del Cementario

6.12 TACTICAL PLANS, CONTINUED

Cañada del Barro

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 3 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 9.8

Map Reference: PPLP Map Ref. CE002, Thomas Page No. 365, Thomas Grid No. H7

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Stream Crossing

Description of Worksite: Class 3

Critical Response Information:

Date Last Revised:

6.12 TACTICAL PLANS, CONTINUED

Highway 101 (M.P. 10.5)

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 4 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 10.5

Map Reference: PPLP Map Ref. CE002, Thomas Page No. 365, Thomas Grid No. H7

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Highway Crossing

Description of Worksite: Class 1

Critical Response Information:

Date Last Revised:

Highway 101 (M.P. 10.5)

6.12 TACTICAL PLANS, CONTINUED

Cañada de la Gaviota (M.P. 10.6)

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 5 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 10.6

Map Reference: PPLP Map Ref. CE002, Thomas Page No. 365, Thomas Grid No. H7

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Stream Crossing

Description of Worksite: Class 2/3

Critical Response Information:

Date Last Revised:

Cañada de la Gaviota (M.P. 10.6)

6.12 TACTICAL PLANS, CONTINUED

Highway 1

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 6 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 13.5

Map Reference: PPLP Map Ref. CE004, Thomas Page No. 365, Thomas Grid No. H6

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Highway Crossing

Description of Worksite: Class 1

Critical Response Information:

Date Last Revised:

6.12 TACTICAL PLANS, CONTINUED

Cañada de la Gaviota (M.P. 13.6)

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 7 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 13.6

Map Reference: PPLP Map Ref. CE004, Thomas Page No. 365, Thomas Grid No. H6

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Stream Crossing

Description of Worksite: Class 3

Critical Response Information:

Date Last Revised:

Cañada de la Gaviota (M.P. 13.6)

6.12 TACTICAL PLANS, CONTINUED

Cañada de las Cruces

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

[redacted]

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 8 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 13.7

Map Reference: PPLP Map Ref. CE004, Thomas Page No. 365, Thomas Grid No. H6

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Stream Crossing

Description of Worksite: Class 3

Critical Response Information:

Date Last Revised:

6.12 TACTICAL PLANS, CONTINUED

Santa Rosa Road

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 9 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 22.1

Map Reference: PPLP Map Ref. CE005, Thomas Page No. 919, Thomas Grid No. H7

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Road Crossing

Description of Worksite: Class 1

Critical Response Information:

Date Last Revised:

Santa Rosa Road

6.12 TACTICAL PLANS, CONTINUED

Santa Ynez River

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 10 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 22.3

Map Reference: PPLP Map Ref. CE005, Thomas Page No. 919, Thomas Grid No. G6

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: River Crossing

Description of Worksite: Class 2

Critical Response Information:

Date Last Revised:

6.12 TACTICAL PLANS, CONTINUED

Town of Buellton

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin Destination

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 12 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 22-24

Map Reference: PPLP Map Ref. CE005, Thomas Page No. 919, Thomas Grid No. G4/G5

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Residential Area

Description of Worksite: Class 1

Critical Response Information:

Date Last Revised:

6.12 TACTICAL PLANS, CONTINUED

Highway 246

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	**DESCRIPTION**
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	**DESCRIPTION**
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	**DESCRIPTION**
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 11 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 23.4

Map Reference: PPLP Map Ref. CE005, Thomas Page No. 919, Thomas Grid No. G5

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Highway Crossing

Description of Worksite: Class 1

Critical Response Information:

Date Last Revised:

6.12 TACTICAL PLANS, CONTINUED

Bobcat Springs Road

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 13 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 24.7

Map Reference: PPLP Map Ref. CE005, Thomas Page No. 919, Thomas Grid No. H2

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Road Crossing

Description of Worksite: Class 1

Critical Response Information:

Date Last Revised:

Bobcat Springs Road

6.12 TACTICAL PLANS, CONTINUED

Highway 101 (M.P. 30.9)

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

[redacted]

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 14 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 30.9

Map Reference: PPLP Map Ref. CE007, Thomas Page No. 365, Thomas Grid No. J2

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Highway Crossing

Description of Worksite: Class 1

Critical Response Information:

Date Last Revised:

6.12 TACTICAL PLANS, CONTINUED

Alisos Canyon Road

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 15 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 34.0

Map Reference: PPLP Map Ref. CE007, Thomas Page No. 365, Thomas Grid No. H1

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Road Crossing

Description of Worksite: Class 1

Critical Response Information:

Date Last Revised:

6.12 TACTICAL PLANS, CONTINUED

Foxen Canyon Creek (M.P. 37.0)

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 16 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 37.0

Map Reference: PPLP Map Ref. CE008, Thomas Page No. 345, Thomas Grid No. H11

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Stream Crossing

Description of Worksite: Class 3

Critical Response Information:

Date Last Revised:

6.12 TACTICAL PLANS, CONTINUED

Asphaltum Creek

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 17 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 37.1

Map Reference: PPLP Map Ref. CE008, Thomas Page No. 345, Thomas Grid No. H11

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Stream Crossing

Description of Worksite: Class 1

Critical Response Information:

Date Last Revised:

Asphaltum Creek

6.12 TACTICAL PLANS, CONTINUED

Foxen Canyon Road (M.P. 37.3)

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 18 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 37.3

Map Reference: PPLP Map Ref. CE008, Thomas Page No. 345, Thomas Grid No. H11

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Road Crossing

Description of Worksite: Class 2

Critical Response Information:

Date Last Revised:

Foxen Canyon Road (M.P. 37.3)

6.12 TACTICAL PLANS, CONTINUED

Sisquoc River

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

[redacted]

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 19 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 41.0

Map Reference: PPLP Map Ref. CE009, Thomas Page No. 345, Thomas Grid No. H11/H12

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: River Crossing

Description of Worksite: Class 2/3

Critical Response Information:

Date Last Revised:

Sisquoc River

6.12 TACTICAL PLANS, CONTINUED

Tepusquet Road (M.P. 44.5)

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 20 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 44.5

Map Reference: PPLP Map Ref. CE009, Thomas Page No. 345, Thomas Grid No. H10

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Road Crossing

Description of Worksite: Class 1

Critical Response Information:

Date Last Revised:

Tepusquet Road (M.P. 44.5)

6.12 TACTICAL PLANS, CONTINUED

Tepusquet Road (M.P. 57.2)

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 20A on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 57.2

Map Reference: PPLP Map Ref. CE009, Thomas Page No. 345, Thomas Grid No. H7

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Road Crossing

Description of Worksite: Class 1

Critical Response Information:

Date Last Revised:

6.12 TACTICAL PLANS, CONTINUED

Cuyama River (M.P. 69.7)

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 21 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 69.7

Map Reference: PPLP Map Ref. CE014, Thomas Page No. 345, Thomas Grid No. K5/K6

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: River Crossing

Description of Worksite: Class 2/3

Critical Response Information:

Date Last Revised:

Cuyama River (M.P. 69.7)

6.12 TACTICAL PLANS, CONTINUED

Cuyama River (M.P. 70.1)

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 22 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 70.1

Map Reference: PPLP Map Ref. CE014, Thomas Page No. 345, Thomas Grid No. K5/K6

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: River Crossing

Description of Worksite: Class 2/3

Critical Response Information:

Date Last Revised:

Cuyama River (M.P. 70.1)

6.12 TACTICAL PLANS, CONTINUED

Soda Lake Road

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 23 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 109.70

Map Reference: Class 1, AAPL Map Ref. CE022, Thomas Page No. 21, Thomas Grid No. G6

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Road Crossing

Description of Worksite:

Critical Response Information:

Date Last Revised:

6.12 TACTICAL PLANS, CONTINUED

Highway 166/33

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin Destination

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 24 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 114.00

Map Reference: Class 1, AAPL Map Ref. CE022, Thomas Page No. 21, Thomas Grid No. H5

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Highway Crossing

Description of Worksite:

Critical Response Information:

Date Last Revised:

6.12 TACTICAL PLANS, CONTINUED

Western Mineral Road

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 25 on IR Map

Water Way:

Owner:

Distance from Spill Source:

Map Reference: Mile Post 116.50

Response Objective: Class 1, AAPL Map Ref. CE023, Thomas Page No. 21, Thomas Grid No. H4

Response Tactic: - Normal Conditions

Watercourse Description: Road Crossing

Description of Worksite:

Critical Response Information:

Date Last Revised:

Western Mineral Road

6.12 TACTICAL PLANS, CONTINUED

Short Road

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 26 on IR Map

Water Way:

Owner:

Distance from Spill Source:

Map Reference: Mile Post 118.30

Response Objective: Class 1, AAPL Map Ref. CE024, Thomas Page No. 21, Thomas Grid No. H4

Response Tactic: - Normal Conditions

Watercourse Description: Road Crossing

Description of Worksite:

Critical Response Information:

Date Last Revised:

Short Road

6.12 TACTICAL PLANS, CONTINUED

Pentland Road

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 27 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 119.50

Map Reference: Class 1, AAPL Map Ref. CE024, Thomas Page No. 21, Thomas Grid No. J4

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Road Crossing

Description of Worksite:

Critical Response Information:

Date Last Revised:

Pentland Road

6.12 TACTICAL PLANS, CONTINUED

Highway 166 (M.P. 131.00)

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 28 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 131.00

Map Reference: Class 1, AAPL Map Ref. CE026, Thomas Page No. 22, Thomas Grid No. A4/B4

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Highway Crossing

Description of Worksite:

Critical Response Information:

Date Last Revised:

Highway 166 (M.P. 131.00)

6.12 TACTICAL PLANS, CONTINUED

California Aqueduct

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 29 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 132.50

Map Reference: Class 2, AAPL Map Ref. CE026, Thomas Page No. 22, Thomas Grid No. B4

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Canal Crossing

Description of Worksite:

Critical Response Information:

Date Last Revised:

California Aqueduct

6.12 TACTICAL PLANS, CONTINUED

Interstate 5

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	**DESCRIPTION**
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	**DESCRIPTION**
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	**DESCRIPTION**
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 30 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 3.5

Map Reference: Class 1, AAPL Map Ref. AA001, Thomas Page No. 22, Thomas Grid No. C4

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Highway Crossing

Description of Worksite:

Critical Response Information:

Date Last Revised:

6.12 TACTICAL PLANS, CONTINUED

Highway 166 (M.P. 5.25)

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

[redacted]

LEGEND Origin Destination

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 31 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 5.25

Map Reference: Class 1, AAPL Map Ref. AA002, Thomas Page No. 22, Thomas Grid No. D4

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Highway Crossing

Description of Worksite:

Critical Response Information:

Date Last Revised:

Highway 166 (M.P. 5.25)

6.12 TACTICAL PLANS, CONTINUED

Highway 99

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 32 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 5.75

Map Reference: Class 1, AAPL Map Ref. AA002, Thomas Page No. 22, Thomas Grid No. D4

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Highway Crossing

Description of Worksite:

Critical Response Information:

Date Last Revised:

6.12 TACTICAL PLANS, CONTINUED

7th Standard Road

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 1 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 2.5

Map Reference: Class 1, AAPL Map Ref. CG-02, Thomas Page No. 17, Thomas Grid No. C7

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Road Crossing

Description of Worksite:

Critical Response Information:

Date Last Revised:

6.12 TACTICAL PLANS, CONTINUED

LoKern Road

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 2 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 5.8

Map Reference: Class 1, AAPL Map Ref. CG-03, Thomas Page No. 17, Thomas Grid No. C7

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Road Crossing

Description of Worksite:

Critical Response Information:

Date Last Revised:

6.12 TACTICAL PLANS, CONTINUED

Town of McKittrick

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 3 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 15.0

Map Reference: Class 1, AAPL Map Ref. CG-07, Thomas Page No. 17, Thomas Grid No. D9

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Residential Area

Description of Worksite:

Critical Response Information:

Date Last Revised:

6.12 TACTICAL PLANS, CONTINUED

Highway 33 (M.P. 15.3)

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 4 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 15.3

Map Reference: Class 1, AAPL Map Ref. CG-07, Thomas Page No. 17, Thomas Grid No. E9

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Highway Crossing

Description of Worksite:

Critical Response Information:

Date Last Revised:

Highway 33 (M.P. 15.3)

6.12 TACTICAL PLANS, CONTINUED

Highway 58

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 5 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 15.5

Map Reference: Class 1, AAPL Map Ref. CG-07, Thomas Page No. 17, Thomas Grid No. E9

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Highway Crossing

Description of Worksite:

Critical Response Information:

Date Last Revised:

6.12 TACTICAL PLANS, CONTINUED

Reserve Road (M.P. 17.0)

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 6 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 17.0

Map Reference: Class 1, AAPL Map Ref. CG-08, Thomas Page No. 17, Thomas Grid No. E9

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Road Crossing

Description of Worksite:

Critical Response Information:

Date Last Revised:

6.12 TACTICAL PLANS, CONTINUED

Reserve Road (M.P. 20.0)

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 7 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 20.0

Map Reference: Class 1, AAPL Map Ref. CG-09, Thomas Page No. 17, Thomas Grid No. E9

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Road Crossing

Description of Worksite:

Critical Response Information:

Date Last Revised:

6.12 TACTICAL PLANS, CONTINUED

Reserve Road (M.P. 20.5)

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin Destination

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 8 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 20.5

Map Reference: Class 1, AAPL Map Ref. CG-09, Thomas Page No. 17, Thomas Grid No. E9

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Road Crossing

Description of Worksite:

Critical Response Information:

Date Last Revised:

6.12 TACTICAL PLANS, CONTINUED

Highway 33 (M.P. 24.1)

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin Destination

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 9 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 24.1

Map Reference: Class 1, AAPL Map Ref. CG-10, Thomas Page No. 21, Thomas Grid No. E1

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Highway Crossing

Description of Worksite:

Critical Response Information:

Date Last Revised:

6.12 TACTICAL PLANS, CONTINUED

Shale Road

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	**DESCRIPTION**
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	**DESCRIPTION**
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	**DESCRIPTION**
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 10 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 25.2

Map Reference: Class 1, AAPL Map Ref. CG-10, Thomas Page No. 21, Thomas Grid No. E1

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Road Crossing

Description of Worksite:

Critical Response Information:

Date Last Revised:

6.12 TACTICAL PLANS, CONTINUED

Randall Road

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 11 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 27.5

Map Reference: Class 1, AAPL Map Ref. CG-11, Thomas Page No. 21, Thomas Grid No. F2

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Road Crossing

Description of Worksite:

Critical Response Information:

Date Last Revised:

6.12 TACTICAL PLANS, CONTINUED

Mocal Road

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin Destination

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 12 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 28.5

Map Reference: Class 1, AAPL Map Ref. CG-12, Thomas Page No. 21, Thomas Grid No. F2

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Road Crossing

Description of Worksite:

Critical Response Information:

Date Last Revised:

Mocal Road

6.12 TACTICAL PLANS, CONTINUED

Midway Road

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin Destination

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 13 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 28.7

Map Reference: Class 1, AAPL Map Ref. CG-12, Thomas Page No. 21, Thomas Grid No. F2

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Road Crossing

Description of Worksite:

Critical Response Information:

Date Last Revised:

6.12 TACTICAL PLANS, CONTINUED

Town of Fellows

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 14 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 28.0

Map Reference: Class 1, AAPL Map Ref. CG-12, Thomas Page No. 21, Thomas Grid No. F2

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Residential Area

Description of Worksite:

Critical Response Information:

Date Last Revised:

6.12 TACTICAL PLANS, CONTINUED

Midoil Road

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

[redacted]

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 15 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 32.3

Map Reference: Class 1, AAPL Map Ref. CG-13, Thomas Page No. 21, Thomas Grid No. F2

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Road Crossing

Description of Worksite:

Critical Response Information:

Date Last Revised:

6.12 TACTICAL PLANS, CONTINUED

Town of Taft

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 16 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 34.0

Map Reference: Class 1, AAPL Map Ref. CG-13, Thomas Page No. 21, Thomas Grid No. G3

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Residential Area

Description of Worksite:

Critical Response Information:

Date Last Revised:

Town of Taft

6.12 TACTICAL PLANS, CONTINUED

Hill Road

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin Destination

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 17 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 35.5

Map Reference: Class 1, AAPL Map Ref. CG-14, Thomas Page No. 21, Thomas Grid No. G3

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Road Crossing

Description of Worksite:

Critical Response Information:

Date Last Revised:

6.12 TACTICAL PLANS, CONTINUED

Town of Maricopa

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 18 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 39.0

Map Reference: Class 1, AAPL Map Ref. CG-15, Thomas Page No. 21, Thomas Grid No. H4

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Residential Area

Description of Worksite:

Critical Response Information:

Date Last Revised:

6.12 TACTICAL PLANS, CONTINUED

Highway 33 (M.P. 39.1)

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

[redacted]

[redacted]

LEGEND Origin Destination

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 19 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 39.1

Map Reference: Class 1, AAPL Map Ref. CG-15, Thomas Page No. 21, Thomas Grid No. H4

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Highway Crossing

Description of Worksite:

Critical Response Information:

Date Last Revised:

Highway 33 (M.P. 39.1)

6.12 TACTICAL PLANS, CONTINUED

Sunset Railroad (M.P. 39.9)

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 20 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 39.9

Map Reference: Class 1, AAPL Map Ref. CG-15, Thomas Page No. 21, Thomas Grid No. H4

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Railroad Crossing

Description of Worksite:

Critical Response Information:

Date Last Revised:

6.12 TACTICAL PLANS, CONTINUED

Kerto Road

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

DRIVING DIRECTIONS

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 21 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 41.5

Map Reference: Class 1, AAPL Map Ref. CG-16, Thomas Page No. 21, Thomas Grid No. H4

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Road Crossing

Description of Worksite:

Critical Response Information:

Date Last Revised:

Kerto Road

6.12 TACTICAL PLANS, CONTINUED

Sunset Railroad (M.P. 43.0)

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

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

LEGEND Origin Destination

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 22 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 43.0

Map Reference: Class 1, AAPL Map Ref. CG-16, Thomas Page No. 21, Thomas Grid No. J4

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Railroad Crossing

Description of Worksite:

Critical Response Information:

Date Last Revised:

6.12 TACTICAL PLANS, CONTINUED

Highway 166 (M.P. 43.7)

Bakersfield District (Santa Barbara, San Luis Obispo and Kern Counties)

[redacted]

RESPONSE STRATEGY

Latitude/Longitude: ' "/ ' "

Location: No. 23 on IR Map

Water Way:

Owner:

Distance from Spill Source: Mile Post 43.7

Map Reference: Class 1, AAPL Map Ref. CG-16, Thomas Page No. 21, Thomas Grid No. J4

Response Objective:

Response Tactic: - Normal Conditions

Watercourse Description: Highway Crossing

Description of Worksite:

Critical Response Information:

Date Last Revised:

LEGEND Origin ■ Destination ■

DRIVING DIRECTIONS

February 2007

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Containment Boom
	Sorbent Boom
	Vac Truck(s)
	Frac Tank(s)
	Work Boat(s)
	Skimmer(s)
	3/8" Polypropylene Line
	Stake(s)
	Sledge hammer(s)
	Sorbent pad(s)
	85 gallon drum liners
	Cell Phone(s)
	Portable Radios(s)
	Light tower(s)

RECOMMENDED EQUIPMENT	
QUANTITY	DESCRIPTION
	Port-o-let(s)
	Poly lined roll-off boxes
	Metal Culvert Pipes
	Trac-hoe

RECOMMENDED PERSONNEL	
NUMBERS	DESCRIPTION
	Boat Operator(s)
	Equipment Operator(s)
	Laborer(s)
	Supervisor(s)
	Vac Truck Operator(s)

6.13 SENSITIVITY MAPS

Click here for Bakersfield Area Sensitivity Map

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

6.14 TRAJECTORY ANALYSIS

Click here to view - Trajectory Analyses

Cañada del Refugio The Cañada del Refugio crossing occurs near the Highway 101 overpass. Refugio is a perennial stream with a very large watershed and several sensitive resources downstream of the crossing. The stream crossing is at a relatively insensitive area, and the crossing is riprapped.

Refugio reaches the Pacific Ocean at Refugio State Beach Park during periods of high flow. The reasonable worst-case spill for this area has been calculated at (b) (7)(F), (b) (3) because the crossing is approximately 1,500 feet from the beach, it is assumed that the total volume would reach the shoreline. Under high streamflow conditions, once the oil reaches the shoreline, it is expected to be carried offshore with the freshwater discharge and spread along the coastline. Under worst-case conditions, the oil would not be entrained in the surf zone by the incoming tide and wave action, and would spread more as if it were a nearshore vessel spill. The Clean Seas Regional Resource Manual (RRM) includes a trajectory analysis of a vessel spill of 62,500 barrels at the Gaviota Interim Marine Terminal (pages 202-16 and 202-17 of the RRM), a trajectory analysis of a facility spill of 4,400 barrels from the Gaviota Interim Marine Terminal (pages 202-32 and 202-33 of the RRM) and a trajectory analysis of a pipeline spill of 3,300 barrels from a Las Flores Canyon Pipeline (pages 202-34 and 202-35 of the RRM). A discussion of the details used for preparing the spill envelopes encompassed by the analyses is provided in Section 202.2 of the RRM. These trajectory analyses are incorporated into this plan by reference.

Cañada de la Gaviota (Gaviota Creek)

The pipeline crosses Gaviota Creek approximately 0.5 miles upstream of the creek's mouth. Gaviota Creek enters the Pacific Ocean at Gaviota State Beach Park, where the creek creates a lagoon. Gaviota Creek is a perennial stream, and is one of the larger coastal streams in Santa Barbara County. Flows are estimated to range from 6.5 to 12 cubic feet per second (cfs). The pipeline crosses the main channel above a large willow thicket.

The reasonable worst-case spill for this crossing has been calculated at (b) (7)(F), (b) (3). Under worst-case conditions, oil entering the creek would be carried to the mouth of the creek. It would most likely coat much of the shoreline in the lagoon, and be carried offshore with the freshwater discharge and spread along the coastline. The presence of the lagoon at the mouth of the creek would most likely retard a portion of the oil from entering the surf zone, but a large percentage of oil is expected to be carried beyond the mouth of the creek. At this point, the slick would act more like a nearshore vessel spill and would be carried under the influence of the tide, current, and prevailing wind at the time of the spill. The Clean Seas RRM includes a trajectory analysis of a vessel spill of 62,500 barrels at the Gaviota Interim Marine Terminal (pages 202-16 and 202-17 of the RRM), a trajectory analysis of a facility spill of 4,400 barrels from the Gaviota Interim Marine Terminal (pages 202-32 and 202-33 of the RRM) and a trajectory analysis for a Point Arguello pipeline spill of 3,900 barrels near Point Conception (pages 202-30 and 202-31 of the RRM). A discussion of the details used for preparing the spill envelopes encompassed by the analyses is provided in Section 202.2 of the RRM. These trajectory analyses are incorporated into this plan by reference.

Santa Ynez River

The pipeline crosses the Santa Ynez River southwest of Buellton, California approximately 0.5 miles west of the Highway 101 Bridge. At this location, the channel is approximately 0.25 miles wide. Flows gauged seven miles downstream at Coopers Reef averaged 27 cfs for the 22-year period between 1954 and 1976. Maximum flow during this period was recorded in January 1969 at 81,000 cfs. Although the flow in the river is normally perennial, the main channel may stop flowing during dry years. However, for the purposes of this analysis, it is assumed that under worst-case conditions there is full channel flow in the river. The pipeline crosses the river approximately 24 miles upstream from the river's mouth and the Santa Ynez Estuary, north of Point Pedernales on Vandenberg Air Force Base.

The reasonable worst-case spill for this crossing has been calculated at (b) (7)(F), (b) (3). Under low or normal flow conditions, every effort would be made to contain the spill within the river before it reaches the estuary and Pacific Ocean, 24 miles downstream. However, under worst case, high flow conditions, it is expected that a significant percentage of the oil would become entrained in the turbulent, sediment-laden water and carried to the mouth of the river. At the estuary, some of the oil may coat the shoreline as flow decreases, but a large portion of the oil would most likely enter the ocean, where is would be carried offshore with the overlying freshwater flow. At this point, the slick would act more like a near shore vessel spill and would be carried under the influence of the tide, current, and prevailing wind at the time of the spill. The Clean Seas RRM includes a trajectory analysis of a vessel spill of 45,000 barrels at the Avila Marine Terminal (pages 202-14 and 202-15 of the RRM) and a trajectory analysis of a facility spill of 2,500 barrels from the shoreline facilities at Point Pedernales (pages 202-28 and 202-29 of the RRM). The trajectories prepared for these two areas encompass the region at the Santa Ynez River mouth. A discussion of the details used for preparing the spill envelopes encompassed by the analyses is provided in Section 202.2 of the RRM. These trajectory analyses are incorporated into this plan by reference.

Sisquoc River

The Sisquoc River crossing is located near the Sisquoc Winery, approximately two miles upstream from the Tepusquet Road river crossing. Approximately six miles downstream, the river joins with the Cuyama River at Fulger Point and forms the Santa Maria River and the Santa Barbara/San Luis Obispo County line. From that point, the Santa Maria River flows approximately 22 miles to the Pacific Ocean approximately five miles north of Point Sal. The pipeline crossing is located at a relatively biologically insensitive area, where the river bed has been mined for gravel for several years.

The reasonable worst-case spill for this crossing has been calculated at (b) (7)(F), (b) (3). Under low or normal flow conditions, every effort would be made to contain the spill within the river before it reaches the confluence with the Cuyama River. During most of the year, flows in the Sisquoc River are low enough that a spill from the pipeline could be contained within the dry riverbed. However, under worst case, high flow conditions, it is expected that a significant percentage of the oil could be carried to the confluence with the Cuyama and Santa Maria rivers. Once a spill reaches the Santa Maria River under worst-case conditions, it could be carried as far as the mouth of the river at the Guadalupe Dunes. Under extreme conditions, such as those during the winter storms of 1995, oil would become entrained in the turbulent, sediment-laden water, and would be carried offshore with the overlying freshwater. At this point, the slick would act more like a near shore vessel spill and would be carried under the influence of the tide, current, and prevailing wind at the time of the spill. The Clean Seas RRM includes a trajectory analysis of a vessel spill of 45,000 barrels at the Avila Marine Terminal (pages 202-14 and 202-15 of the RRM) and a trajectory analysis of a facility spill of 2,500 barrels from the shoreline facilities at Point Pedernales (pages 202-28 and 202-29 of the RRM). The trajectories prepared for these two areas encompass the region at the Santa Maria River mouth. A discussion of the details used for preparing the spill envelopes encompassed by the analyses is provided in Section 202.2 of the RRM. These trajectory analyses are incorporated into this plan by reference.

6.14 TRAJECTORY ANALYSIS, CONTINUED

Click here to view - Oil Persistence and Toxicity

Oil Persistence and Toxicity

The Clean Seas RRM includes a discussion of sensitive resources in the Santa Barbara Channel area and Central Coast as far north as Cape San Martin. Based on the trajectory analyses presented in Section 202 of the RRM, shoreline types and sensitive resource maps from Point Piedras Blancas (Clean Seas Map CS-03) to the North, to the Santa Barbara area (Clean Seas Map CS-20), and the Channel Islands (Clean Seas Maps CS-28 through CS-39) would cover the envelope of potential shoreline impact areas from a reasonable worst case spill from any of PPLP's Santa Barbara County pipeline segments. Accompanying each map is a table that identifies the following information:

- Shoreline identification, substrate type (primary, secondary, tertiary), and primary response technique
- Areas of special significance, and contacts for trustees or local experts
- Map keys, indicating priorities for protection, and the seasonal distribution and status of species

These maps and the accompanying discussion of shoreline sensitivities in the Clean Seas RRM are incorporated into this plan by reference.

Oil persistence is generally governed by the rate at which environmental factors remove oil from a given shoreline. These factors include wave energy, natural erosion, tidal action, evaporation, and biodegradation. Areas that experience high wave energy or high sediment transfers should be given a lower priority for cleanup because these processes will break up and transfer oil from the shoreline into the water column or subtidal area where it will undergo relatively rapid biodegradation. Conversely, oil persistence will be high in protected shoreline areas that do not experience high levels of wave energy or erosion. Therefore, these lower energy shorelines should receive higher cleanup priority.

Using a general sensitivity ranking system called ESI (Environmental Sensitivity Index) adopted by NOAA, shoreline areas that are not associated with a particular sensitivity can be prioritized. The ESI system ranks various shoreline types in order of their increasing potential for long-term oil persistence and biological damage.

In general, the longer the oil is expected to persist on a shoreline the higher the priority for protection. Long term oil persistence can a present chronic toxicity effects as well as affecting the

natural sediment erosional and depositional processes. The potential persistence or residence time of stranded oil on a shoreline is primarily dependent on the:

- Degree of impact
- Type of shoreline sediments
- Level of exposure to the elements

In general, higher degrees of impact, coarser, well sorted sediments, and lower levels of exposure to wind, waves, currents, and tidal flushing will increase the residence time of the oil on the shoreline. Coarser grain sediments usually permit the oil to penetrate deeper into the shoreline but can also allow for greater tidal flushing and natural degradation. Finer grained sediments typically inhibit penetration, but if oil does become incorporated into the sediments, residence time will increase.

Lower levels of exposure, such as in protected inlets or bays, will increase the residence time due to the decreased natural abrasion caused by sediment movements and flushing action by wind, waves, and tides. Protected area may also be shaded and calm, which could inhibit evaporation and photo-oxidation. Table 303-1 in the Clean Seas RRM summarizes the shoreline types and their associated rankings. This table has been reproduced as Table 8-1. Section 303.3 of the Clean Seas RRM provides additional guidance on the potential persistence of stranded oil, and Section 306.5.1 includes a general discussion of the toxicity of oil on wildlife. This information is incorporated into this plan by reference.

ESI SHORELINE TYPES AND RANKINGS*

ESI RANKING	SHORELINE TYPE	PERSISTENCE POTENTIAL	COMMENTS
1	Exposed Rocky Headlands/ Cliffs/ Seawalls/Bulkheads/ Pilings	Low	Wave-induced cleansing generally removes oil in several weeks
2	Exposed Wave-Cut Rock Platforms	Low	Wave-induced cleansing generally removes oil in several weeks
3	Exposed Fine-Grained Sand Beaches	Low	Penetration is usually minimal and wave-induced erosion can expedite oil removal
4	Exposed Coarse-Grained Sand Beaches	Moderate	Penetration is usually moderate and oil may be retained for months
5	Exposed Mixed Sand/Gravel Beaches	Low	Most oil naturally removed in several months
6	Sheltered Sand Beaches (Coarse or Fine)	High	Oil can persist for years
7	Exposed Gravel/Boulder Beaches and Rip-Rap	High	Significant penetration can result in long-term oil persistence
8	Sheltered Rocky Shores and Rip-Rap	High	Oil may persist for many years
9	Sheltered Tidal Flats	Moderate	Oil may persist for a significant period of time
10	Marshes	Very High	Oil may persist for several years

*Reproduced from Table 303-1 of the Clean Seas RRM

6.14 TRAJECTORY ANALYSIS, CONTINUED

Click here to view - Regional Resources Overview

Regional Resources Overview

The pipeline system traverses more than 72 miles of varying terrain in Santa Barbara County. It crosses coastal terraces, coastal streams, natural drainages along the coast and inland, coastal mountains (Santa Ynez Range), rolling hill country (Purisima and Solomon Hills), three major river systems (Santa Ynez, Sisquoc and Cuyama Rivers) and interior mountains (Sierra Madre Range). **FIGURE 1-4** illustrates the pipeline route in Santa Barbara County. The variety of terrain and climatic conditions give rise to several different habitat types supporting a diverse assemblage of plants and animals. Plant communities, wildlife resources, and protected species are discussed in the EIS/EIR prepared for the project (ERT 1984, 1985). These are also addressed in several recently completed environmental documents including the Draft and Final EIR's prepared for the Pacific Pipeline Systems, Inc., Pipeline project, between Gaviota and Las Flores Canyon (Aspen, 1993) and the Interim Marine Terminal at Gaviota (Aspen, 1992). Most recently, Clean Seas commissioned the preparation of the Regional Resource Manual (Clean Seas RRM) which addresses potential marine impacts associated with crude oil spills which could originate from on-shore and off-shore sources (ENSR, 1994). The Clean Seas RRM also identifies sensitive areas and their associated resources, along the California coastline from Cape San Martin to the area south of Mugu Lagoon, including the Santa Barbara Channel Islands.

Other sources consulted during the preparation of this Plan include recently published documents that address sensitive resources in areas potentially affected by PPLP's facilities. These are: the EIR prepared for the Unocal Sisquoc Pipeline between PPLP's Sisquoc Pump Station and Unocal's Santa Maria Pump Station (Envicom 1991 and 1992) and the Special Species Survey conducted for the Coast Rock Project site on the Sisquoc River (LSA 1993). Additionally, Santa Barbara County Flood Control's EIR for Maintenance along the Santa Ynez River (SBC 1992) and the EIR prepared for the Santa Ynez Extension (Coastal Branch Phase II) State Water Project (SAIC 1991) were consulted with regard to sensitive or protected resources potentially at risk from an PPLP crude oil pipeline spill at the Santa Ynez River.

With regard to culturally and economically sensitive areas, the Clean Seas RRM, as amended by OSPR letter dated June 14, 1994 (Robert Sands to Darryle Waldron), is incorporated herein by reference. This June 14, 1994 letter, and its attached listing of information sources relative to California's Archeological Inventory, is included herein at the end of this section. In the event of spilled crude oil from an PPLP facility that has the

potential to affect California's marine waters and coastline, PPLP's Environmental Team Supervisor will be responsible for identifying resources at risk and developing measures for use during response containment and post spill cleanup that, to the extent practical, will minimize impacts to these resources. PPLP's Environmental Team Supervisor is very familiar with the types of resources at risk as well as their general location in proximity to PPLP's facilities.

Vegetation

The vegetation of the project area can be classified into eight different types based primarily on the physical characteristics of the vegetation and the dominant plant species. These vegetation types include agricultural land, grassland, sage scrub, chaparral, valley oak savannah, coast live oak woodland, blue oak woodland, and riparian woodland. The major vegetation type crossed by PPLP's pipelines is grassland, followed by shrublands (sage scrub and chaparral), oak woodlands, agricultural lands, and riparian woodlands. Detailed descriptions of vegetation types along the pipeline route are included in Appendix 4 of this document. Sensitive and/or protected plant species, as determined by federal or state law or as listed by the California Native Plant Society, are addressed throughout this section. These species are described in the Company's EIS/EIR as well as other documents prepared for various projects within Santa Barbara County (Aspen 1992, 1993; Envicom, 1991 and 1992; ENSR, 1994; SBC, 1992; SAIC 1991; and LSA 1993).

Wildlife

Several sensitive and/or protected species of wildlife occupy the habitat types described above. These species are described in the Company's EIS/EIR as well as other documents prepared for various projects within Santa Barbara County (Aspen 1992, 1993; Envicom, 1991 and 1992; ENSR, 1994; SBC, 1992; SAIC 1991; and LSA 1993). Further, as required by Final Development Plan Condition H-16, site specific surveys were updated for PPLP's 24-inch Coastal Pipeline segment in 1990. The results of these surveys are provided in **FIGURE 6.7-1**. With respect to an oil spill, sensitive wildlife species include waterfowl and small animals unable to escape from oiled habitats. Large species such as deer and mobile species such as songbirds can avoid oil; oil spill effects are usually limited to temporary displacement.

Aquatic waterfowl are sensitive to oil spills because of their dependence on aquatic habitats. Waterfowl can become oiled by landing in oil spills may become stressed and may perish from oiling. Oiling of waterfowl habitats may also force changes in distribution patterns when resting and feeding habitats are not

available. Waterfowl may be expected at several locations along the PPLP pipeline routes which include but are not necessarily limited to:

1. The mouths of Cañada del Refugio, Arroyo Quemado, Arroyo Hondo and Cañada de la Gaviota;

2. In lagoons and ponds and the mouth of the Santa Ynez River; and

3. In lagoons, ponds and the mouth of the Sisquoc-Santa Maria River System;

Sensitive marine and nearshore resources subject to potential impacts in the areas identified above are addressed in the Clean Seas RRM (ENSR 1994).

Sensitive/Protected Species

Several sensitive/protected species of plants and wildlife that may potentially occur along the PPLP pipeline routes include species protected by federal and/or state law, or may be listed by the California Native Plant Society. Of these species, many have been found on or near the pipeline routes some of which occur in Gaviota State Park and along the coastal pipeline route.

Because of their immediate proximity to the Pacific Ocean and the potential for impacts to marine waters from a PPLP crude oil spill, each of the stream, creek and natural drainages along the coastal pipeline route are individually addressed in **SECTION 6.14**. This section also includes individual discussions for the major river systems crossed by PPLP within Santa Barbara County (e.g., Santa Ynez, Sisquoc-Santa Maria, and Cuyama). In this section sensitive/protected species are identified by their common names according to their known or expected occurrence at, near or downstream of specific waterway crossing.

6.14 TRAJECTORY ANALYSIS, CONTINUED

Click here to view - Biological Sensitivity to Oil

Biological Sensitivity to Oil

Historically, Oil Spill Contingency Plans concentrated on techniques of clean-up without regard to the biological resources at risk. In the past 20 years, primarily as a result of monitoring studies on the effects of clean-up on biological systems, new ideas on appropriate levels of effort and techniques for clean-up have been developed.

One concept to arise from these investigations is the idea of biological sensitivity to oil. It has been demonstrated that different biological systems respond differently to oil. In general, marine and aquatic systems are considered the most vulnerable to oil because of the opportunity for oil to travel great distances possibly contaminating reproductive habitats, feeding habitats, water supplies, and directly coating vegetation and wildlife in its path. Terrestrial spills generally are confined to smaller areas and therefore, usually affect fewer resources. Terrestrial spills, however, can result in significant impacts if spills occur in rare plant and animal habitats or if clean-up techniques result in reducing the potential for resource recovery.

For the purposes of this section, potentially affected marine, freshwater, and terrestrial habitats are considered. Spill response considerations for each habitat type are discussed below.

Marine Habitats

In 1982, the Minerals Management Service published a classification of the central and northern California coastline using two indices, an Oil Residence Index and a Biological Sensitivity Index (Woodward Clyde 1982). The Oil Residence Index evaluates the time oil is likely to remain in a given area. Generally, the longer the residence time the longer the recovery. The Biological Sensitivity Index is based on the vulnerability (likelihood of contact) and the sensitivity (response to contact with oil) of biological features. This system has also been applied to estuaries and embayments. Marine habitats in general were identified as the most sensitive habitats.

With respect to onshore pipelines, the primary concern is to contain spilled oil before it reaches sensitive marine resources. An oil spill from the Plains Pipeline System could reach marine resources if a spill occurred at or near a coastal stream crossing. In addition to the many stream crossings and drainages found along the 30-inch mainline between Gaviota and the Cuyama River PPLP's pipeline facilities also cross all coastal streams and natural drainages between Cañada del Corral in Las Flores Canyon and Cañada del Leon, immediately east of the Gaviota Pump Station. Most of these crossings are generally less than one mile from the mouths of these streams, their outfall being the Pacific Ocean. It is possible that oil could reach coastal resources including local beaches and the lagoons that may exist at the mouth of a particular drainage. Specific clean-up

considerations for these resources are included in the Clean Seas Manual for Santa Barbara County (Woodward Clyde 1982), the Clean Seas RRM (ENSR 1994) and are addressed in Chapter 900 of this Plan. All coastal stream crossings are considered to be "biologically sensitive" because of the potential risk to the marine environment. A comprehensive listing of sensitive/protected resources is provided, by drainage, in Section 806. Sensitivity issues with respect to crude oil and marine or nearshore resources potentially at risk are addressed in the Clean Seas RRM (ENSR 1994).

Freshwater Habitats

The pipeline system in Santa Barbara County currently crosses three major rivers, eighteen streams containing riparian resources, and another thirty crossings of dry or intermittent natural drainages. For the purposes of this chapter, major river crossings, stream crossings supporting riparian vegetation, and the coastal stream crossings are considered biologically sensitive. Spills in dry drainages would likely be treated similar to spills in grassland habitats and is discussed on Page 5 of this Section, "Terrestrial Habitats".

The pipeline also passes near wetland habitats considered to be biologically sensitive; the freshwater/brackish lagoons at the mouths of Refugio Creek, Arroyo Quemado, Arroyo Hondo, and Cañada de la Gaviota, freshwater ponds/lagoons within the Santa Ynez River and possibly at the mouth of the Santa Maria River.

The level of impact to aquatic resources from an oil spill in terms of duration and length of stream reach affected would depend upon the size of the spill, time of year, physical characteristics of the stream (i.e., bottom substrates, flow, channel characteristics), clean-up and control techniques, and susceptibility of the dominant or important aquatic resources to oil.

Differences between the energies of standing versus running water determine a variety of effects and response considerations (Baca, et. al.). this is primarily the result of the brief retention time of oil in running water when compared to the retention time of oil in standing water. Generally, the longer the residence time the more disruptive the clean-up technique and the longer the recovery rate. Therefore, spills in small streams and wetlands, such as ponds and lagoons, would likely be more persistent in their effects than in large fast flowing rivers.

Oil spill containment and clean-up techniques commonly used in streams include damming or blocking the channel to contain oil, removing oil with a vacuum pump truck, soaking up oil with sorbent materials, cleaning oiled rocks and substrates, removing oiled

vegetation, and removing and replacing oiled substrates. In some instances, allowing the oil to degrade naturally may be preferred to removing stream substrates or clearing oiled vegetation.

In the event of an oil spill, the Company will coordinate with federal, state, and local authorities and experts to assess oil spill damage and recommend clean-up and restoration techniques. The Environmental Team Supervisor will be responsible for contacting the appropriate authorities and experts for the purposes of assessing potential resource damages and coordinating the preparation of the most appropriate clean-up and restoration techniques.

This coordinated assessment will include the evaluation of possible impacts of clean-up to surrounding habitats, potential impacts to protected species and/or culturally sensitive areas, and preferred techniques to enhance natural recovery of oiled habitats. The following considerations and those addressed in the Clean Seas RRM (ENSR, 1994) will be evaluated during the assessment process. Some of the response criteria to be considered include:

High Energy Systems (rapidly flowing streams and rivers)
The following considerations will be evaluated prior to clean-up attempts:

- Oil should be diverted, contained, and cleaned up in less valuable habitats or in areas where oil will cause the least damage. For example, oil in the Santa Ynez River can be diverted to dry, bare channels without vegetation or to agricultural fields for clean-up.

- The clean-up techniques requiring the least disturbance to habitats is preferred. For example, if possible, use of hand-dug channels and hand-constructed containment devices is preferred to using large equipment. If heavy equipment is used, channel morphology should be returned to pre-spill conditions to avoid increasing the erosion hazard.
- Oiled rocks and stream substrates can be cleaned with steam cleaning or low-pressure water flushing. Care should be taken to ensure water pressure is low and erosion of stream banks does not occur.
- If oiled rocks and substrates are removed, replacement with material of similar size and composition will be considered. Oiled substrates may be easier to remove after oil has solidified and begun to degrade. Oiled materials should be disposed of, off site, in approved disposal sites (see Chapter 1000).

Low Energy System (Ponds, Lagoons, Slow Flowing Streams)

The following considerations will be evaluated prior to initiating clean-up:

- Access of equipment into clean-up areas should be from less valuable habitats if possible (i.e., existing roadways, barrow ditches, gravel bars, dry channels).
- Small equipment or manual techniques should be used if possible.
- Cutting contaminated vegetation at ground level is preferred to clearing since riparian vegetation may sprout from intact root systems. Cut vegetation will also provide some erosion protection. Cutting can be done by hand with sickles, brush cutters, or chain saws. Cut vegetation should be disposed of, off site, in approval landfills (see Chapter 1000).
- Oiled trees may also survive if clean-up does not cause erosion around the tree. Broken branches or tree wounds from equipment should be trimmed and/or treated to discourage disease and infection.

Terrestrial Habitats

The pipeline system crosses eight major plant communities and habitats in Santa Barbara County. These include agricultural land, grassland, valley oak savannah, sage scrub, chaparral, coast live oak woodland, blue oak woodland, and riparian woodland/scrub. These habitats have varying sensitivity to oil. The following considerations will be evaluated prior to initiating clean-up:

All Habitats

Under no circumstances should oil be removed by burning. Burning causes adverse air quality impacts and may further damage soils.

Oils should be contained and cleaned up using the lease damaging technique available.

Each site should be evaluated for resource damage including total acreage and loss of rare species. All sites should be documented using photographs and standard reporting procedures.

Each site will be evaluated for appropriate restoration and revegetation following clean-up.

All proposed clean-up and restoration techniques will be approved by appropriate federal, state and local authorities.

Agricultural Lands

Oil diverted to agricultural lands should be controlled in the smallest possible area and should be removed. Large amounts of oil are toxic to plants and will interfere with water retention and rooting. Care

should be taken to remove as little topsoil as possible. For example, oil can be left to dry and then removed with a blade.

Small amounts of oiled soil can be spread and deeply plowed to dilute oil and encourage natural breakdown of oil. Dicing or chisel-plowing increases photochemical oxidation of oil and microbial degradation. Breakdown improves with frequent dicing and plowing. These techniques are routinely used in land farming operations at refineries to dispose of waste oils. In small doses, oil may even act as a fertilizer.

Oiled areas should be re-spread with topsoil from surrounding areas to introduce microflora and fauna to assist in oil breakdown and to provide a suitable seedbed for replanting. In some cases, supplemental topsoil may be needed. The amount of topsoil needed will depend on the depth of oil, success of mixing, and future land use. Replacement topsoil should have similar texture and composition as the removed soils.

Soil samples should be taken to identify soil characteristics and determine fertilizer recommendations.

Fertilizer and other soil amendments can be added to enhance recovery of contaminated soils. Standard nitrogen-phosphorous-potassium fertilizer (8-8-8) can be applied at a fertilizer to oil ratio of 10:1. Fertilizer can assist the effects of discing and plowing.

Grasslands
Oil can be removed from pastureland and dry creek drainages using similar techniques as those described above for agricultural land.

Grassland sites should be reseeded after clean-up with similar species as the affected community (see also PPLP's Restoration, Erosion Control and Revegetation Plan).

Oak Savannah
Oil can be removed from oak savannah habitats using similar techniques to those described for grasslands. Any trees damaged (i.e., broken branches or tree wounds) during clean-up operations should be trimmed and/or treated to discourage disease and infection.

Sage Scrub
Two types of sage scrub habitats (coastal sage scrub and interior sage scrub) are crossed by the pipeline. Sage scrub is dominated by low, medium-sized shrubs. Sage scrub communities occupy a variety of sites including steep, dry slopes near the coast to the interior foothills.

It often occurs as a mosaic pattern with grasslands, chaparral, and woodlands and usually occupies sites with poorly developed soils. Soil types vary in this habitat from loose unconsolidated sandy materials to weathered clays and shallow rocky soils underlain by bedrock. Depending on the terrain involved, clean-up of oil in sage communities may be very difficult.

In sage scrub habitats, especially on steep slopes, the no clean-up option may be preferred. Oiled shrubs may survive oiling if roots are not contaminated. Extensive clean-up techniques may result in increased off right-of-way disturbance, loss of soil, and increased erosion.

Partial clean-up should be considered. Use of hand clean-up techniques is preferred. If oiled vegetation is to be removed it should be cut at the base by hand. In some species the remaining root mass may sprout and the roots will help to minimize erosion. After the oil has solidified it can be removed from the surface with shovels.
If adequate soil is present, these areas can be reseeded with similar plant species. The seeds (or transplants) will come from the same community or revegetation segment as described in PPLP's Restoration, Erosion Control and Revegetation Plan.

If inadequate soil is present for revegetation, soil amendments such as mulch, fertilizer, or imported soils may be necessary. Imported soils will be of similar texture and composition.

Chaparral
Chaparral is the dominant vegetation type along most of the northern portions of the pipeline route in Santa Barbara County. It occurs on rocky hillsides and slopes with poorly developed soils.
Considerations for clean-up in chaparral are similar to those described for sage scrub habitats.

Coast Live Oak Woodlands
Coast live oak woodlands occur along the pipeline on steep north-facing slopes with relatively well-developed soils. Most of the woodlands have relatively well-developed understories of shrubs and herbs.

Clean-up techniques should be limited to hand removal of oiled vegetation if at all possible. Oiled trees are likely to survive if roots are not contaminated.

Oiled vegetation should be cut at ground level.

Oil should be cleaned up with sorbents and/or left to dry. Solidified oil can be removed with shovels. Adequate soils should remain to revegetate the site.

Cleaned up sites can be revegetated using similar plant species (see also PPLP's Restoration, Erosion Control and Revegetation Plan).

Blue Oak Woodland

Blue oak woodlands occur on the northern portion of the pipeline on gentle to steep slopes with relatively deep soils. The blue oak woodlands generally have less development of under-story than the coast live oak woodlands. Most of the understory is limited to grass. Techniques for clean-up would be similar to oak woodlands and grasslands.

Riparian Woodlands and Scrublands

The most extensive riparian woodland along the pipeline route occurs at the Santa Ynez River. Other riparian habitats occur as narrow bands along most of the perennial streams and several of the coastal streams crossed by the pipeline. Depending on seasonal flow characteristics of the affected stream or river, riparian vegetation may or may not be involved in oiling. See also discussion for streams in, "Freshwater Habitats".

Clean-up techniques should avoid impacting surrounding areas. For example, oiled materials should be stockpiled on plastic sheets or collected in barrels, tanks or trucks. Oil freed from vegetation or contained in booms should be controlled and not allowed to contaminate un-oiled areas.

Oiled vegetation should be cut at the base.

Low pressure water flushing should be considered as a clean-up option.

Revegetation should be similar to techniques used during post-construction revegetation.

Gaviota Tarplant Habitat

Gaviota Tarplant Habitat generally occupies that area bounded on the north by the base of the Coast Range; on the South by the Pacific Ocean; on the east by Cañada de las Zorrillas; and on the west by Cañada del Barro. The Coastal Pipeline, the feederline pipeline, Gaviota Pump Station and portions of the 30-inch mainline are within known Gaviota Tarplant Habitat. In conjunction with the California Department of Fish and Game (Natural Heritage Plant Program) and

Chevron U.S.A., Inc. PPLP is participating in the establishment of the Gaviota Tarplant Ecological Reserve (PPLP 1995). This preserve is generally located north of U.S. Highway 101 between Cañada de las Zorrillas to the east and Cañada San Onofre on the west. PPLP's southern easement boundary in this area delineates the northern boundary of the proposed Reserve. Within the Gaviota Tarplant's known range the procedures listed below should be considered for any work that may involve impacts to this state listed species. Further, all such work should be coordinated with CDFG's Plant Ecologist.

Unoiled seed from oiled plants should be collected and stored for use in revegetation.

Oiled vegetation should be cut at the base by hand and disposed of. Care should be taken to not introduce seed of similar tarplant species into Gaviota Tarplant habitat during clean-up. Subspecies seed introduced from other areas could decrease the genetic purity of Hemizonia increscens villosa.

Contaminated soil should be left in place and allowed to naturally biodegrade.

Other Sensitive/Protected Plant Species

Isolated populations of other sensitive/protected plant species are known or suspected to occur in the proximity of PPLP's pipelines in Santa Barbara County. These include: Catalina Mariposa Lily; Plummer's Baccharis; Cliff Aster; Hoffmann's Nightshade and Refugio Manzanita. The Environmental Team Supervisor, who is knowledgeable of these species and their general locations in the vicinity of PPLP's pipeline routes, will be responsible to ensure that appropriate agency and expert coordination is completed during the initial stages of a response.

Native Americans

Along the PPLP pipeline rights-of-way, there are numerous areas deemed culturally and/or religiously sensitive due to the presence of known pre-historic, historic and contemporary sites of significance to the local Native American and Archeological communities. Care should be exercised when any response is required in areas such as these and all activities should be completed after consultation with representatives of the affected Native American Group as well as expert archeological personnel. PPLP's Environmental Team Supervisor is very familiar with these resources and their sensitivity and is keenly aware of the coordination and consultation that must occur in these areas.

6.15 GROUNDWATER SPILLS

A general description of the hydrogeologic characteristics of groundwater basins in the area is presented below. Refer to **SECTION 6.15.1** for groundwater spill clean-up procedures and **SECTION 6.15.2** for groundwater spill post-clean-up procedures. **SECTION 6.15.3** discusses clean-up procedures for groundwater basins in the area.

GROUNDWATER SPILLS
Santa Ynez Basin
The Santa Ynez River channel and alluvial deposits consist of silt, sand and gravel. The residual weathered soils consist of silty sand, silt, and clay with a permeability range of 0.21 to 20.0 inches per hour. The corrosivity of soils ranges from low to high.
The primary source of recharge for the basin is from surface water runoff and from Zaca Creek, north of Buellton, which provides recharge by both surface water and ground water. Discharge is by ground water flow out of the ground water basin.
The velocity of ground water movement and distance the water would migrate in one year was calculated based on values of specific capacity, transmissivity, hydraulic conductivity, gradient of the water table (hydraulic gradient), and thickness of saturated zone. The velocity of the ground water was estimated to be 1,050 feet per year. Should an oil leak occur, the oil will not move with the same velocity as the water. The oil is expected to be heavy crude (API° = 12° to 15°). Note: Although the Leighton and Associates report indicates gravity of crude to be APIo = 12° to 15°, more recent data for Point Arguello crude indicates that APIo is approximately 20°. If the lighter fraction is lost, the oil will likely sink. The lighter fraction may either (1) move downward through the soils to the water table where it will tend to float, spread out, and move in the same direction as the water but at a slower rate than ground water flow or (2) move upward toward the surface. Any soluble fractions would mix with the ground water until they (1) become immobilized by soil particles, (2) become biochemically degraded, (3) escape as volatile gases, and/or (4) become discharged with contaminated water in wells.
Use of the water within the Santa Ynez ground water basin is for irrigation, stock supply, and domestic application. The quality of the ground water generally meets the drinking water standards of Title 22, California Administrative Code.
Based on available data, sensitive areas of the basin do exist along the banks of the river at the pipeline crossing. The pipeline will be above or below the shallow water table, depending on the amount of water in the alluvial deposits in the basin. The Company has given special consideration to the engineering design of the pipeline in order to accommodate the hydrogeologic conditions mentioned above.

6.15 GROUNDWATER SPILLS

A general description of the hydrogeologic characteristics of groundwater basins in the area is presented below. Refer to **SECTION 6.15.1** for groundwater spill clean-up procedures and **SECTION 6.15.2** for groundwater spill post-clean-up procedures. **SECTION 6.15.3** discusses clean-up procedures for groundwater basins in the area.

GROUNDWATER SPILLS, CONTINUED
Sisquoc Basin
The Sisquoc River channel and alluvial deposits consist of silt, sand, and gravel. The residual weathered soils consist of silty sand, silt, and clay with a permeability range of 0.21 to 20.0 inches per hour. The corrosivity of soils ranges from low to high.
The primary source of recharge is from surface water runoff during the rainy season with secondary recharge through the permeable bedrock. Discharge is by ground water flow out of the groundwater basin.
The velocity of ground water movement and distance the water would migrate in one year was calculated based on values of specific capacity, transmissivity, hydraulic conductivity, gradient of water table (hydraulic gradient), and thickness of saturated zone. The velocity of the ground water was estimated to be 5,600 feet per year. Should an oil leak occur, the oil will not move with the same velocity as the water. [Should an oil leak occur, the oil will not move with the same velocity as the water. The oil is expected to be heavy crude (API° = 12° to 15°). Note, however, that more recent data indicates that Point Arguello Gravity is about API° = 20°. If the lighter fraction is lost, the oil will likely sink.
Use of the water within the Sisquoc ground water basin is for irrigation, stock supply, and domestic application. The quality of the ground water generally meets the drinking water standards of Title 22, California Administrative Code.
Based on the available data, sensitive areas do not exist along the banks of the river at the All American Pipeline crossing.
Cuyama Basin
The Cuyama River channel and alluvial deposits consist of silt, sand, and gravel. The residual weathered soils consist of silty sand, silt, and clay with a permeability range of 0.21 to 20.0 inches per hour. The corrosivity of soils ranges from low to high.
A bedrock nose located one mile downstream of the river crossing causes the flow of surface water to be diverted northeasterly. This area could be used as a natural catchment for any oil spilled from the pipeline. The primary source of recharge for the basin is from surface water runoff during the rainy season with secondary recharge through the permeable bedrock. Discharge is by ground water flow out of the ground water basin.

6.15 GROUNDWATER SPILLS

A general description of the hydrogeologic characteristics of groundwater basins in the area is presented below. Refer to **SECTION 6.15.1** for groundwater spill clean-up procedures and **SECTION 6.15.2** for groundwater spill post-clean-up procedures. **SECTION 6.15.3** discusses clean-up procedures for groundwater basins in the area.

GROUNDWATER SPILLS, CONTINUED
Cuyama Basin, Continued
The velocity of ground water movement and distance the water would migrate in one year (3,900 feet per year) was calculated based on values of specific capacity, transmissivity, hydraulic conductivity, gradient of the water table (hydraulic gradient), and thickness of saturated zone. Because these data are limited, the velocity of the ground water could only be estimated for the Cuyama River. Should an oil leak occur, the oil will not move with the same velocity as the water. Recent data shows that the APIo is about 20° versus the 12° to 15° estimated by Leighton and Associates. If the lighter fraction is lost, the oil will likely sink. The lighter fraction may either (1) move downward through the soils to the water table where it will tend to float, spread out, and move in the same direction as the water but at a slower rate than ground water flow or (2) move upward toward the surface. Any soluble fractions would mix with the ground water until they (1) become immobilized by soil particles, (2) become biochemically degraded, (3) escape as volatile gases, and/or (4) become discharged with contaminated water or wells.
Use of the water within the Cuyama ground water basin is for irrigation, stock supply, and domestic application. The quality of the ground water generally meets the drinking water standards of Title 22, California Administrative Code.
Based on the available data, sensitive areas of the basin do not exist along the banks of the river at the pipeline crossing.
Containment
The most effective method of containing a spill to maintain groundwater integrity is to respond as quickly and effectively as possible to the surface spill. The less oil on the surface, the less chance the oil will penetrate the groundwater supply. A brief synopsis of groundwater characteristics for a simple aquifer system (gravity flow system) is provided below. Data for this discussion is taken from Farmer (1983).
The three components of a gravity flow groundwater system are the unsaturated zone, capillary fringe, and saturated zone. The unsaturated zone is characterized by large air spaces and residual water molecules attached to substrate particles as a coating and interconnects between particles. This thin layer of water is sometimes referred to as a "wetting ring". When an oil spill occurs, the crude oil molecules displace the air spaces and residual water molecules as long as there is enough energy to move the oil molecules forward. As the energy dissipates, the oil layer becomes disarticulate. At this point, the oil forms spherical droplets which do not pass through the irregularly shaped pore spaces.

6.15 GROUNDWATER SPILLS

A general description of the hydrogeologic characteristics of groundwater basins in the area is presented below. Refer to **SECTION 6.15.1** for groundwater spill clean-up procedures and **SECTION 6.15.2** for groundwater spill post-clean-up procedures. **SECTION 6.15.3** discusses clean-up procedures for groundwater basins in the area.

GROUNDWATER SPILLS, CONTINUED
Containment, Continued
In the capillary fringes, the air spaces are smaller and more water occupies the spaces between the substrate particles. The water is held in place by capillary forces which are stronger than the gravitational pull. This phenomenon occurs due to the random, sinuous pore patterns of the irregular capillary tubes extending upward toward the unsaturated zone. In general, capillary action works with the smallest pore spaces attracting water to the greatest height. The lower portion of the capillary zone is 100 percent saturated although the water is immobile. The saturation gradient decreases upward through the fringe.
The saturated zone is that area below the capillary fringe where there is 100 percent saturation and free flowing water molecules. Pumpable groundwater is located in this zone.
Sometimes it is possible to place physical barriers in the saturated zone to prevent spilled oil from migrating in mobile water. Examples of physical barriers include slurry wall, vibrated beam, grout curtain, and sheet piling. The slurry wall is constructed by digging a trench to an impermeable base. As the trench is dug, it is cleaned and filled with bentonite. At some point, the backfill is returned to the trench and mixes with the bentonite, forming a soil/bentonite wall. The major problem with this technique is that bentonite is susceptible to brine which is common in many groundwater systems.
The vibrated beam technique utilizes specially adapted I-beams which are vibrated into place and withdrawn. As the beam is withdrawn, a slurry is injected resulting in a slurry-filled trench. The slurry normally consists of bentonite and Portland cement. Additives can be beneficial if used properly.
A grout curtain is constructed by drilling a series of holes and injecting a cement or chemical grout into the holes at very high pressures. This procedure is expensive and time consuming. It also requires compatibility to the substrate in which it is placed.
Sheet pilings are also used to create an impervious wall. The sheet pilings are driven into the ground in an overlap fashion. This barrier is usually dependent on subsurface conditions (i.e., Ph, salinity, particle size). Its major detriment is that a sheet can appear to be in place from the surface but is, in reality, bent out of place by some subsurface object.

6.15 GROUNDWATER SPILLS

A general description of the hydrogeologic characteristics of groundwater basins in the area is presented below. Refer to **SECTION 6.15.1** for groundwater spill clean-up procedures and **SECTION 6.15.2** for groundwater spill post-clean-up procedures. **SECTION 6.15.3** discusses clean-up procedures for groundwater basins in the area.

GROUNDWATER SPILLS, CONTINUED
Containment, Continued
One additional technique called groundwater gradient deviation may be used to contain contaminated waters in the saturated zone. Utilization of this technique requires lowering of the water table by excessive pumping, or rising by excessive injection depending upon the desired effect.

6.15.1 Clean-Up Procedures for Groundwater Spills

The California Regional Water Quality Control Board has established maximum levels acceptable for drinking water for a number of pollutants which could enter the groundwater due to an accidental spill of oil (URS Corporation, 1986). The amount of contaminants reaching the groundwater would depend on the location of the spill, soil type, water level depth, precipitation, and oil characteristics.

Groundwater clean-up methodology includes recovery wells and interceptor trenches. Various recovery well configurations are presently in use including single well/single pump, single well/dual pump, and dual well/dual pump. The recovery system operates automatically on predetermined manual settings for each pump. The control probes maintain a constant desired hydrocarbon thickness in the recovery will while creating a stabilized cone of depression.

In the single well/single pump technique, pumps are placed very near the water surface in the well to remove product from the top of the water surface. **FIGURE 6.15-1** shows the basic construction features of one such well. These wells pump recovered groundwater and hydrocarbons into phase separation facilities where flotation and skimming are used to separate free product from the groundwater. Free hydrocarbons are then stored in a separate tank prior to removal by tank trucks. Following phase separation, recovered groundwater can be discharged directly, if it meets appropriate water quality or discharge standards, or if necessary treated further by coagulation, air stripping, or carbon absorption.

The advantages and disadvantages of the various recovery well configurations are taken verbatim from Blake and Lewis (1982).

Single-pump systems using one well have several advantages over other systems. They are normally cheaper to construct than multiple pump systems because only one pump is required and complicated electronic controls are not needed to regulate pumping levels. A simple mechanical float can be installed to ensure that the pumping level is maintained close to the pump intake to facilitate recovery of the hydrocarbons. Also, smaller diameter wells can be used for the recovery system. However, there are several disadvantages to single-pump systems. Separators must be installed to recover the product at the surface. They are normally not as efficient as two-pump systems because the pump must cycle. The agitation of the product during recovery may emulsify the product and make separation from the water difficult. The mixing of the product and water can result in an increase in the amount of soluble hydrocarbon components retained in the waste water. Although the one-pump system can be utilized effectively for hydrocarbon recovery, these disadvantages make them a less desirable alternative.

In the single well/dual pump completion method (**FIGURE 6.15-2**), a unit underlying the contaminated aquifer is drilled into and packed off (great care should be taken during packer placement to prevent leakage). Clean water is pumped from this zone while another small pump removes free product from the upper contaminated zone above the packer. Explosion-proof retrieval pumps are made which rely on an oil/water sensing probe to discriminate between water and product. This pump is placed at the water table in a water-table-drawndown well (well in which there is a pump withdrawing water for the purpose of creating a cone of depression) and skims product off the water surface. The recovered decantant is treated at the surface in a similar fashion as that for a single well/single pump.

Two-pump systems utilizing one well are generally the most desirable recovery arrangement. A water pump is installed with the intake near the bottom of the well and water is withdrawn at a controlled rate to create the cone of depression. A product pump suspended on a cable is placed above the water pump and adjusted so that the intake is at or below the oil-water interface. Automatic controls are attached at the product pump intake to cycle the product pump as product is accumulated and removed. In addition, controls are installed on the water pump which will stop the pump if product accumulates in the well and approaches the level of the water pump intake.

There are several significant advantages to this type of system. The product is separated from the water in the well and surface separators are not normally necessary. In some instances the product can be recovered, reblended and sold without any additional refining. Addition of soluble hydrocarbon components to the waste water is minimized, since the water and oil are not mixed when recovered. The system is fully automated and can be operated continuously, thus maximizing the efficiency of the system and speed of recovery.

6.15.1 Clean-Up Procedures for Groundwater Spills, Continued

Although this recovery system is normally the most efficient and preferred alternative, there are several disadvantages which must be considered. A larger diameter casing and screen must be installed to house both pumps. The equipment required to operate a two-pump system, mainly due to the complex electronic controls, is much more expensive than that in the one-pump system. If resistivity probes are used to detect the product in the well and operate the product pump, they require periodic maintenance and cleaning. The probes can become coated with hydrocarbon and will not sense the water interface. The control panels, although not overly sensitive, are subject to malfunctions. The most common problem is fuse failure, followed by failure of control switches, failure of the time delay module used to control the cycling period of the pumps, and failure of the power supply module which drives the control panel and its sensors. With the exception of fuse blowouts, the control repairs are not simple to perform and require the services of an experienced electrician. This can result in significant loss of time of operation, thus it is recommended that spare controls be kept on hand. These systems cannot be left unattended for long periods of time and be expected to operate efficiently. The systems must be inspected at least weekly and preferably more often.

In addition, extreme care must be exercised during the initial start up and adjustment of the two-pump system. The water pumping rate and product pump location in the well must be adjusted so that the oil-water interface is maintained at a constant level in the well. Thus, the well must be gauged routinely for several days following start up to assure that pumping levels are stabilized. The stabilization of pumping levels in low-yield wells can be extremely difficult and well shut-down due to over pumping is a common problem. Thus, the installation, start up and operation of two-pump recovery wells should be left to personnel experienced in this method of oil recovery and all of its pitfalls.

The dual well/dual pump (**FIGURE 6.15-3**) is most commonly used when a well exists at the spill site which is not capable of housing two wells. Water is removed from the lower screened portion of the well creating a cone of depression. The accumulated product-contaminated water is then skimmed by the second pump. It is very detrimental for product to discharge through the water pump. To control this, electronic controls need to be installed in the water pump which automatically shut-off upon detecting product.

Interceptor trenches are used for small spills in shallow aquifers. Two types are commonly used: open trench with skimmer (**FIGURE 6.15-4**) and interceptor trench with recovery well (**FIGURE 6.15-5**). The following discussion is taken verbatim from Blake and Lewis (1982).

The materials and equipment necessary to install the systems are generally locally available; the systems is not complicated and it can be installed relatively quickly. There are several factors to evaluate when considering an interceptor system: 1) the trench must bisect the entire width of the spill in order to contain it so the spill must be of relatively limited extent; 2) due to soil instability, the volume of material which must be removed, and the excavation equipment available, the depth of the trench systems is normally limited to 6 to 8 feet; 3) skimming or pumping equipment must operate continuously or the product will accumulate and migrate around the ends of the trench.

Once the trench has been excavated, an impermeable barrier should be installed on the downgradient side of the trench to stop the migration of the floating product but allow the water to pass underneath. The trench can then be left open and skimmer systems employed to remove the floating product. Alternately, the trench can be backfilled with very porous material and a French drain or large-diameter well installed. The use of a skimmer system has the advantage of producing very limited amounts of water which must be disposed of. However, the rate of recovery is slow since the system relies mainly on the natural gradient to transport the oil to the trench. The pumped trenches are more effective and provide for more rapid recovery because a gradient is created toward the trench. However, larger volumes of water which may contain unacceptable concentrations of dissolved hydrocarbons must be disposed of.

FIGURE 6.15-1 - SINGLE WELL/SINGLE PUMP METHOD OF HYDROCARBON RECOVERY

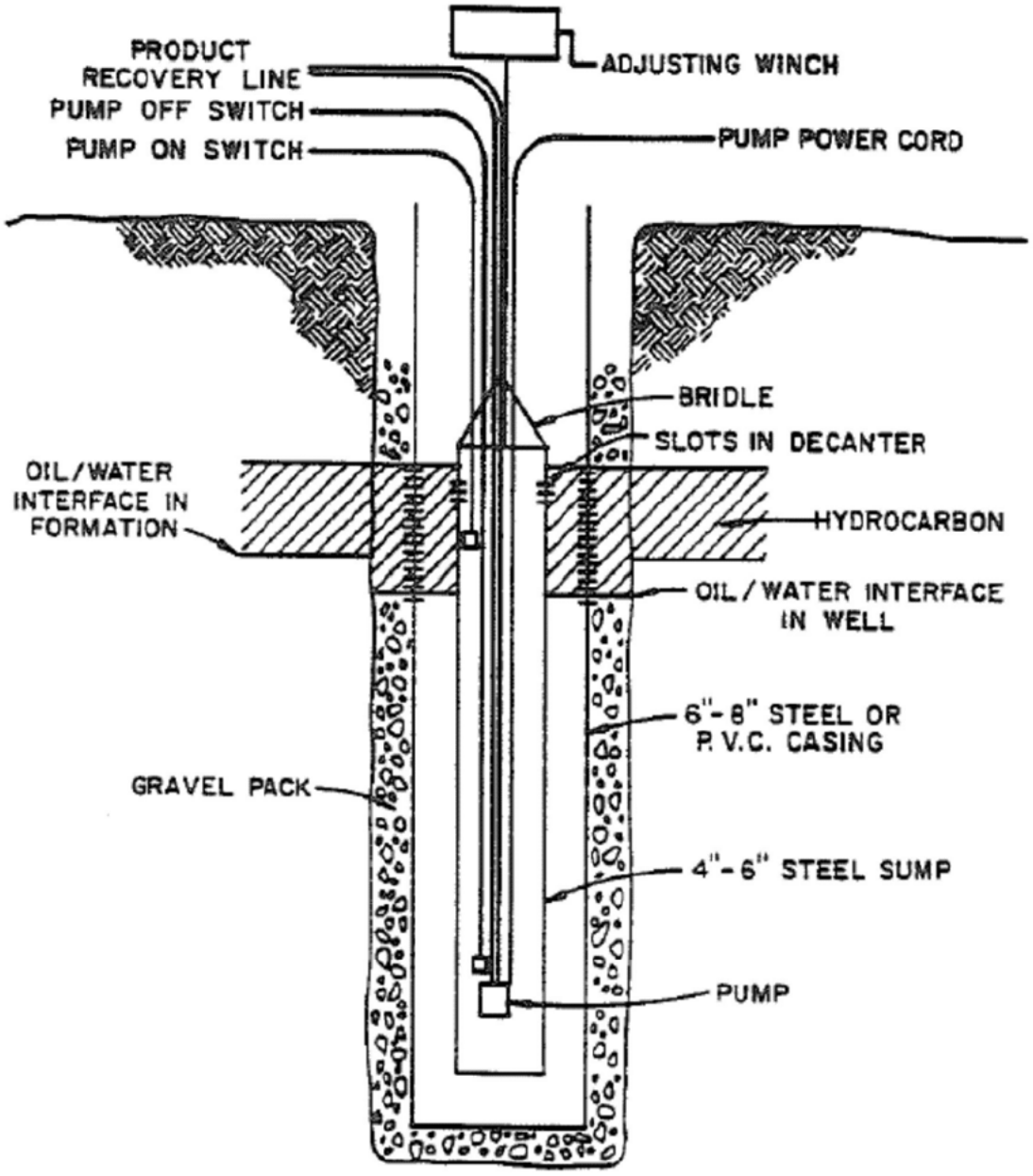


FIGURE 6.15-2 - SINGLE WELL/DUAL PUMP RECOVERY WELL CONFIGURATION

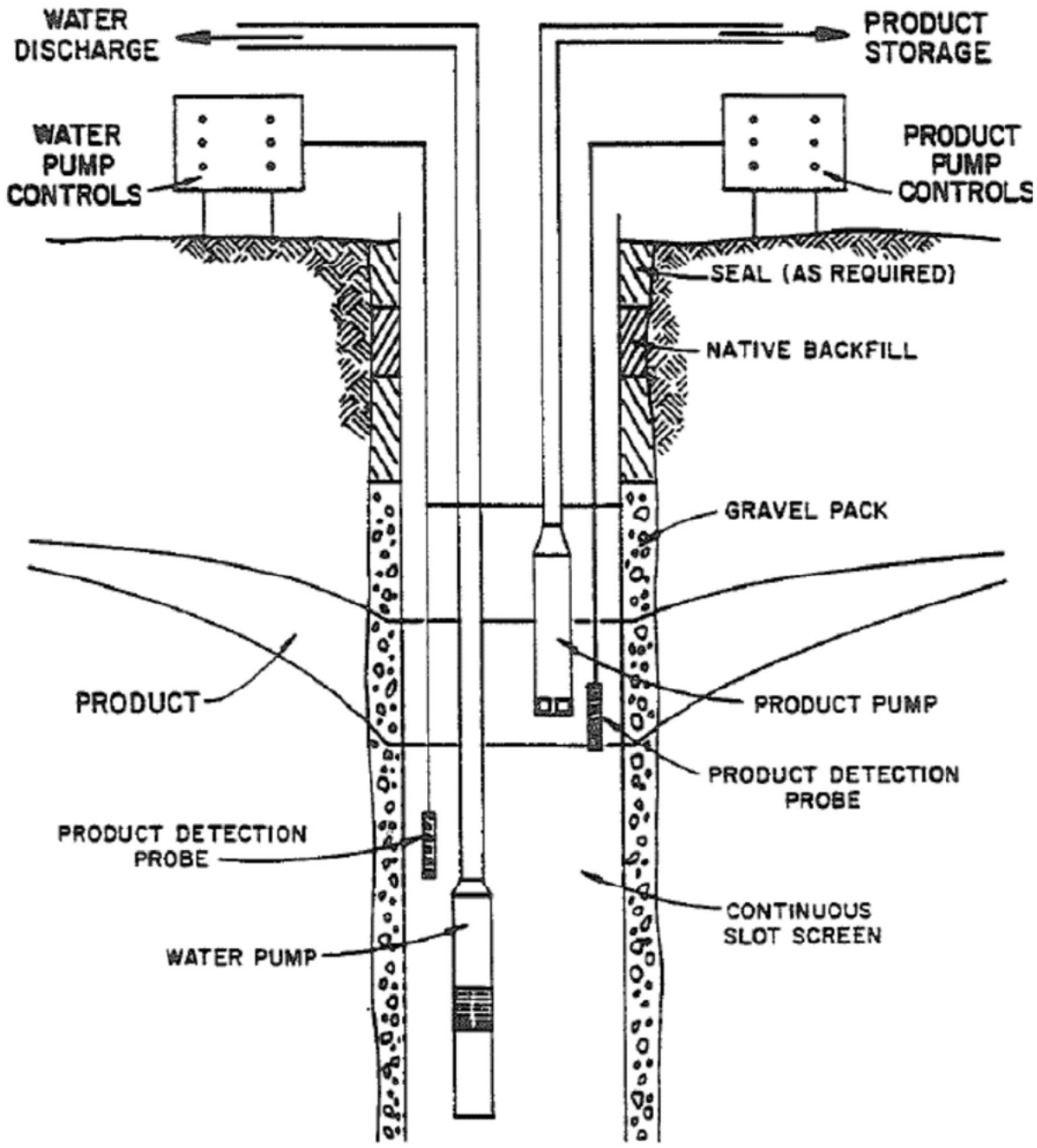


FIGURE 6.15-3 - DUAL WELL/DUAL PUMP RECOVERY WELL CONFIGURATION

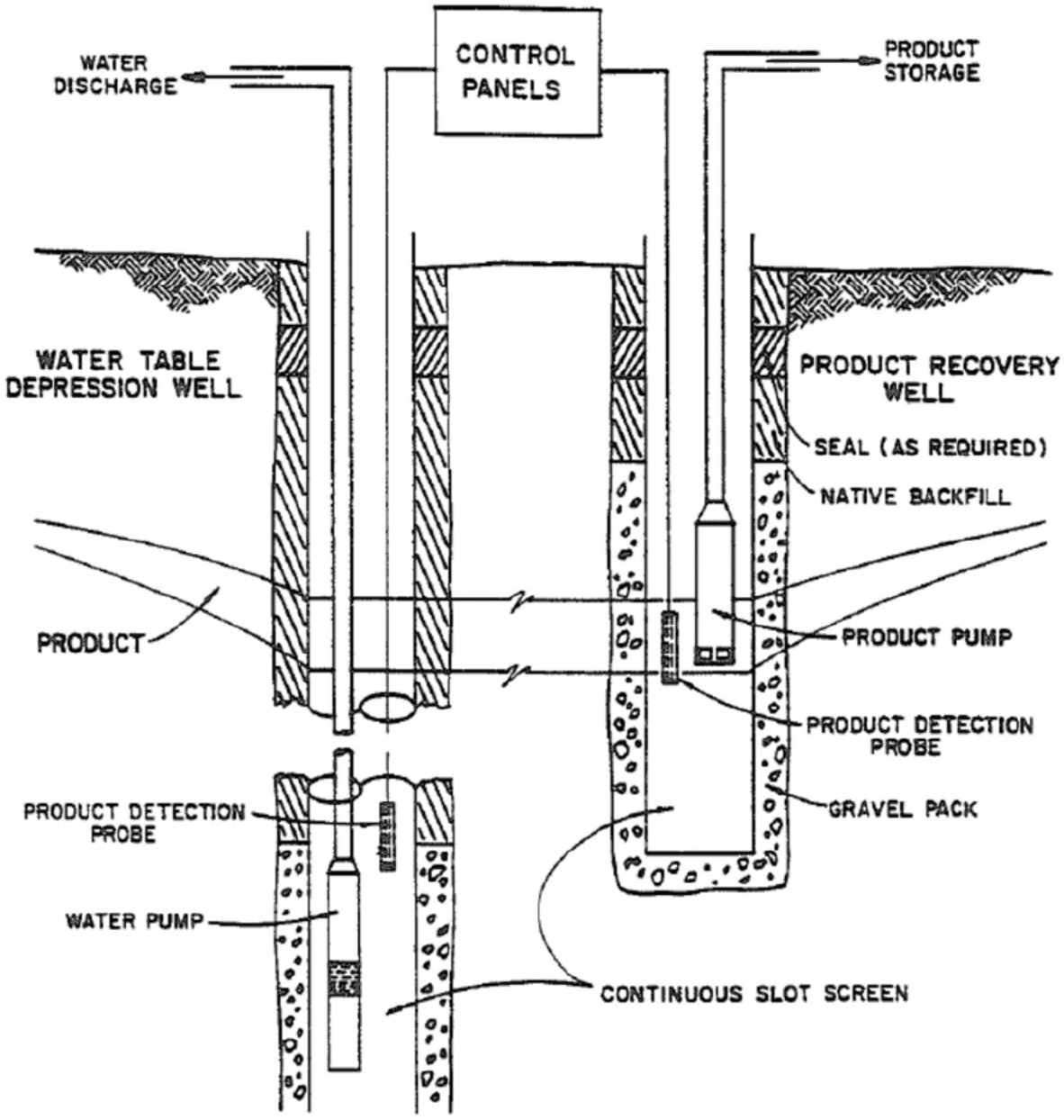


FIGURE 6.15-4 - INTERCEPTOR TRENCH USING AN OPEN TRENCH WITH A SKIMMER

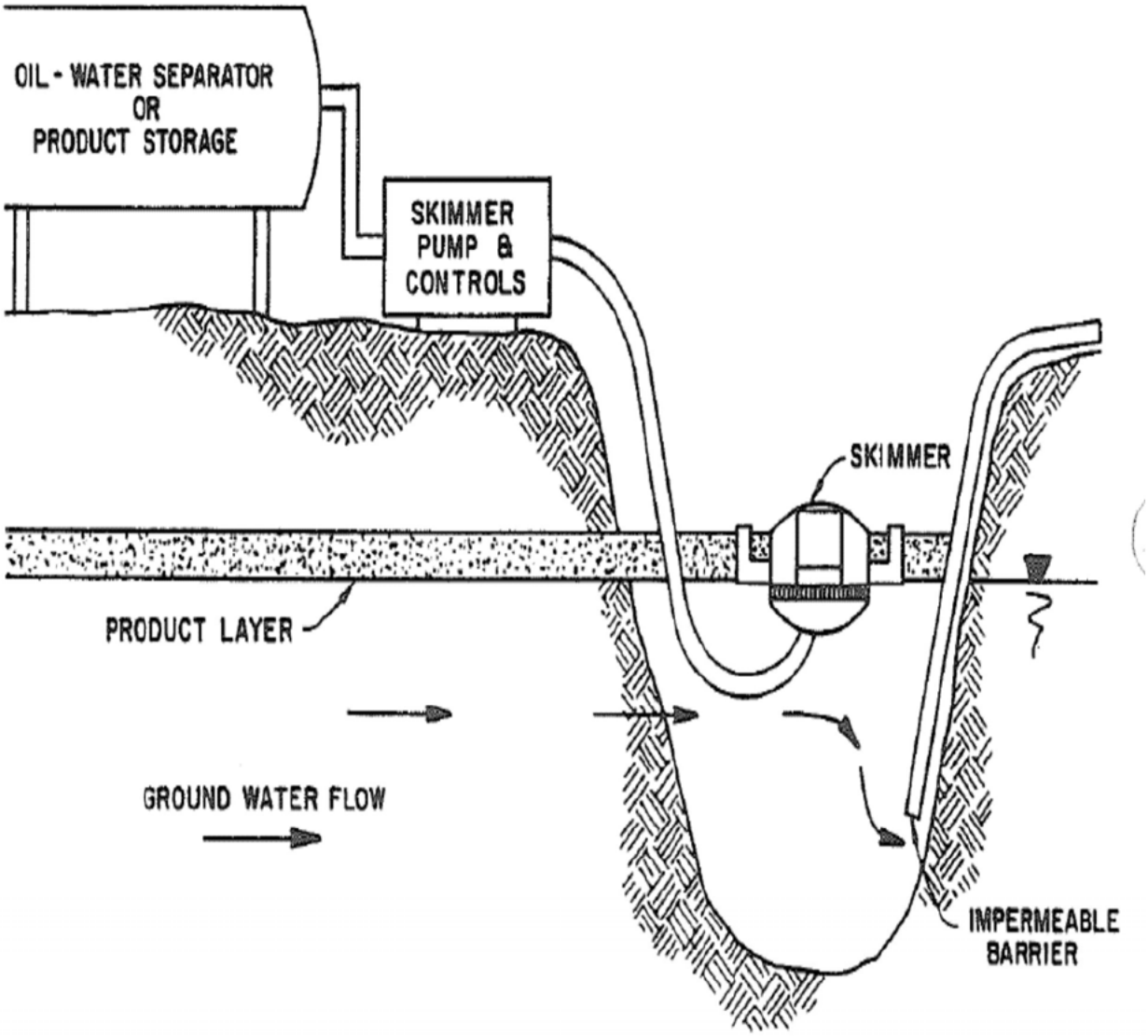
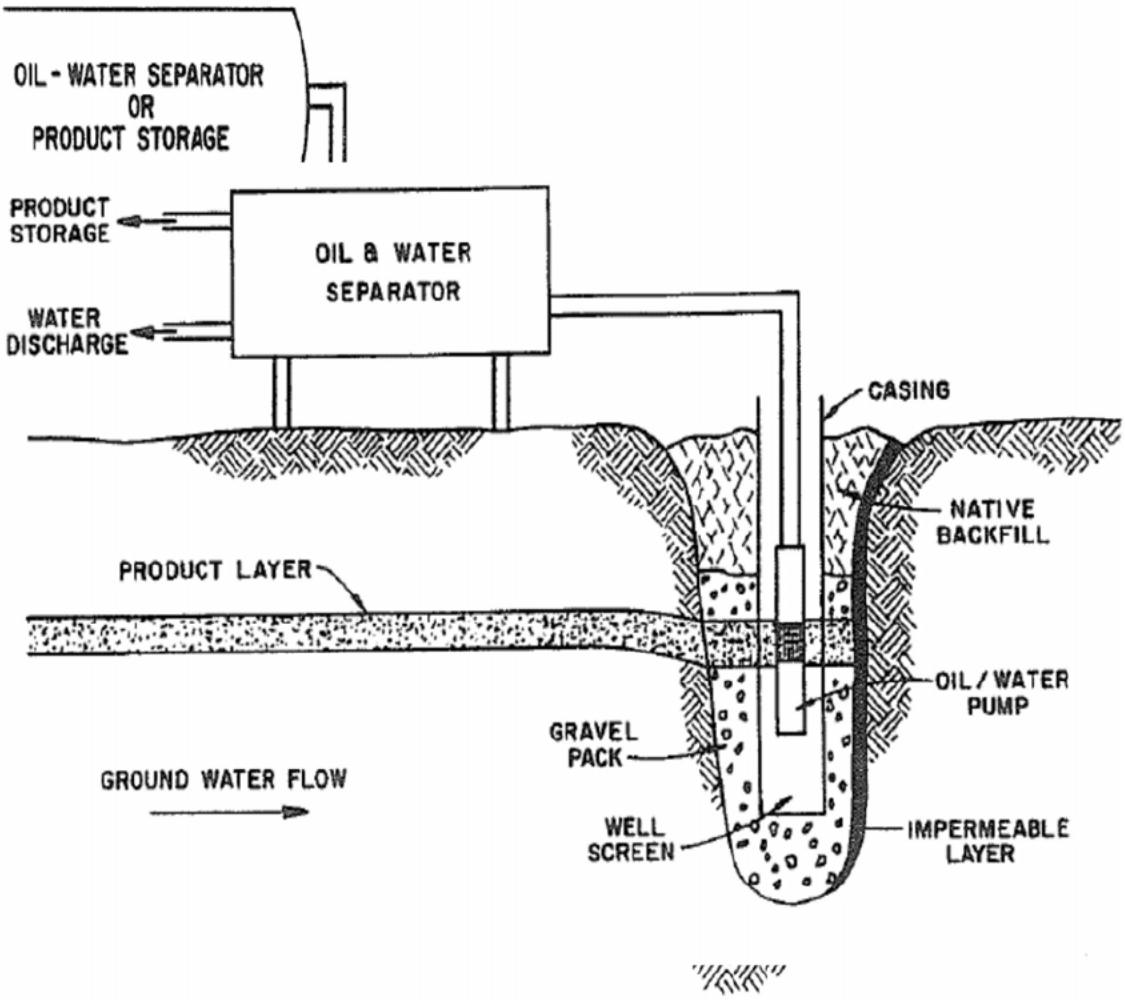


FIGURE 6.15-5 - INTERCEPTOR TRENCH USING A RECOVERY WELL AND SINGLE PUMP UNIT



6.15.2 Post-Clean-Up Procedures for Groundwater Spills

After clean-up procedures have been initiated, or are in progress, low permeability cap(s) and/or monitoring wells may be installed. Low permeability caps are used to prevent percolation of water through the contaminated zone. One generally accepted installation method involves laying down 6 to 8 inch lifts of the low-permeability soil, compacting each lift before the next is added. The low-permeability cap would be graded to promote drainage, further reducing infiltration. Topsoil would be placed above the low-permeability layer to support vegetation.

In those cases where escaped product may be left in the soil above an aquifer, it may be advisable or necessary to install monitor wells in order to monitor for the presence of migrating contaminants.

Background wells (preferably more than one) should be drilled in a location believed to be hydraulically up-gradient of the spill area. If available, an existing well may be used. Any other well(s) should be placed down-gradient of the area of escaped product; their locations would be determined by site-specific study and recommendations.

A central area should be set up to clean and decontaminate the drilling rig, drill tools, bits and subs, and the sampling equipment, including the sample extruder between each boring. The equipment should be steam cleaned to remove the dirt, washed with Alconox soap, and then rinsed with deionized (DI) water. All washing should be done over a lined wash pit with washings disposed of in approved areas. Tool joints should be made up dry or with graphite to minimize sample contamination. Samples of any steam cleaning fluid and DI wash water should be collected and retained for future analysis, if necessary. Cleaned sampling and downhole drilling equipment should be stored under plastic until it is transported to another site. At the drill site, cleaned equipment should be kept off the ground by storing it on racks or pallets. Any tools, drilling equipment, or sampling equipment lying on the ground would be considered contaminated and would be cleaned prior to re-use. An on-site geologist/engineer should be designated as the site Quality Assurance/Quality Control (QA/QC) officer.

6.15.3 Groundwater Basins

The necessary clean-up techniques and procedures to be employed in the event of a spill affecting the groundwater supply would be assessed on a site-specific basis. A general description of clean-up procedures for groundwater basins in the area is presented below.

6.15.3 GROUNDWATER BASINS
Santa Ynez Basin
Pursuant to Final Development Plan Condition F-9a, the Company will monitor for groundwater contamination to ensure early detection of such contamination. This monitoring will include aerial and ground surveys, pipeline pressure monitoring, and water sampling of strategic wells located in the vicinity of the spill and downstream, if appropriate.
In the event of an oil spill which has the potential to cause any groundwater contamination, the Company will notify the appropriate well owners. Pursuant to Final Development Plan Condition F-9b, an inventory of existing wells and owners was completed (Leighton and Associates, Inc., 1985). This information is on file in the Company's Santa Barbara office. Plains All American Pipeline will also begin monitoring of those wells immediately adjacent to the spill locations on a daily basis until the surface spill is cleaned-up, on a weekly basis for the first two months after a spill, and on a quarterly basis for the first year. If well contamination from the spill is detected, the Company will expand monitoring to wells located further from the spill. If a well is contaminated beyond use, PAALP will contact the Buellton Community Services District in order to receive temporary potable water, if available, for use until a permanent solution can be worked out with the affected landowner. The Regional Water Quality Control Board (RWQCB), Santa Barbara County Health Director, and Emergency Services Director will be notified of monitoring results. Monitoring will be done by an independent state licensed laboratory acceptable to the RWQCB and Santa Barbara County.
Sisquoc Basin
Pursuant to Final Development Plan Condition F-9a, the Company will monitor for groundwater contamination to ensure early detection of such contamination. This monitoring will include aerial and ground surveys, pipeline pressure monitoring, and water sampling of strategic wells located in the vicinity of the spill and downstream, if appropriate.
In the event of an oil spill which has the potential to cause any groundwater contamination, the Company will notify the appropriate well owners. Pursuant to Final Development Plan Condition F-9b, an inventory of existing wells and owners was completed (Leighton and Associates, Inc., 1985). This information is on file in the Company's Santa Barbara office. Plains All American Pipeline will also begin monitoring of those wells immediately adjacent to the spill locations on a daily basis until the surface spill is cleaned-up, on a weekly basis for the first two months after a spill, and on a quarterly basis for the first year. If well contamination from the spill is detected, the Company will expand monitoring to wells located further from the spill. If a well is contaminated beyond use, PAALP will provide temporary potable water from Flood Ranch Company until a permanent solution can be worked out with the affected landowner. The Regional Water Quality Control Board (RWQCB), Santa Barbara County Health Director, and Emergency Services Director will be notified of monitoring results. Monitoring will be done by an independent state licensed laboratory acceptable to the RWQCB and Santa Barbara County.

6.15.3 Groundwater Basins

The necessary clean-up techniques and procedures to be employed in the event of a spill affecting the groundwater supply would be assessed on a site-specific basis. A general description of clean-up procedures for groundwater basins in the area is presented below.

6.15.3 GROUNDWATER BASINS, CONTINUED
Cuyama Basin
Pursuant to Final Development Plan Condition F-9a, the Company will monitor for groundwater contamination to ensure early detection of such contamination. This monitoring will include aerial and ground surveys, pipeline pressure monitoring, and water sampling of strategic wells located in the vicinity of the spill and downstream, if appropriate.
In the event of an oil spill which has the potential to cause any groundwater contamination, the Company will notify the appropriate well owners. Pursuant to Final Development Plan Condition F-9b, an inventory of existing wells and owners was completed (Leighton and Associates, Inc., 1985). This information is on file in the Company's Santa Barbara office. Plains All American Pipeline will also begin monitoring of those wells immediately adjacent to the spill locations on a daily basis until the surface spill is cleaned-up, on a weekly basis for the first two months after a spill, and on a quarterly basis for the first year. If well contamination from the spill is detected, the Company will expand monitoring to wells located further from the spill. If a well is contaminated beyond use, PAALP will provide temporary potable water from Russell Ranch (landowner in the Cuyama Valley) until a permanent solution can be worked out with the affected landowner. The Regional Water Quality Control Board (RWQCB), Santa Barbara County Health Director, and Emergency Services Director will be notified of monitoring results. Monitoring will be done by an independent state licensed laboratory acceptable to the RWQCB and Santa Barbara County.

6.16 REVEGETATION AND RESTORATION

Upon completion of clean-up operations along any portion of the pipeline system, the Company will revegetate and restore any contaminated areas to pre-spill conditions to the extent feasible and practical. The pipeline corridors have been studied to characterize the vegetative habitats. This information appears in other studies (see the Company's Restoration, Erosion Control and Revegetation Plan) prepared for this project and is summarized briefly in **SECTION 6.9** and **SECTION 6.11**, and discussed in more detail in **SECTION 6.7** and **FIGURE 6.7-1**. These issues are also addressed in the Clean Seas (ENSR 1994), which is incorporated herein by reference.

This section outlines the approach, procedures and considerations important in revegetating and restoring natural habitats after an oil spill. These measures will be implemented by the Company, as appropriate, given site-specific conditions. Because of the variables involved in any given oil spill (i.e., the type of oil, season of spill, size of spill, habitat affected, and clean-up technique used) it is not possible to describe specific restoration and revegetation techniques for all situations. However, it is possible to describe the environmental considerations important in selecting restoration and revegetation techniques.

6.16.1 Revegetation and Rehabilitation Plans

Based upon the results of a damage assessment and habitat type affected, the Company (in conjunction with appropriate federal, state, and local agency officials) will develop a site-specific revegetation and rehabilitation plan for the affected area. Presented below are guidelines to follow in developing a site-specific revegetation/rehabilitation plan. These guidelines may be modified to reflect circumstances as they relate to a specific spill or affected habitat type.

Revegetation/rehabilitation plans will include the following:

- Procedures for controlling water and wind erosion for an affected area. This will include surface protection measures such as mulches, including type and application rate.
- Specific erosion control techniques and procedures will be developed in consultation with appropriate local, state, and federal government agency personnel and approved prior to implementation.
- Specific sediment control measures will be described if necessary and may include the following: water spraying to prevent wind erosion; the use of straw bales or silt fences to filter runoff; mulching; channel breaks; level spreaders; the use of temporary earth berms, pipes, or sandbags; and the use of jute net, excelsior, or geofabric. The proper use and/or construction of these erosion control devices has been previously prepared for the Company in a document submitted to Santa Barbara County under separate cover entitled "Restoration, Erosion Control and Revegetation Plan". This document should be referred to prior to developing site-specific erosion control measures along the pipeline corridor.
- Sources and names of local contractors that can supply necessary quantities of compatible (texture and composition) soil types in the event contaminated soils have to be replaced.
- Procedures to restore existing topography, substrate, or topsoil, including methods for stream bank and bed restoration.
- Engineering designs, if necessary, to prevent further degradation of oil damaged areas due to loss of vegetation.

6.16.1 Revegetation and Rehabilitation Plans, Continued

- Lists and sources of all of the plant materials to be used for rehabilitation. The list will include all seeding mixtures including the species composition and seeding rate for each species. The use of any cuttings or seedlings will be described including any specific practices necessary for propagation of these species and details of enclosures to protect these seedlings.

- Provisions for using locally collected native plant materials if necessary. The plan will provide a schedule with sufficient lead time to collect and propagate all materials to be used. The schedule will also detail planting and seeding times. If seeding cannot be performed for several months, interim erosion control such as mulching will be implemented.

Procedures contained in the revegetation plan will typically involve standard methods that are widely used in revegetating areas disturbed by construction activities which result in the crushing of vegetation, or the removal of vegetation and soils. These procedures are described in the Company's Restoration, Erosion Control and Revegetation Plan. Special revegetation procedures may be required for areas affected by oil spills because of the potential toxic or inhibitory effects of spilled substances and/or chemical dispersants used to clean up the spill (Cairns and Buikema, 1984; Brevel, 1981).

Procedures that will be considered include the following:

- Testing of all post clean-up soils for fertility, pH, cation exchange capacity, microflora/fauna, and residual level of contamination to ensure the soils used for revegetation are suitable.

- Application of special amendments or application of amendments in atypical amounts in order to counteract any growth-inhibitory effect of residual soil contamination.

- Establishment of barriers around plantings (i.e., shoots and roots) to prevent contamination by runoff from affected areas during the initial growing stages and before decomposition of residual contaminants.

- Addition of amendments and/or microflora and microfauna to soils with residual contamination to increase rate of decomposition.

6.16.2 Terrestrial Habitats

Any terrestrial habitats affected by an oil spill occurring along any onshore portion of the pipeline system will be assessed for damages to existing vegetation. If it is decided to revegetate the area, then contaminated soil may be removed and replaced by compatible (composition and texture) material. Revegetation over the affected area will be initiated by the Company in accordance with the guidelines and procedures established in the Restoration, Erosion Control, and Revegetation Plan used for the pipeline corridor after construction. Although an oil spill may affect areas away from the pipeline corridor, the terrestrial habitats at distance from the corridor are similar. Therefore, the revegetation procedures established under this plan for specific vegetation habitats will apply.

6.16.3 Streams and Rivers

Methods to restore streams and rivers in the project area after an oil spill and subsequent clean-up are described below. A detailed description of the restoration of area streams and rivers are provided below due to their high biological sensitivity. Similar restoration techniques would be utilized for other sensitive creek or stream crossings.

6.16.3 Streams and Rivers, Continued

No Flow Conditions

If an oil spill from the pipeline system enters a stream or river channel during periods of no water flow, the Company will make every feasible effort to restore the contaminated portions of the stream bed to pre-spill conditions. All contaminated soils (e.g., sand, gravel) would be cleaned or removed. Compatible material (composition and size) may be transported to the affected area to replace the removed materials. Vegetation in a dry stream channel is expected to be minimal and not of significant concern in the restoration process of these areas.

Streams with sparsely vegetated dry stream beds include the following: Cañada de la Gallina, Cañada Guillermo, Cañada de la Posta, Cañada de las Zorrillas, Cañada del Barro, unnamed tributaries to Nojoqui Creek (near Rancho de la Vega Shale pit), De la Questa Canyon, Dry Creek, Cañada Botella, East Fork Zaca Creek, West Fork Zaca Creek, East Fork San Antonio Creek, West Fork San Antonio Creek, Cañada del Comasa, Los Alisos Creek, Cuaslui Creek tributaries, Whoop Canyon tributaries, Sisquoc River, Kelly Canyon, Santa Maria Canyon, Buckhorn Canyon, and Pine Canyon. The Cuyama River crossing is primarily a dry stream channel.

Flow Conditions

If an oil spill from the pipeline system enters a stream or river with flowing water, oil may contaminate the sediments and vegetation adjacent to the stream borders. The Company and the appropriate federal, state and local agencies will asses the amount of vegetation contamination on a case-by-case basis. Based on this assessment, a decision to remove the contaminated vegetation or to leave the affected area alone will be made. The decision will be based on:

- Degree of contamination.
- Type of contaminated vegetation.
- Potential for further contamination.
- Potential harm to the area as a result of clean-up operations and vegetation removal.
- Wildlife use of the area.

If the decision is made to remove the contaminated vegetation, the Company will revegetate the area with appropriate vegetation to restore the spill area to pre-spill conditions to the extent feasible and practical.

Stream and river crossings with riparian vegetation and/or perennial flow include: Cañada del Corral, Refugio Creek, Arroyo Hondo, Cañada del San Onofre, Cañada del Mollino, Gaviota Creek, Betty Creek, Cañada de las Cruces, Moonshine Canyon, tributaries to Nojoqui Creek, Santa Ynez River, Foxen Creek, Asphaltum Creek, Tepusquet Creek, Suey Canyon Creek, Buckhorn Canyon, Aliso Canyon (on Hutchings Property) and Clear Creek.

These streams and rivers would be revegetated using similar techniques as those used in post-construction revegetation including cuttings and seed scattering using plant materials collected in the drainage.

6.16.3 Streams and Rivers, Continued

Sensitive Streams

This section provides a description of methods to restore habitats along sensitive stream crossings following the clean-up of an oil spill. The segments of these waterways that are addressed include a mile-long reach downstream from the pipeline crossings.

The following drainages are considered sensitive based on perennial flow, their proximity to marine resources, and/or the presence of riparian vegetation: Cañada del Corral, Refugio Creek, Arroyo Quemado, Arroyo Hondo, Cañada del Mollino, Cañada San Onofre, Cañada del Leon, Cañada de la Gaviota, Betty Creek, Las Cruces Creek, Nojoqui Creek, Santa Ynez River, Tepusquet Creek, Suey Canyon Creek, Alisos Creek.

6.16.4 Shore and Near Shore Habitats

Given the proximity of the numerous drainages crossed by the pipeline to their respective outfall into the Pacific Ocean, the potential for a spill reaching the shoreline exists. It is expected that containment by cooperatives and contractors (refer to **APPENDIX B**) will reduce the potential for wide spread impacts, but if a spill reaches the shore line, clean-up and rehabilitation to pre-spill conditions would be completed. These activities should be planned based on site specific variables and should, prior to implementation, involve input from the proper regulatory authorities, as well as qualified experts. Efforts to minimize response related impacts on sensitive resources will be included in these efforts.

6.16.5 Rehabilitation Techniques

Techniques to rehabilitate the habitats along the sensitive drainages listed above after the completion of clean-up operations are described in this section. The objective of rehabilitation is two-fold: (1) to control any significant post clean-up erosion or sedimentation problems; and (2) return the damaged terrestrial, wetland, and aquatic habitats to their original, pre-spill conditions.

There are two major approaches to rehabilitating oil-damaged habitats: natural recovery or restoration (including erosion control and revegetation). Natural recovery processes begin when oil toxicity and the physical effects of oil spills are reduced or removed. In most cases, recovery starts with or without clean-up. However, the rate and final extent of recovery vary greatly, depending on the type of habitat and severity of the spill. Natural recovery is usually rapid under the following conditions:

- Oil damage and coating is light.
- Low retention of oil and toxic effects in soil.
- Low-impact clean-up procedures are used (i.e., hand cleaning, flushing).
- Little or no soil and vegetation is removed.
- Oil resistant plants are present, such as trees.
- Natural recolonization potential by seeds or rootstocks is high.

6.16.5 Rehabilitation Techniques, Continued

Natural recovery is slow under the following conditions:

- Oil damage and coating is heavy.
- Oil is retained in soil with toxic effects, especially in fine-grained soils.
- Substantial clean-up procedures are used, such as use of equipment and dispersants.
- Substantial amounts of soil and vegetation are removed during clean-up.
- Annual plants are dominant.
- No nearby seed sources and no rootstocks are present.

Restoration involves the rehabilitation of an oil-damaged habitat by corrective actions, including (1) re-building and stabilizing physical features of the creek such as pools, banks, and channel bars and (2) revegetating habitats by seeding and planting of propagules. The need to restore must be carefully considered. First, it is often difficult to create a new habitat that retains the same species and ecological complexities of the original habitat. Secondly, restoration can result in additional damage due to clearing, introduction of non-native species, and inadvertent conversion of habitat types. Restoration is appropriate under the following conditions: (1) the likelihood of successful natural recovery is very low to low; (2) there is a need to control sedimentation and erosion; and (3) there are opportunities to enhance the biological value of affected habitats.

Following the clean-up of an oil spill in a sensitive creek, an assessment of the residual damage to the habitats would be performed by a qualified biologist in consultation with USFWS and CDFG. The objective of this assessment is to select the appropriate method of rehabilitation for each affected habitat or area within a single habitat. These methods would consist of either natural recovery (i.e., no action other than monitoring), partial restoration, or full restoration (i.e., reconstruction and revegetation procedures described below).

Areas of the waterway affected by oil and/or clean-up procedures will be mapped and classified according to the habitat type present (or originally present), the post clean-up conditions, and the likely method of rehabilitation.

FIGURE 6.16-1 - Likely Methods of Rehabilitation

POST CLEAN-UP CONDITIONS	LIKELY METHOD OF REHABILITATION
Disturbed by clean-up, but not oiled	Natural recovery to restoration
Oiled, but not clean-up	Natural recovery
Oiled, but low impact clean-up (hand cutting and removal)	Natural recovery
Oiled and subject to clean-up by flushing, dispersants, minor excavation	Partial restoration
Upper layer of oiled soil removed	Full restoration
Oiled topsoil completely removed	Full restoration

6.16.6 Natural Recovery

No action after spill containment and clean-up would be taken if this rehabilitation technique was selected. The rate and extent of recovery would be monitored and corrective restoration action would be implemented, as necessary.

Partial Restoration

Partial restoration would require some of the methods and techniques described under full restoration. However, these activities would be scaled down in area, extent, or intensity of restoration. For example, during a spill and clean-up, it is possible that only the channel bottom would be disturbed by oiled soil removal, while the creek banks would remain unaffected. This would require only that the measures described for riparian wash or freshwater marsh would be deployed (depending on how far downstream the oil spill extended). Sediment traps may or may not be necessary. Erosion control of the creek banks and allowing natural recovery for revegetation, in most cases, may be all that is necessary.

Full Restoration

Full restoration would be necessary if the vegetation and topsoil were removed. Following is a brief description of potential techniques for rebuilding, stabilizing, and revegetating creek channels. The following discussion assumes that (1) the site has been cleaned up (with much of the natural vegetation and soil removed) and (2) there will be monitoring.

Soils

Prior to rebuilding the creek channel, the soil substrate would be tested for oil toxicity. If any oil toxicity remains, the soil in question would be removed. Any topsoil removed would be replaced with soil of similar texture classification.

After all topsoil has been replaced or supplemented, creek channel characteristics would be restored to pre-spill conditions. Pre-spill conditions of the channel (i.e., height, width, shape) will be accomplished using small equipment. Stabilization of the creek banks may be necessary to prevent erosion and allow revegetation to occur. One or more stabilization techniques may be employed. Several recommended slope stabilization methods are outlined below and include straw mulch, jute netting, hydromulching, mulch blanket, filter berm, filter fence, and sandbag or straw bale barriers (Amimoto, 1978).

Straw Mulch

Straw mulch will be used where appropriate along stream banks and slopes. Straw mulch will serve to slow sheet movement of water, catch sediment, and modify the seedbed for planting. Clean grain straw (no noxious weeds), preferably barley straw, will be used. Mulch can be hand-spread or applied with a blower. Application rates will be between 2,000 and 4,000 pounds per acre depending on site characteristics. Where possible straw mulch should be crimped with a crimper or straw punch roller. Straw mulch may also be anchored with jute netting.

6.16.6 Natural Recovery, Continued

Jute Netting

Jute netting is very effective for stabilizing moderate slopes and small drainage ways until revegetation can occur. The techniques for installation of jute netting are outlined below.

- Remove all trash, large stones, footprints, tracks, etc. from the area to be covered.
- Bury the top end of the jute strips in a trench six inches or more in depth, cover, tamp fill, and secure with a row of staples four inches downslope of the trench.
- Roll out netting alone or over straw mulch, overlapping sections by four inches (uphill sections on top of downhill sections) and staple.
- Jute mesh should be loose and relaxed on the slope.
- Bury lower end of netting as described above for top end.
- Place staples two to four feet apart for entire area (closer if necessary) and one foot apart on seams.
- Jute netting is usually installed prior to seeding or planting cuttings.

Hydromulching

Is the process of spraying mulch, seed, and fertilizer using a jet of water applied under pressure. Hydromulching is best used on steep slopes too difficult for manual treatment or broadcast seeding. Tackifier or adhesive used in hydromulching will be applied at the rates recommended by the manufacturer for severe conditions. "Sentinel" or "M-Binder" is recommended and will be evenly applied at a minimum rate of 120 pounds per acre. Seeding rates will be doubled when added to hydromulch. Seed will not be allowed to stand in the tank longer than 30 min.

Mulch or Excelsior Blanket

The mulch blanket and excelsior blanket are similar and work in similar fashions. Mulch blankets are formed as sheets composed of cellulose fibers bonded to a water soluble binder and meshed with a bio-degradable plastic or cotton net. Following saturation of the mulch blanket by rains, the binder dissolves and the fibers form a mulch cover. Installation is similar to that described for jute netting.

Check Dam

In order to control excessive erosion of sediments in channel bottoms after clean-up, various erosion control or sediment barrier devices may be employed. Check dams are a permanent method of effectively stabilizing the grade and controlling head cutting in natural or artificial channels. Check dams can be constructed of earth or rock. Three types of temporary sediment traps can be employed to effectively control erosion along streams until vegetation or mulch is in place. These temporary sediment traps are filter berms, filter fences, and sandbag or straw bale barriers.

Filter Berm

The filter berm is a temporary sediment trap consisting of a ridge of gravel or crushed rock constructed across the stream channel. These structures measure one to two feet high and three to five feet wide at the top. The side slope grade should be no more than 3:1 if possible. The filter berms should be spaced approximately 250 feet apart.

6.16.6 Natural Recovery, Continued

Filter Fence

Mirafi 100X silt fences shall be installed as specified by the manufacturer. Each fence shall be unbroken. Splices will not be used. Fences will be monitored and silt material removed periodically. Material removed from the fences will be spread upslope and out of waterways.

Sandbag or Straw Bale Barrier

Temporary sediment traps of either sandbags or straw bales may be used similarly to the filter berms to control instream erosion. The sandbags or bales are placed perpendicular to the flow of water across the creek channel or at culvert outlets. Straw dikes will utilize unbroken three-twin bales. It is best to insert the bales at least four inches into the substrate and anchor them with two stakes per bale. Sandbags or earthen structures are preferred where cattle are prevalent. Sandbags may require staking if stacked higher than two bags. Anchors may consist of steel rods, fence posts, rebars, or wood pickets. If straw dikes are to remain permanently, bales should be anchored with wooden stakes or other biodegradable material.

6.16.7 Revegetation

Depending upon the vegetation type damaged by the oil spill and subsequent clean-up, different methods may be employed for site preparation, planting, and maintenance as described below.

Riparian Scrub

This vegetation type will require replacement of shrubs which occupied the creek banks of sensitive streams. After returning the banks to their original or near-original shape and replacing any lost or removed topsoil, cuttings from shrubs present in the drainage will be planted along the banks. Cuttings and seeds may be obtained from nearby populations upstream or downstream of the affected area.

When stems of willow readily sprout, cuttings should be made by the staking method. This method is described as follows: stick the cutting (9 to 12 inches long and 0.5 inch or greater in diameter) topside up into the ground with only three to six inches of the cutting remaining above the soil. At least six inches should be stuck or pounded into saturated soils. Cuttings should be placed from the top of the slope down. Cuttings should be staggered or clumped for best erosion control.

When taking cuttings from parent material, cut in desired length (about 12 inches), bundle, and store under wet burlap or in water. The larger the cutting, the more food is available to the new plant. Stakes thumb size or greater in diameter are preferred. Cut the bottom ends of the cuttings at an angle to distinguish the top from the bottom, or paint the top ends. Be sure there are live buds on the cuttings and that cuttings are planted with buds pointing up. Cuttings should be planted in late winter or early spring (i.e., January or February).

Riparian Wash

This vegetation type consists of weedy species, both native and naturalized. Unless very extensive amounts of bottom substrate were removed, revegetation of this habitat would not be necessary because it is dominated by species which invade disturbed habitats quickly. However, revegetation can be expedited by seeding.

Seed may be brought in by scraping a thin layer of topsoil (one inch) from upstream areas containing similar vegetation and spreading the topsoil over the area to be revegetated. Alternatively, seed may be hand-gathered from specific plant species from the surrounding area and broadcast along the channel bottom.

6.16.7 Revegetation, Continued

Freshwater Marsh

This vegetation type consists of perennial, rhizomatous plants such as slender sedge, umbrella sedge, California tule (bulrush), and cattail. These plants are most successfully revegetated by transplanting portions of the stems with roots and rhizomes (underground stems). The best method of harvesting material is by shovel, placing the roots in wet burlap and transplanting as quickly as possible into moist to wet soil. It may be necessary to irrigate these areas to ensure adequate regrowth or establishment. This can be accomplished by periodic flooding of the freshwater marsh areas from a water truck.

Riparian Woodlands

In most cases trees should not be seriously affected by an oil spill. However, some trees may be injured or removed as a result of oil clean-up operations. Any damaged or cracked branches should be trimmed and all serious tree wounds treated to discourage disease. Trees larger than five inches in diameter at breast height from stream crossings should be replaced with seedlings. Tree seedlings will be replaced at a 3:1 ratio as specified in California Department of Fish and Wildlife 1603 Agreements. Small seedlings may need supplemental watering and protection from trampling by cattle and predation by rodents and deer.

Terrestrial Habitats

Revegetation plans will vary depending on the type of habitat, season of spill, degree of oiling, and degree of clean-up. The following considerations will be incorporated in these plans.

- **Special Habitats** — Oil Spill Containment, clean-up and rehabilitation could take place in sensitive habitat areas such as that of Gaviota Tarplant. In these areas, special techniques will be developed by the Company in conjunction with the appropriate regulatory authorities and qualified experts.

- **Soil** — If topsoil has been removed, full restoration as described under rehabilitation will likely be necessary. Similar soil may be borrowed from surrounding areas if removing soil does not reduce the borrowed area's revegetation potential. Discing or plowing to mix contaminated soil and new soil is highly recommended since it will help in water infiltration, root establishment, and in the breakdown of remaining oil.

  Borrowed soil will likely have a significant seed source for reseeding the area. In these instances, especially where local seed is not available for collecting, the site may be seeded with a cereal cover crop. Barley, oats, or wheat seed will establish a temporary cover crop and help stabilize the site from erosion. These seeded cereal grains will allow for the eventual invasion of native species since crop varieties are not as well adapted as the surrounding plants.

- **Seed Source** — Seed for grassland communities (dominated by primarily introduced annuals) may be purchased. In native shrub communities, seed for revegetation should be collected from surrounding areas or collected from the same revegetation segment (see the Company's Restoration, Erosion Control and Revegetation Plan). Seeding rates, mixtures, and techniques should be similar to those used in post-construction revegetation.

- **Planting Season** — Planting should occur when the seed is most likely to receive rain. If an oil spill and subsequent clean-up, restoration, and revegetation occurs during the summer months, the site may need to be temporarily stabilized with mulch until it can be seeded in late fall. Similar mulch rates and techniques as were used during post-construction revegetation are recommended. If a spill and subsequent control measures occur when native seed is readily available off site, this seed may be used as mulch material and a natural seed source.

SECTION 7

Last Revised: May 1, 2013

SUSTAINED RESPONSE ACTIONS

SECTION 7
SUSTAINED RESPONSE ACTIONS, CONTINUED

7.1 RESPONSE RESOURCES

Company-owned response equipment is listed in **SECTION 7.1.1**. This equipment is strategically staged to minimize response time and is sufficient to contain a 50-barrel spill. Please note that these inventories are dynamic in that various materials needed for daily operations and maintenance may be drawn from these supplies. Each Emergency Response Trailer is inventoried periodically and materials are restocked as necessary.

The Company has an Emergency Management Team (EMT) of qualified personnel for immediate response and spill management activities, and will rely on its primary and secondary OSRO contractors for most of its spill response resources. The Company's owned and maintained resources are dedicated to Company application and are non-cascadable. OSRO and mutual aid organization resources are considered cascadable. These resources are believed to be adequate to initiate the response to any Company release scenario in Southern California. Additional resources can be obtained locally or imported from other portions of the state within 24 hours or less.

The Company's immediate response teams will be equipped with basic spill containment equipment allowing them to initiate limited containment/control actions as time permits. On-duty Company responders can be dispatched to the general spill area within minutes. Off-duty Company personnel will be rotated on an on-call basis, and can typically be en-route to the spill vicinity within 60 minutes of notification. Company responders have access to pickup trucks, mobile communications, and basic first responder spill containment equipment.

The Company has developed working relationships with local resources along the pipeline routes. The local resources (e.g., fire departments, mutual aid organizations) will commonly be the resources on scene first and will initiate basic fire control and public safety functions. Participating fire departments have been trained in oil spill containment and control, and have been equipped by the Company with equipment suitable for initial spill containment, including limiting spill flow into storm drains and waterways. These agencies will commonly be the resources on scene (typically within 15 minutes of notification) and will initiate basic fire control and public safety functions.

The Company is a member in several mutual aid organizations and emergency response co-ops. These organizations maintain response equipment and personnel that are available at the local level to assist in a response action.

The resources of the Company and its response contractor resources exceed planning requirements significantly. Cooperative agreements with other response contractors provide additional personnel and equipment, as needed. In addition, numerous other commercial and government spill response resources exist within the regions and can usually be on-scene within 24 hours or less.

Overall regional resources are summarized in the inventory titled *US Oil Spill Response Equipment at a Glance*, prepared by the National Strike Force Coordination Center.

Response to inland and harbor spills is less subject to interference by adverse weather than for open ocean/coastal spills. Industry standard equipment is available to the Company through its OSRO and other support contractors, and this equipment is generally satisfactory for anticipated scenarios. Primary conditions limiting spill response include flooding, high river currents/storm drain flow, and associated heavy debris loadings. Equipment failure and extreme hazard to personnel are possible under these conditions. Under such circumstances, the Company will move response operations to downstream locations where conditions permit safe operations. Major environmental disasters, such as earthquakes, may also complicate response activities, particularly with regard to response time.

7.1.1 Facility Response Equipment

SKIMMERS/PUMPS					
TYPE/MODEL/YEAR	**QUANTITY**	**CAPACITY**	**DAILY EFFECTIVE RECOVERY RATE**	**DATE FUEL LAST CHANGED**	**STORAGE LOCATION**
None	n/a	n/a	n/a	n/a	n/a
BOOM					
TYPE/MODEL/YEAR	**QUANTITY**	**SIZE**	**CONTAINMENT AREA (sq ft)**	**STORAGE LOCATION**	
"OK Corral" Containment Boom	800 ft.	(6' x 12" x 100' x 1/4 w/Cable)		Bakersfield Emergency Response Trailer	
Boom Absorbent Oil Only	2	8" x 10'		Santa Maria Emergency Response Trailer	
Boom Oil Containment	10	8" x 10'		Santa Maria Emergency Response Trailer	
Boom Absorbent Oil Only	2	8" x 10'		Las Flores Emergency Response Trailer	
River Boom	200 feet			Gaviota Pump Station Utility Trailer (17100 Calle Mariposa Reina, Goleta, CA 93117)	
CHEMICALS STORED					
TYPE	**QUANTITY**	**DATE PURCHASED**	**TREATMENT CAPACITY**	**STORAGE LOCATION**	
None	n/a	n/a	n/a	n/a	
DISPERSANT DISPENSING EQUIPMENT					
TYPE/YEAR	**CAPACITY**	**STORAGE LOCATION**	**RESPONSE TIME (min)**		
None	n/a	n/a	n/a		
SORBENTS					
TYPE/YEAR	**QUANTITY**	**ABSORPTION CAPACITY (gal)**	**STORAGE LOCATION**	**OPERATIONAL STATUS**	
Sorbent Rolls 38" x 144'	55		Bakersfield Emergency Response Trailer	Operational	
Sorbent Boom 8" x 10'	200 ft.		Bakersfield Emergency Response Trailer	Operational	
Sorbent Pads 17" x 19" x 3/8" Oil Only 3M (100 Bx)	6		Bakersfield Emergency Response Trailer	Operational	
Absorbent Boom 8" x 10" Oil Only 3M	4		Bakersfield Emergency Response Trailer	Operational	
Absorbent Rolls 36" x 144' Grade Blanket	3		Bakersfield Emergency Response Trailer	Operational	
Sorbent Pads 17" x 19" x 3/8" Oil Only 3M 100/Bx	6		Las Flores Emergency Response Trailer	Operational	
Absorbent Rolls 39" x 144 Grade Blanket	5		Las Flores Emergency Response Trailer	Operational	
Absorbent Rolls 39" x 144' Grade Blanket	5		Santa Maria Emergency Response Trailer	Operational	
Sorbent Pads 10" x 13" 50/Box	4		Santa Maria Emergency Response Trailer	Operational	
Sorbent Pads 17" x 19" x 3/8" Oil Only 3M 100/Box	2		Santa Maria Emergency Response Trailer	Operational	

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

7.1.1 Facility Response Equipment, Continued

HAND TOOLS					
TYPE/YEAR	**QUANTITY**	**STORAGE LOCATION**	**OPERATIONAL STATUS**		
Rake Bow	5	Santa Maria Emergency Response Trailer	Operational		
Shovel Roundpoint w/47" Handle	6	Santa Maria Emergency Response Trailer	Operational		
Shovel Squarepoint w/47" Handle	6	Santa Maria Emergency Response Trailer	Operational		
Rake Bow	6	Las Flores Emergency Response Trailer	Operational		
Brush, Scrub 12" w/Handle	12	Bakersfield Emergency Response Trailer	Operational		
Brush, Scrub 12" w/Handle	12	Bakersfield Emergency Response Trailer	Operational		
Shovel Roundpoint w/47" Handle	1	Las Flores Emergency Response Trailer	Operational		
Shovel Squarepoint w/47" Handle	1	Las Flores Emergency Response Trailer	Operational		
Rake Bow w/60" Handle	7	Bakersfield Emergency Response Trailer	Operational		
Backhoe, Case 580 Super K	1	Bakersfield Emergency Response Trailer	Operational		
Wach Saw Pipe Cold Cutting Equipment	1	Bakersfield Emergency Response Trailer	Operational		
Shovel Flat Nose w/47" Handle	7	Bakersfield Emergency Response Trailer	Operational		
Shovels Round Nose w/47" Handle	2	Bakersfield Emergency Response Trailer	Operational		
1-1/2" Drive Hydraulic Torque Wrench w/Sockets	1	Bakersfield Emergency Response Trailer	Operational		
FIRE FIGHTING AND PERSONNEL PROTECTIVE EQUIPMENT					
TYPE/YEAR	**QUANTITY**	**STORAGE LOCATION**	**OPERATIONAL STATUS**		
Tyvek Coveralls (100 SM, 100 LG, 100 X-LG, 100 XX-LG, 100 XXX-LG)	500	Bakersfield Emergency Response Trailer	Operational		
Boots Cover Latex Disposable Yellow (50 Large, 50X-Large, 50 XX-Large) - Pair	150	Bakersfield Emergency Response Trailer	Operational		
Rainsuit 3 PC Suit Poly (5 Med, 5 Large, 5 X-Large, 5 XX-Large, 5 XXX-Large)	25	Bakersfield Emergency Response Trailer	Operational		
Safety Eyewear (Visitor Specs) Clear	24	Bakersfield Emergency Response Trailer	Operational		

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

7.1.1 Facility Response Equipment, Continued

FIRE FIGHTING AND PERSONNEL PROTECTIVE EQUIPMENT					
TYPE/YEAR	**QUANTITY**	**STORAGE LOCATION**	**OPERATIONAL STATUS**		
Safety Eyewear w/Amber Lens	6	Bakersfield Emergency Response Trailer	Operational		
Safety Eyewear w/Mirror Lens	12	Bakersfield Emergency Response Trailer	Operational		
Nuke Boots (40 Medium, 50 Large, 50 XX-Large)	150	Bakersfield Emergency Response Trailer	Operational		
Nuke Protective Suit (100 Large, 100 X-Large)	200	Bakersfield Emergency Response Trailer	Operational		
Gloves, Latex (Large)	500	Bakersfield Emergency Response Trailer	Operational		
Gloves, Latex (X-Large)	500	Bakersfield Emergency Response Trailer	Operational		
Gloves, Latex Powdered (Large) (Box)	2	Bakersfield Emergency Response Trailer	Operational		
Gloves, Latex Powdered (X-Large) (Box)	2	Bakersfield Emergency Response Trailer	Operational		
Gloves, Leather (Dozen)	8	Bakersfield Emergency Response Trailer	Operational		
Gloves, Leather Palm (Dozen)	4	Bakersfield Emergency Response Trailer	Operational		
Gloves Rubber PVC (Dozen)	12	Bakersfield Emergency Response Trailer	Operational		
Goggles	50	Bakersfield Emergency Response Trailer	Operational		
Goggles, Clear Splash/Impact	12	Bakersfield Emergency Response Trailer	Operational		
Hard Hats (Gray) ANSI Z89.1	15	Bakersfield Emergency Response Trailer	Operational		
ICS, Safety Vest (Set)	1	Bakersfield Emergency Response Trailer	Operational		
Life Preserver Vest	4	Bakersfield Emergency Response Trailer	Operational		
Full Face Shield	10	Bakersfield Emergency Response Trailer	Operational		
Fire Extinguisher (Dry Chemical 30 lb)	4	Bakersfield Emergency Response Trailer	Operational		

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

7.1.1 Facility Response Equipment, Continued

FIRE FIGHTING AND PERSONNEL PROTECTIVE EQUIPMENT					
TYPE/YEAR	**QUANTITY**	**STORAGE LOCATION**	**OPERATIONAL STATUS**		
Coveralls Tyvek White Elastic 3 Pc (50-Large, 50-XX Large, 50 XXX-Large)	150	Bakersfield Emergency Response Trailer	Operational		
Coveralls Saranex White Elastic 3 Pc (5 Large, 5 X-Large) 5 XX-Large)	15	Bakersfield Emergency Response Trailer	Operational		
Ear Plug, Foam (200 pair/box)	3	Bakersfield Emergency Response Trailer	Operational		
Ear Muff	10	Bakersfield Emergency Response Trailer	Operational		
Saranex Coverall White Elastic 3 Pc. (Large)	5	Las Flores Emergency Response Trailer	Operational		
Saranex Coverall White Elastic 3 Pc. (X-Large)	5	Las Flores Emergency Response Trailer	Operational		
Saranex Coverall White Elastic 3 Pc. (XX-Large)	5	Las Flores Emergency Response Trailer	Operational		
Rainsuit 2 Piece (Medium)	11	Las Flores Emergency Response Trailer	Operational		
Rainsuit 2 Piece (Large)	9	Las Flores Emergency Response Trailer	Operational		
Rainsuit 2 Piece (X-Large)	14	Las Flores Emergency Response Trailer	Operational		
Rainsuit 2 Piece (XX-Large)	9	Las Flores Emergency Response Trailer	Operational		
Tyvek Coverall (Large)	25	Las Flores Emergency Response Trailer	Operational		
Tyvek Coverall (XX-Large)	25	Las Flores Emergency Response Trailer	Operational		
Flotation Device Type III Personal (Adult)	4	Las Flores Emergency Response Trailer	Operational		
Glove Latex Disposable 100/Bx	1	Las Flores Emergency Response Trailer	Operational		
Glove Rubber PVC	20	Las Flores Emergency Response Trailer	Operational		
Gloves Leather Palm	24	Las Flores Emergency Response Trailer	Operational		
Goggles Clear Splash Impact	12	Las Flores Emergency Response Trailer	Operational		

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

7.1.1 Facility Response Equipment, Continued

FIRE FIGHTING AND PERSONNEL PROTECTIVE EQUIPMENT					
TYPE/YEAR	**QUANTITY**	**STORAGE LOCATION**	**OPERATIONAL STATUS**		
Hardhat White ANSI Z89.1 Class ABC	14	Las Flores Emergency Response Trailer	Operational		
Fire Extinguisher 30 lb Dry Chemical	1	Las Flores Emergency Response Trailer	Operational		
Boot Cover Latex Disposable (Large)	5	Las Flores Emergency Response Trailer	Operational		
Boot Cover Latex Disposable (X-Large)	6	Las Flores Emergency Response Trailer	Operational		
Boot Cover Latex Disposable (XX-Large)	10	Las Flores Emergency Response Trailer	Operational		
Rainsuit 2 Piece (Medium)	6	Santa Maria Emergency Response Trailer	Operational		
Rainsuit 2 Piece (Large)	6	Santa Maria Emergency Response Trailer	Operational		
Rainsuit 2 Piece (X-Large)	6	Santa Maria Emergency Response Trailer	Operational		
Rainsuit 2 Piece (XX-Large)	6	Santa Maria Emergency Response Trailer	Operational		
Hardhat White ANSI Z89.1 Class ABC	6	Santa Maria Emergency Response Trailer	Operational		
Flotation Device Type III Personal (Adult)	4	Santa Maria Emergency Response Trailer	Operational		
Safety Vests "Emergency Response Personnel"	3	Santa Maria Emergency Response Trailer	Operational		
Safety Vests Fluorescent orange	8	Santa Maria Emergency Response Trailer	Operational		
Tyvek Coverall (Large)	83	Santa Maria Emergency Response Trailer	Operational		
Tyvek Coverall (X-Large)	25	Santa Maria Emergency Response Trailer	Operational		
Tyvek Coverall (XX-Large)	25	Santa Maria Emergency Response Trailer	Operational		
Boot Cover Latex Disposable (Large)	10	Santa Maria Emergency Response Trailer	Operational		
Boot Cover Latex Disposal (X-Large)	10	Santa Maria Emergency Response Trailer	Operational		

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

7.1.1 Facility Response Equipment, Continued

FIRE FIGHTING AND PERSONNEL PROTECTIVE EQUIPMENT					
TYPE/YEAR	**QUANTITY**	**STORAGE LOCATION**	**OPERATIONAL STATUS**		
Boot Cover Latex Disposable (XX-Large)	10	Santa Maria Emergency Response Trailer	Operational		
Ear Plug Foam 200/Box	2	Santa Maria Emergency Response Trailer	Operational		
Fire Extinguisher 10 lb. ABC	3	Santa Maria Emergency Response Trailer	Operational		
Fire Extinguisher 30 lb. Dry Chemical	1	Santa Maria Emergency Response Trailer	Operational		
Glove Latex Disposable 100/Box	6	Santa Maria Emergency Response Trailer	Operational		
Glove Rubber PVC	20	Santa Maria Emergency Response Trailer	Operational		
Gloves Leather Palm	24	Santa Maria Emergency Response Trailer	Operational		
Goggles Clear Splash Impact	6	Santa Maria Emergency Response Trailer	Operational		
OTHER					
TYPE/YEAR	**QUANTITY**	**STORAGE LOCATION**	**OPERATIONAL STATUS**		
Ground Rod 5/8" x 6'	1	Santa Maria Emergency Response Trailer	Operational		
First Aid Kit (Deluxe) 100 person	1	Santa Maria Emergency Response Trailer	Operational		
First Responder Site Required PPE Chart (24" x 36")	1	Santa Maria Emergency Response Trailer	Operational		
Flashlight Brite Lite Submersible	1	Santa Maria Emergency Response Trailer	Operational		
Flashlight Rayovac Workhorse	4	Santa Maria Emergency Response Trailer	Operational		
Flashlight rechargeable w/Adapters Maglite	4	Santa Maria Emergency Response Trailer	Operational		
Emergency Response Manual PPLP	1	Santa Maria Emergency Response Trailer	Operational		
Emergency Support Units	6	Santa Maria Emergency Response Trailer	Operational		
Extension Cord 15 AMP 125 Volt 100'	1	Santa Maria Emergency Response Trailer	Operational		
Extension Cord 30 AMP 125 Volt 15'	1	Santa Maria Emergency Response Trailer	Operational		

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

7.1.1 Facility Response Equipment, Continued

OTHER					
TYPE/YEAR	**QUANTITY**	**STORAGE LOCATION**	**OPERATIONAL STATUS**		
Extension Cord w/Rewind Reel 100' 14/3 SLEO 50 Volt	1	Santa Maria Emergency Response Trailer	Operational		
Eyewash Station 15 Gallon Gravity Fed	1	Santa Maria Emergency Response Trailer	Operational		
Ford F-150 4x4	1	2230 S. Depot Street, Suite A; Santa Maria, California	Operational		
Ford 1 Ton Utility Truck w/Auto Crane	1	2230 S. Depot Street, Suite A; Santa Maria, California	Operational		
Ford F-250 4x4 w/electrical Utility Bed	2	2230 S. Depot Street, Suite A; Santa Maria, California	Operational		
Dodge 1 Ton Utility Truck w/Auto Crane	1	2230 S. Depot Street, Suite A; Santa Maria, California	Operational		
Chevy 1/2 Ton	2	2230 S. Depot Street, Suite A; Santa Maria, California	Operational		
Emergency Response Trailer with Inventory	1	2230 S. Depot Street, Suite A; Santa Maria, California	Operational		
Emergency Response Trailer with Inventory	1	Las Flores Pump Station, 12050 Calle Real; Goleta, CA	Operational		
Bull Horn w/C-Cell Batteries	2	Santa Maria Emergency Response Trailer	Operational		
Cable Extension (30 AMP)	100	Santa Maria Emergency Response Trailer	Operational		
Caution Tape (CAUTION DO NOT ENTER) 3" x 1000'	3	Santa Maria Emergency Response Trailer	Operational		
CPR Response Kit	1	Santa Maria Emergency Response Trailer	Operational		
Duct Tape 2" x 60 Yards	18	Santa Maria Emergency Response Trailer	Operational		
Badges, Oil Spill Response (Color Coded – Set)	1	Santa Maria Emergency Response Trailer	Operational		
Bags, Nylon Woven	50	Santa Maria Emergency Response Trailer	Operational		
Bags, Poly 100/Box	1	Santa Maria Emergency Response Trailer	Operational		
Barricade Flasher Amber w/Solar Switch 12V	4	Santa Maria Emergency Response Trailer	Operational		

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

7.1.1 Facility Response Equipment, Continued

OTHER					
TYPE/YEAR	**QUANTITY**	**STORAGE LOCATION**	**OPERATIONAL STATUS**		
Batteries 6 Volt	6	Santa Maria Emergency Response Trailer	Operational		
Batteries AA-Cell (24-Carton)	1	Santa Maria Emergency Response Trailer	Operational		
Batteries C-Cell (12 per Carton)	1	Santa Maria Emergency Response Trailer	Operational		
Batteries D-Cell (12 per Carton)	2	Santa Maria Emergency Response Trailer	Operational		
Blanket Emergency Disposal 54" x 80"	2	Santa Maria Emergency Response Trailer	Operational		
Blanket First Aid 62" x 80" Wool	2	Santa Maria Emergency Response Trailer	Operational		
Visqueen 100 ft. Roll 6 Mil	2	Santa Maria Emergency Response Trailer	Operational		
Drinking Water (5 Gal/Ea)	2	Santa Maria Emergency Response Trailer	Operational		
Wind Sock	1	Santa Maria Emergency Response Trailer	Operational		
Generator Honda EM 5000S	1	Santa Maria Emergency Response Trailer	Operational		
Spill Response Buckets w/5, Sock Absorbs	3	Santa Maria Emergency Response Trailer	Operational		
Tape, Masking	1	Santa Maria Emergency Response Trailer	Operational		
Tarp 12' x 24'	2	Santa Maria Emergency Response Trailer	Operational		
Traffic Barrier Plastic 8" x 24" Reflective	4	Santa Maria Emergency Response Trailer	Operational		
Traffic Cones 28" Fluorescent Orange	12	Santa Maria Emergency Response Trailer	Operational		
Trash Bags 38" x 58" 2.0 ml (100/Box)	2	Santa Maria Emergency Response Trailer	Operational		
Trauma Burn Pack Portable (Adult)	1	Santa Maria Emergency Response Trailer	Operational		
Tripod Light, 2 Lighthead 1000 Watt 25' Cord 5' x 10" Ext.	1	Santa Maria Emergency Response Trailer	Operational		

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

7.1.1 Facility Response Equipment, Continued

OTHER					
TYPE/YEAR	**QUANTITY**	**STORAGE LOCATION**	**OPERATIONAL STATUS**		
Heater Electric 1500 Watt	1	Santa Maria Emergency Response Trailer	Operational		
Incident Command Organization Chart (30" x 40")	1	Santa Maria Emergency Response Trailer	Operational		
Initial On-Site Emergency Action Plan Chart (30" x 40")	1	Santa Maria Emergency Response Trailer	Operational		
Initial Response Site Safety Plan Chart (30" x 40')	1	Santa Maria Emergency Response Trailer	Operational		
Maps, USGS Quadrangle 7.5 Minutes SB/SLO Counties	1	Santa Maria Emergency Response Trailer	Operational		
Marker Board (5' x 3') w/Markers	1	Santa Maria Emergency Response Trailer	Operational		
MSDS Binder	2	Santa Maria Emergency Response Trailer	Operational		
Oil Spill Contingency Plan PPLP	1	Santa Maria Emergency Response Trailer	Operational		
Oil Spill Response Plan PPLP	1	Santa Maria Emergency Response Trailer	Operational		
Pail Plastic 5 Gallon w/Handles	3	Santa Maria Emergency Response Trailer	Operational		
Rags, Corduroy 25 lb/Box	2	Santa Maria Emergency Response Trailer	Operational		
Respirator Organic Vapor (Medium)	7	Santa Maria Emergency Response Trailer	Operational		
Respirator Organic Vapor (Large)	4	Santa Maria Emergency Response Trailer	Operational		
Rope Nylon 1/4" x 500'	1	Santa Maria Emergency Response Trailer	Operational		
Safety Can 5 Gallon Type II w/Flexible Hose	4	Santa Maria Emergency Response Trailer	Operational		
Bull Horn w/C-Cell Batteries	2	Las Flores Emergency Response Trailer	Operational		
Cable extension (30 AMP)	100	Las Flores Emergency Response Trailer	Operational		
Caution Tape (CAUTION DO NOT ENTER) 3" x 1000'	2	Las Flores Emergency Response Trailer	Operational		

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

7.1.1 Facility Response Equipment, Continued

OTHER					
TYPE/YEAR	**QUANTITY**	**STORAGE LOCATION**	**OPERATIONAL STATUS**		
CPR Response Kit	1	Las Flores Emergency Response Trailer	Operational		
Duct Tape 2" x 60 Yds	2	Las Flores Emergency Response Trailer	Operational		
Emergency Response Manual PPLP	1	Las Flores Emergency Response Trailer	Operational		
Extension Cord w/Rewind Reel 100' 14/2 SLEO 250 Volt	1	Las Flores Emergency Response Trailer	Operational		
Eyewash Station 15 Gallon Gravity Fed	1	Las Flores Emergency Response Trailer	Operational		
First Aid Kit (Deluxe) 100 Person	1	Las Flores Emergency Response Trailer	Operational		
First Responder Site Required PPE Chart (24" x 36")	1	Las Flores Emergency Response Trailer	Operational		
Flashlight Rayovac Workhorse	4	Las Flores Emergency Response Trailer	Operational		
Bags, Poly 100/Box	1	Las Flores Emergency Response Trailer	Operational		
Barricade flasher Amber w/Solar Switch 12V	2	Las Flores Emergency Response Trailer	Operational		
Batteries 6 Volt	18	Las Flores Emergency Response Trailer	Operational		
Batteries AA-Cell (24 per Carton)	1	Las Flores Emergency Response Trailer	Operational		
Batteries C-Cell (12 Carton)	3	Las Flores Emergency Response Trailer	Operational		
Blanket First Aid 62" x 80" Wool	2	Las Flores Emergency Response Trailer	Operational		
Heater Electric 1500 Watt	1	Las Flores Emergency Response Trailer	Operational		
Incident Command Organization Chart (30" x 40")	1	Las Flores Emergency Response Trailer	Operational		
Initial On-Site Emergency Action Plan Chart (30" x 40")	1	Las Flores Emergency Response Trailer	Operational		
Initial Response Site Safety Plan Chart (30" x 40")	1	Las Flores Emergency Response Trailer	Operational		

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

7.1.1 Facility Response Equipment, Continued

OTHER					
TYPE/YEAR	**QUANTITY**	**STORAGE LOCATION**	**OPERATIONAL STATUS**		
Maps, USGS Quadrangle 7.5 Minute SB/SLO Counties	1	Las Flores Emergency Response Trailer	Operational		
Marker Board (5' x 3') w/Markers	1	Las Flores Emergency Response Trailer	Operational		
MSDS Binder	2	Las Flores Emergency Response Trailer	Operational		
Oil Spill Contingency Plan PPLP	1	Las Flores Emergency Response Trailer	Operational		
Oil Spill Response Plan PPLP	1	Las Flores Emergency Response Trailer	Operational		
Rags Corduroy 25 Lb/Box	1	Las Flores Emergency Response Trailer	Operational		
Ground Rod 5/8" x 6'	1	Las Flores Emergency Response Trailer	Operational		
Generator Honda EM 5000S	1	Las Flores Emergency Response Trailer	Operational		
Visqueen 100 Ft Roll 6 Mil	1	Las Flores Emergency Response Trailer	Operational		
Drinking Water (5 Gal/Ea)	3	Las Flores Emergency Response Trailer	Operational		
Wind Sock	1	Las Flores Emergency Response Trailer	Operational		
Spill Response Buckets w/5, 3" x 4" Sock Absorbs	3	Las Flores Emergency Response Trailer	Operational		
Traffic Barrier Plastic 8" x 24" Reflective	2	Las Flores Emergency Response Trailer	Operational		
Traffic Cones 28" Fluorescent orange	12	Las Flores Emergency Response Trailer	Operational		
Trauma Burn Pack Portable (Adult)	1	Las Flores Emergency Response Trailer	Operational		
Tripod Light, 2 Lighthead 1000 Watt 25' Cord 5'x10" Ext.	1	Las Flores Emergency Response Trailer	Operational		
Rope Nylon 1/4" x 500'	1	Las Flores Emergency Response Trailer	Operational		
Safety Can 5Gallon Type II w/Flexible Hose	3	Las Flores Emergency Response Trailer	Operational		

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

7.1.1 Facility Response Equipment, Continued

OTHER					
TYPE/YEAR	**QUANTITY**	**STORAGE LOCATION**	**OPERATIONAL STATUS**		
Ford F-250 Technician Truck	1	3600 Bowman Court, Bakersfield, CA 93308	Operational		
Ford 350 1 Ton Welding Truck	1	3600 Bowman Court, Bakersfield, CA 93308	Operational		
Ford F-250, 3/4 Ton	1	3600 Bowman Court, Bakersfield, CA 93308	Operational		
Ford F-250, 3/4 Ton w/Extended Cab	4	3600 Bowman Court, Bakersfield, CA 93308	Operational		
Ford F-800 Dump Truck	1	3600 Bowman Court, Bakersfield, CA 93308	Operational		
Ford 1 Ton Mechanic Truck w/Auto Crane	1	3600 Bowman Court, Bakersfield, CA 93308	Operational		
Ford Rangers	2	3600 Bowman Court, Bakersfield, CA 93308	Operational		
Honda Quad Runner (ATC)	1	3600 Bowman Court, Bakersfield, CA 93308	Operational		
Chev 1 Ton Mechanic Truck w/Auto Crane	1	3600 Bowman Court, Bakersfield, CA 93308	Operational		
Chev 1 Ton Pipeliner w/Auto Crane	1	3600 Bowman Court, Bakersfield, CA 93308	Operational		
Chev 3/4 Ton – Corrosion Technician	1	3600 Bowman Court, Bakersfield, CA 93308	Operational		
Chev 1/2 Ton	1	3600 Bowman Court, Bakersfield, CA 93308	Operational		
Stopple Trailer w/760 Hot Tap machine, 16" Stopple Equipment	1	3600 Bowman Court, Bakersfield, CA 93308	Operational		
Eager Trailer (Backhoe)	1	3600 Bowman Court, Bakersfield, CA 93308	Operational		
15 Ft. Trailer Iron Maiden	1	3600 Bowman Court, Bakersfield, CA 93308	Operational		
Trailer Carriers	2	3600 Bowman Court, Bakersfield, CA 93308	Operational		
Emergency Response Trailer w/Inventory	1	3600 Bowman Court, Bakersfield, CA 93308	Operational		
Emergency Response Plan (Santa Barbara County)	1	Bakersfield Emergency Response Trailer	Operational		

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

7.1.1 Facility Response Equipment, Continued

OTHER					
TYPE/YEAR	**QUANTITY**	**STORAGE LOCATION**	**OPERATIONAL STATUS**		
Extension Cord w/Rewind Reel 100' 14/3 SJEO 250V	2	Bakersfield Emergency Response Trailer	Operational		
Eyewash 15 gals Gravity Fed	1	Bakersfield Emergency Response Trailer	Operational		
Cup, Drinking Foam	200	Bakersfield Emergency Response Trailer	Operational		
Degreaser, Simple Green	4	Bakersfield Emergency Response Trailer	Operational		
First Aid Kit (Deluxe) 100 Person	1	Bakersfield Emergency Response Trailer	Operational		
Flag Marker w/Fiberglass Mount	10	Bakersfield Emergency Response Trailer	Operational		
Flasher Amber Barricade w/Solar Switch 12V	4	Bakersfield Emergency Response Trailer	Operational		
Flashlight Rechargeable w/Adapters Maglite	6	Bakersfield Emergency Response Trailer	Operational		
Generator/Honda #EM5000SX	1	Bakersfield Emergency Response Trailer	Operational		
Bull Horn w/C-Cell Batteries	2	Bakersfield Emergency Response Trailer	Operational		
Cable Extension 30 AMP	100'	Bakersfield Emergency Response Trailer	Operational		
Canopy, Portable 12' x 20'	1	Bakersfield Emergency Response Trailer	Operational		
Caution Tape "Caution Do Not Enter", 3" x 1000'	7	Bakersfield Emergency Response Trailer	Operational		
Caution Tape "Hazardous Material"	1	Bakersfield Emergency Response Trailer	Operational		
Clipboard	12	Bakersfield Emergency Response Trailer	Operational		
Badges, Oil Spill Response (Color Coded)(Set)	1	Bakersfield Emergency Response Trailer	Operational		
Batteries AA-Cell	36	Bakersfield Emergency Response Trailer	Operational		
Batteries C-Cell	36	Bakersfield Emergency Response Trailer	Operational		

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

7.1.1 Facility Response Equipment, Continued

OTHER					
TYPE/YEAR	**QUANTITY**	**STORAGE LOCATION**	**OPERATIONAL STATUS**		
Batteries D-Cell	36	Bakersfield Emergency Response Trailer	Operational		
Batteries 3 Flashlight, D-Cell	6	Bakersfield Emergency Response Trailer	Operational		
Batteries 6-Volt	10	Bakersfield Emergency Response Trailer	Operational		
Binocular 7 x 35	1	Bakersfield Emergency Response Trailer	Operational		
Blanket First Aid 62" x 80" Wool	2	Bakersfield Emergency Response Trailer	Operational		
MSDS Binder	1	Bakersfield Emergency Response Trailer	Operational		
Notepad	12	Bakersfield Emergency Response Trailer	Operational		
Hudson Sprayer (3 Gallon)	3	Bakersfield Emergency Response Trailer	Operational		
Ice Chest, 48 Gallon	2	Bakersfield Emergency Response Trailer	Operational		
ICS Organization Chart	1	Bakersfield Emergency Response Trailer	Operational		
Ground Rod 1/2" x 6'	1	Bakersfield Emergency Response Trailer	Operational		
Hand Clear Towel, Scrubs 100/per Bucket	6	Bakersfield Emergency Response Trailer	Operational		
Hand Cleaner Waterless 5 Lbs	4	Bakersfield Emergency Response Trailer	Operational		
Hand Cleaner Waterless 4 1/2 Lbs	12	Bakersfield Emergency Response Trailer	Operational		
Oil Spill Contingency Plan (Santa Barbara County)	1	Bakersfield Emergency Response Trailer	Operational		
Oil Spill Response Plan (Onshore Pipeline)	1	Bakersfield Emergency Response Trailer	Operational		
Pails (Plastic) 5-Gallon w/Handles	5	Bakersfield Emergency Response Trailer	Operational		
Pails (Steel) 5-Gallon w/ Handles	11	Bakersfield Emergency Response Trailer	Operational		

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

7.1.1 Facility Response Equipment, Continued

OTHER					
TYPE/YEAR	**QUANTITY**	**STORAGE LOCATION**	**OPERATIONAL STATUS**		
Paint, Marking, White 17 oz.	12	Bakersfield Emergency Response Trailer	Operational		
Plastic Rolls 10' x 100' (1,000 sq. ft.) 6 mil	4	Bakersfield Emergency Response Trailer	Operational		
Plastic Sheet, Black 12' x 100' 4 mil	2	Bakersfield Emergency Response Trailer	Operational		
Plastic Tarp, 8' x 16'	6	Bakersfield Emergency Response Trailer	Operational		
Rags Corduroy (25 lbs/box)	2	Bakersfield Emergency Response Trailer	Operational		
Respirator 3M Dual Cartridge 5000 Series Organic Vapor (15 Medium, 15 Large)	30	Bakersfield Emergency Response Trailer	Operational		
Rope 3/8" x 600'	2	Bakersfield Emergency Response Trailer	Operational		
Rope Nylon 1/4" x 500'	1	Bakersfield Emergency Response Trailer	Operational		
Rubber Chock (Set)	1	Bakersfield Emergency Response Trailer	Operational		
Safety Can 5 Gal Type II w/Flexible Hose	2	Bakersfield Emergency Response Trailer	Operational		
Warning Flag, Vinyl Red w/Wooden Handle	10	Bakersfield Emergency Response Trailer	Operational		
Water, Drinking 5 Gal.	3	Bakersfield Emergency Response Trailer	Operational		
Hydro-Crane w/Tools (F9000)	1	Bakersfield Emergency Response Trailer	Operational		
Pressure Washer, Land	1	Bakersfield Emergency Response Trailer	Operational		
Set Flanges Spreaders, Hydraulic	1	Bakersfield Emergency Response Trailer	Operational		
185 Cubic Inch Air Compressor	1	Bakersfield Emergency Response Trailer	Operational		
1-1/2" Drive Impact w/Sockets	1	Bakersfield Emergency Response Trailer	Operational		
Station Maps	1	Bakersfield Emergency Response Trailer	Operational		

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

7.1.1 Facility Response Equipment, Continued

OTHER					
TYPE/YEAR	**QUANTITY**	**STORAGE LOCATION**	**OPERATIONAL STATUS**		
Tape, Duct 2" x 60"	34	Bakersfield Emergency Response Trailer	Operational		
Tape, Blue Ribbon 1-3/16" x 150'	36	Bakersfield Emergency Response Trailer	Operational		
Tape, Yellow Ribbon 1-3/16" x 300'	36	Bakersfield Emergency Response Trailer	Operational		
Tape, Fluorescent Lime Ribbon 1-3/16" x 150'	24	Bakersfield Emergency Response Trailer	Operational		
Tape, Fluorescent Red Ribbon 1-3/16" x 150'	36	Bakersfield Emergency Response Trailer	Operational		
Toilet Paper	10	Bakersfield Emergency Response Trailer	Operational		
Towel, Paper 100 per Pack	4	Bakersfield Emergency Response Trailer	Operational		
Traffic Barriers Plastic 8" x 24" Reflective	4	Bakersfield Emergency Response Trailer	Operational		
Traffic Barriers Plastic 8" x 24" Reflective	4	Bakersfield Emergency Response Trailer	Operational		
Traffic Cones 28" Fluorescent Orange	12	Bakersfield Emergency Response Trailer	Operational		
Trash Bags 38" x 58" 2.0 ml (100/Box)	15	Bakersfield Emergency Response Trailer	Operational		
Trauma Burn Pack Portable (Adult)	1	Bakersfield Emergency Response Trailer	Operational		
Tripod Light 2 Lighthead 1000W 25' Cord 5' x 10' ext	1	Bakersfield Emergency Response Trailer	Operational		
T-101 Hot Tap Machine	1	Bakersfield Emergency Response Trailer	Operational		
36" Lifting Straps w/Hooks	4	Bakersfield Emergency Response Trailer	Operational		
EM5000SX Portable Generator	1	Bakersfield Emergency Response Trailer	Operational		
Line-up Clams 12" to 30"	Assortment	Bakersfield Emergency Response Trailer	Operational		
Signs, Stop & Slow w/Handle	2	Bakersfield Emergency Response Trailer	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
Worley Catastrophe Response Hammond, LA	None - Claims Company	0 hours
Amergent Tech Long Beach, CA		0 hours
M.P. Environmental Services, Inc. Bakersfield, CA	Vacuum trucks and roll-off bins for solid waste storage	1 hours
*Clean Seas, LLC Carpinteria, CA	Full Response Capability per USCG Classification Requirements	4 hours
Witt O'Brien's Brea, CA	Spill management company - no response equipment	4 hours
*NRC Environmental Service Long Beach, CA	Full Response Capabilities per U.S. Coast Guard Classification, including aerial tracking and dispersants	4 hours
Center for Toxicology and Environmental Health, LLC (CTEH) North Little Rock, AR		24 hours

Note: Response times are based on 35 mph for land (five knots for water) 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.

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 "list location": The office in Santa Maria at 2230 S. Depot St. Suite A, Santa Maria, CA 93455 or at a local hotel depending on how big is the response.

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 "list location": The closest station to the spill. Gaviota Pump Station, 17100 Calle Mariposa Reinna, Goleta, CA. Las Flores Station, 12050 Calle Real, Goleta, CA 93117. Sisquoc Station, 5781 Santa Maria Mesa Road, Santa Maria, CA 93454.

7.1.6 Communications Plan

Company owned communications equipment and quantities, as well as Emergency Operating Frequencies, commonly used to address response communications are listed below:

Plains utilizes landline and cell phones for voice communications during normal operations and emergency events. Pipeline operations and maintenance personnel are provided cell phones for placing and receiving calls from public, fire, police, and company personnel. During extensive and long duration emergency response activities, cell phones for voice communications may be supplemented with satellite phones and hand held radios. The communication system must at a minimum meet the requirements on §195.408(b).

PPLP employs a variety of communications equipment and devices for use during normal operating conditions or in an emergency event, including an oil spill. These include: (1) A dedicated microwave based FM Radio Communications System that provides radio linkage between the Oil Movements Control Room (OMC Dispatchers) and Company personnel (Division, District offices, company vehicles and hand-held radios). (2) Hardwire communications links are also provided to all Division - District offices, from the Oil Movements Control Room as are all remotely monitored and operated facilities (e.g., pump stations and Remote Terminal Units). (3) Key and supervisorial personnel are provided with portable cellular phones or cellular phones installed in company or employee owned vehicles.

In the event of an emergency, the Company's portable self-contained mobile radio repeater would be dispatched from Bakersfield to the incident scene and utilized to augment existing radio systems or to replace those systems which may be, in part or wholly, inoperable. To augment existing radio communications along the Coastal Pipeline, in general, and within Las Flores Canyon specifically, the Company has installed a fixed radio repeater on Exxon's off-shore platform Hondo. This repeater is linked with the Company's existing repeater on Santa Ynez Peak to facilitate internal long distance and local radio communications.

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 setup 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.

Refer to **APPENDIX C.2** for information on the Supervisory Control and Data Acquisition (SCADA) System.

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.

7.2 EXTERNAL COMMUNICATIONS DURING AN INCIDENT

Many incidents create an intense desire for information among the media, local residents, elected officials, regulators and other key stakeholders. Plains strives to be a trusted source for information during an incident, which will help each of these key stakeholders informed. Plains recognizes that if we, or our response partners, are not the primary sources of information during the response, the news coverage and information flow may not reflect the response efforts or portray the company accurately.

It is the intent of the Plains Communications team to lead the communications efforts during an incident. However, early in the incident response, some communications activities might fall to First Responders (fire, police, other emergency responders on scene) or PAA field managers . PAA asset/terminal managers should be prepared to compile vital information, share that information with a Plains Communications team member, and, in rare instances approved by the Plains Communications team, communicate directly with the media.

This section provides instruction and protocol for how to begin a communications response while the Plains Communications team mobilizes.

7.2.1 Steps to Take When an Incident Occurs

Step One: Make the Required Notifications

The Communications team will be notified of an incident by the VP of Operations or one of his direct reports. Please alert the Communications team directly if the circumstances require a more timely response from the team (i.e. reporters are already on site/have called requesting information) or if the circumstances do not meet the definition of a typical operational incident but require communications support (see "Non-Operational Risks and Other Considerations" segment in **SECTION 2** for more information). Please contact the following individuals:

Brad Leone	**Roy Lamoreaux**
Manager, Communications	Director, Investor Relations
(b) (6) [redacted]	
bleone@paalp.com	rilamoreaux@paalp.com

In the event that neither Brad nor Roy is available, contact Tim O'Leary at O'Brien's Response Management (281-352-7740 mobile; Timothy.O'Leary@obriensrm.com) or Kirsten Kennedy (832-623-2178 mobile; KCKennedy@paalp.com). Both have been briefed on the Plains incident communications response process and will be able to provide support and activate resources as needed.

If the news media contact any Plains field employee or contractor prior to engagement of the Corporate communications team and the field manager, in consultation with a Division Manager/Assistant Division Manager, feels that a response must be provided, the approved response to their inquiry can be found in the 'Pre-Approved Media Response Information' portion of this document.

Step Two: Compile a Fact Sheet

An essential aspect of the communications response is having as much accurate information as possible as quickly as possible.

As soon as it has been assessed that an incident may invite scrutiny, assemble a fact sheet using the **following information fields or using the template in SECTION 7.2.3 of this section**. The fact sheet will serve as an internal document and the basis for later communications. It is important that it be completed as thoroughly as possible.

7.2.1 Steps to Take When an Incident Occurs, Continued

Please do not speculate or guess when populating the fact sheet. Use clear and concise language, and avoid vague answers.

Fact Sheet Fields (the full form can be found in **SECTION 7.2.3**):

- Date/time of the incident
- Location of the incident
- Number of company personnel involved (do not release names)
- Company assets involved (do not speculate on damage or amount of product released)
- Description of what happened and the timing if known
- Status of emergency response
    - Actions taken and planned
    - Resources mobilized
    - Authorities notified
    - Injuries sustained
- Mitigation required to return to normal operations

Once completed, the fact sheet should be submitted to a member of the Plains Communications team.

Step Three: Log Media Inquiries

Generally speaking, your interaction with reporters should be limited. However, some incidents (e.g. explosions or fires) will generate more media interest than others. During these incidents you may find members of the news media at the facility seeking comment or several media outlets trying to reach you by telephone for comment - even before you are able to coordinate an appropriate response with the Plains Communications team.

During every interaction with the media, please obtain the reporter's name, contact information and affiliation. Record this information in a Media Contact Log in the Appendix and provide the information to the Communications team as soon as possible. This log will help the Plains Communications team keep track of the various media enquiries and respond to them in a timely fashion.

Step Four: Determine if Additional Media Interaction is Required

In the event that news media are on site or calling regularly, it is possible that you could be required to provide information to the media. The decision to provide information to the media is not something that should be taken lightly; it should be done in conjunction with the Plains Communications team and your Division Manager to determine the best course of action.

If it is agreed that communicating with the media is in the best interest of the company, District/Terminal Managers are authorized to share several pre-approved key points. The intent of sharing the pre-approved key points is to allow District/Terminal managers to communicate basic information to the media before the company has been able to develop a more specific response. This course of action should help the media to understand that Plains is willing to communicate and will provide more information at a later time; ideally, it will take immediate pressure off the Operations team with regards to media response and allow them to focus on mitigation and response efforts.

7.2.1 Steps to Take When an Incident Occurs, Continued

Pre-Approved Media Response Information

Following is information that has been pre-approved for distribution to the media. It should be shared by the most senior person at the incident - ideally someone who has received media training from Plains.

1. Remain calm, introduce yourself (name and title) and ask the name and affiliation of the reporter (be sure to record this in the media log).
2. Acknowledge the incident that has occurred.
3. Explain:
    a. We have activated our emergency response plan.
    b. We are working closely with local emergency responders.
    c. Our personnel are well-trained on emergency response procedures.
    d. The Company intends to provide information through a designated spokesperson.
4. Provide the reporter with the names and contact information of the Plains Communications Team.
5. Politely disengage with the reporter and return to your response activities.
6. Report the media interaction to a member of the Plains Communications team.

When making initial contact with the media, **do not attempt to answer questions**, speculate about the facts or say anything that could be disproved at a later time.

7.2.2 Communications Checklist

Following is a simplified checklist to review during an incident to ensure the proper steps are taken from a communications standpoint:

	Notify Supervisor/Control Center and/or Plains Communications team of an incident of significance.
	Compile fact sheet using the form provided and send it to the Plains Communications team.
	If a member of the news media contacts you, complete the media log and notify the Plains Communications team.
	Work with the Plains Communications team and local managers to determine if additional media interaction is required (handle locally if needed).

7.2.3 Fact Sheet

Please prepare the following information about an incident and forward the completed sheets via email or fax (713-646-4572) to Brad Leone (bleone@paalp.com) and Roy Lamoreaux (rilamoreaux@paalp.com), or simply call them and provide the information over the phone.

INCIDENT FACT SHEET TEMPLATE	
Date/Time of Incident:	
Location:	
Number of Company Personnel Injured/Killed:	
Company Assets Involved:	
Emergency Response Status:	
Actions taken/planned:	
Resources mobilized:	
Authorities notified:	
Injuries sustained:	
Mitigation Required:	

7.2.4 Media Log (remove and make copies as needed)

During every interaction with the media, obtain the reporter's name, contact information and affiliation. Record the information as calls are received and forward the completed sheets via email or fax (713-646-4572) to Brad Leone (bleone@paalp.com) and Roy Lamoreaux (rilamoreaux@paalp.com), or simply call them and provide the information over the phone.

Date:	**Time:**	**Received by:**
Reporter's Name:		
Media Outlet/Affiliation:		
Phone Number:	**Email address:**	
Deadline:		
Information requested:		
Information forwarded to spokesperson ■		

Date:	**Time:**	**Received by:**
Reporter's Name:		
Media Outlet/Affiliation:		
Phone Number:	**Email address:**	
Deadline:		
Information requested:		
Information forwarded to spokesperson ■		

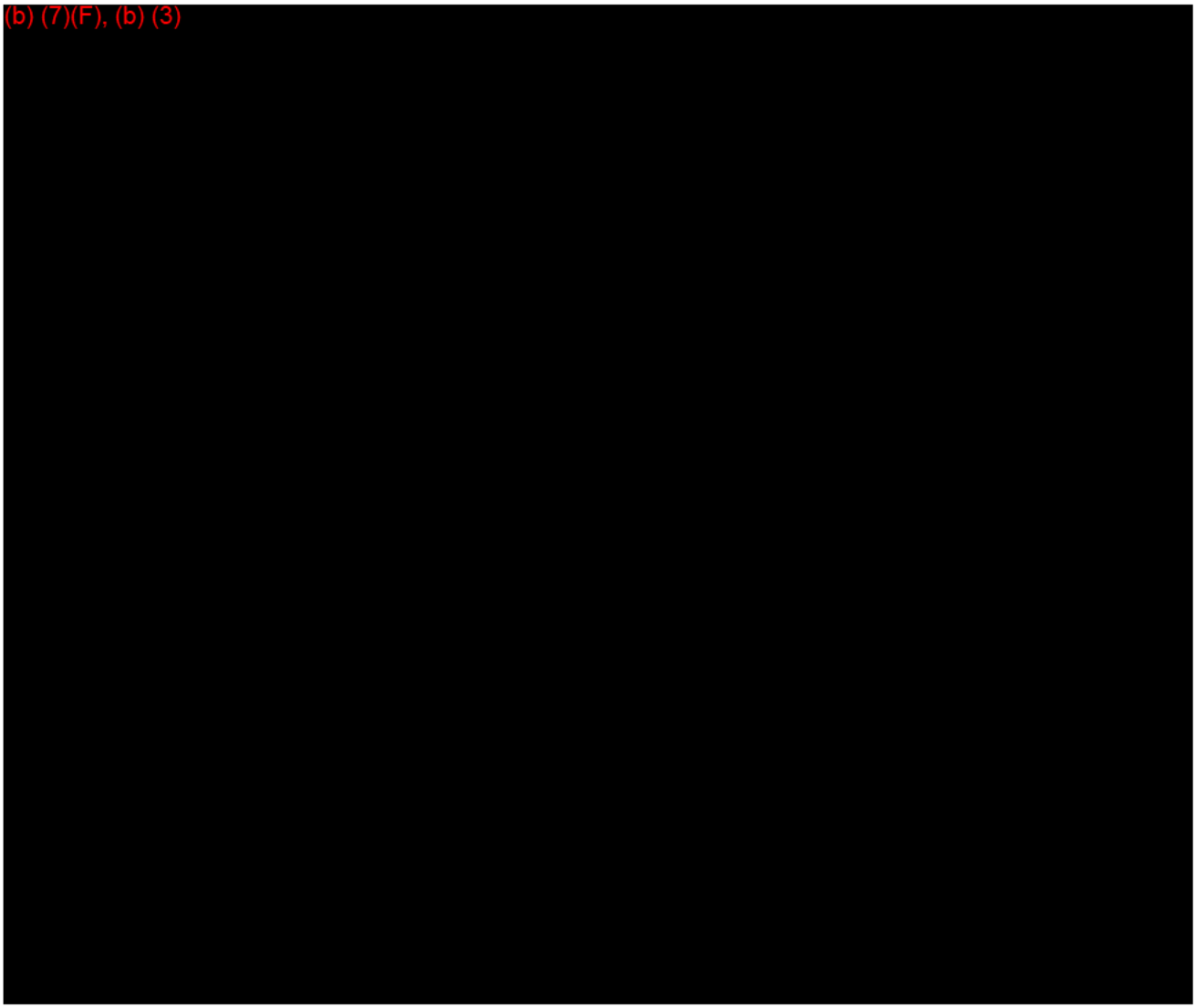
7.3 SITE SECURITY MEASURES

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

[redacted]

FIGURE 7.3-1 - SITE SECURITY CHECKLIST

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



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.
- 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.
- 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
- Transportation

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

Spilled petroleum products are defined as waste under various Federal and State laws. However, if the recovered material can be accepted by a refinery for reuse, it may qualify as a product and not be subject to waste management requirements. State laws also require that recycling be considered. If the recovered material cannot be sent to a refinery or recycled, it must be managed as a waste.

Proper classification and disposal of wastes associated with oil spill clean up activities are important to assure sound and cost-effective waste management. The Company is responsible for properly classifying spill-generated wastes. Its Environmental Advisors will be used to characterize and classify wastes for recycling and disposal.

State guidelines for characterizing the waste differ from the RCRA guidelines. Therefore, both Federal and State criteria should be checked when characterizing an unknown waste. Particular attention should be directed toward differences in Federal and State toxicity criteria.

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

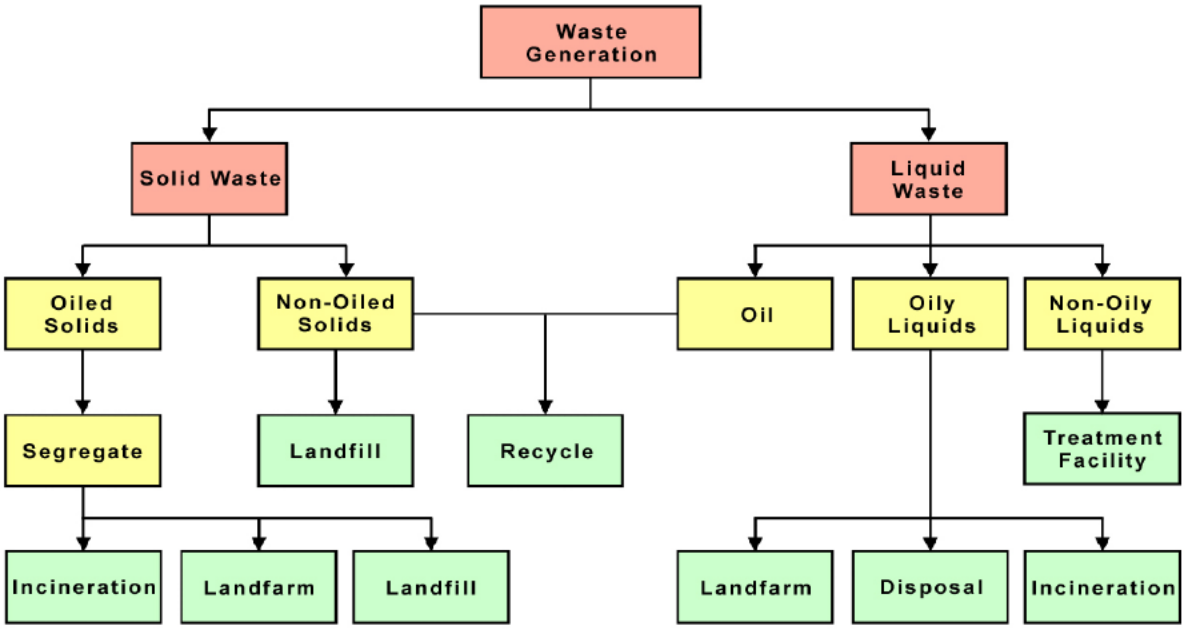


FIGURE 7.4-2 - GENERAL WASTE CONTAINMENT AND DISPOSAL CHECKLIST

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	Spilled oil and oil-containment materials recovered during containment and clean-up operations require special handling procedures and a method of safe disposal. These procedures are addressed in Section 305 of the Clean Seas RRM (ENSR 1994). Crude oil recovery and the recovery of oiled debris during a spill response will be the responsibility of Clean Seas (Nearshore and Marine areas) and PAALP's response contractors, as identified in APPENDIX B. Due to their relative small size, PAALP's facilities (pump stations and pipelines) are not sufficient to accommodate the temporary storage and staging of recovered oil and oiled debris. Therefore, in conjunction with its response Contractors and responding agency personnel, PPLP will select the most accessible site(s) for this use and will, to the extent required, obtain all required permits for these facilities (e.g., Coastal Commission, State Parks, and County of Santa Barbara). PAALP's response contractors will be responsible for the transportation and disposal of recovered oil and oiled debris, which would be conducted in accordance with the requirements of various regulatory agencies including the California Regional Water Quality Control Board and the Dept. of Health. Analytical tests will be performed on crude oil contaminated wastes prior to disposal to "characterize" the wastes. Although crude oil is classified by the Dept. of Transportation as hazardous material, oil contaminated solid wastes generally do not meet the criteria for this classification. The analytical testing to characterize the waste is performed to confirm that the oil contaminated waste is not a federal Resource Conservation and Recovery Act (RCRA) hazardous waste or California Non-RCRA hazardous waste. After the waste is characterized, it will be transported to a properly permitted, non-hazardous waste disposal site. The waste disposal facilities identified in the next column are licensed to accept solid and/or liquid crude oil contaminated wastes.	1. USA Waste McKittrick Waste Treatment Site 56533 Highway 58 W McKittrick, CA 93251 (Kern County) 2. Clean Harbors Buttonwillow, CA (Kern County) 3. Terrain Technology 20318 7th Standard Road McKittrick, CA 93251-9741 (Kern County)
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

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

To ensure that actions taken during an emergency are as effective as possible, it is necessary to review actions taken and their effectiveness. Refer to **SECTION 8.3.1** for emergency response investigation procedures. All Facility personnel involved in the incident shall be debriefed (by the Company) within two weeks after termination of operations. A Post-Incident Response Review/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. Results of the review are forwarded to the California Office of Spill Prevention and Response (OSPR) within 90 days following completion of response and clean-up procedures. This review shall be used by the OSPR only for the purpose of future amendments to the contingency plan. Refer to **SECTION 8.3.2** for a final spill cleanup report.

8.3.1 Emergency Response Investigation

An evaluation of the Plan's effectiveness is accomplished by performing a complete and thorough review of the emergency response. This procedure will serve as a guide for this review and evaluation.

Initiation of the Investigation

Within 60 days after a "reportable accident" the Director of Regulatory Compliance shall conduct a review of the accident. This review shall address the following areas:

- Leak detection and notification.
- Initial safety enhancement and damage mitigation.
- Accident scene action.
- Performance of personnel and procedures.
- Cause of accident.
- Follow-up action.

The Director of Regulatory Compliance shall include in the investigation those supervisors involved in the accident. It may be necessary to question not only Company personnel, but also persons from outside agencies and contracted personnel involved in the accident.

Goals of the Investigation

A thorough investigation should yield the following results:

- The cause of the accident.
- The effectiveness of the response of personnel involved.
- A determination of whether the qualification of operators was an issue in the accident and whether drug or alcohol use was involved.
- The effectiveness of the Company's written procedures.
- The interface of Company personnel with emergency responders from various agencies.
- Any areas of weakness in the operation of the pipeline that may be changed to improve future operations and reaction to emergency conditions.

Areas of Investigation

The following areas may be investigated by asking the questions listed under each heading. Many other questions will come up in the course of the investigation and should be answered as fully as possible.

8.3.1 Emergency Response Investigation, Continued

Initial Response Correctiveness and Effectiveness

- Operator action; was the action of those responsible for operation of the pipeline proper and effective?
- Line shutdown and valve closure; was the line shut down quick and effective in reducing the danger and/or pollution at the scene? Were valves closed in a timely fashion? Were there alternatives to closing the valves that may have been more effective?
- Personnel dispatch; were the proper personnel dispatched to the scene in an expedient manner?
- Contractor personnel; if contractor personnel or equipment were necessary, were they dispatched to the scene in an expedient manner?

Accident Scene Action

- Assessment of the situation; did the first company representative on the scene make an accurate and complete assessment of potential hazards, personnel and equipment needs, and communicate this information to the control center?
- Evacuation and/or isolation; if this was required was it carried out effectively? By whom?
- Pipe repair; was the pipe repaired quickly and safely?
- Clean up; was the clean up conducted quickly and efficiently to minimize environmental damage?

Performance of Personnel and Procedures

- Supervisory personnel; were the performance of supervisory personnel adequate? Were events adequately planned and organized? Was there adequate supervision of all activities?
- Operations personnel; were the operations personnel able to act quickly and confidently? Were their actions appropriate for the situation? Was it necessary for them to refer to the written procedures or could they be effective without it? Were operators considered qualified based on their actions?
- Repair crew; did the repair crew respond effectively and with the proper equipment for the type of repair needed? Was there additional equipment that would have improved the situation significantly? If so, what?
- Contractor personnel; were the contractor personnel at the scene, capable, safety conscious, HAZWOPER trained and effective in their work? Were they supervised by a qualified person? Should they be used in the future for similar situations?
- Miscellaneous agency performance; were the miscellaneous agencies involved in this accident helpful, organized, cooperative, and constructive in their approach to the accident? In your opinion were any of their actions harmful or ill-advised? Did various agencies work well together or were they functioning independently without regard for the overall impact on the accident?
- Written procedures performance; were the procedures adequate for handling the various phases of the accident? What areas need to be revised? How? Did the procedures, as written, restrict the performance of the individuals involved?

8.3.1 Emergency Response Investigation, Continued

Cause of the Accident

Was the cause of the accident:

- An operational error or problem?
- A pipe or material defect?
- Over pressure?
- Faulty weld or workmanship?
- Sabotage?
- Design or construction problem?
- An act of God?
- Third party damage?
- Other?
- Unknown at time of evaluation?

Describe the apparent cause of the accident fully and list any alternative causes that you feel worthy of mention. Do not speculate on a cause. A possible cause should only be defined in terms of verifiable facts.

Follow-Up Action

- Regulatory agency written reports; were the necessary written reports made to the proper agencies within the required time?
- Property damage settlements; were property damage settlements made promptly and without legal action?
- Continuing environmental clean-up and monitoring; was this necessary for this accident? What is the current status of the work?
- Remedial action; what remedial action is recommended as a result of this review and investigation?

Conclusion

This outline, when conscientiously applied, should provide the framework to thoroughly evaluate every aspect of an accident and every major response activity to uncover flaws and weaknesses in the plan. This information will be used to revise emergency response procedures for an accident to make them more effective. Each of the subjects and questions listed here can be expanded upon, and should be, in order to thoroughly conduct a constructive review of the response to an emergency.

FIGURE 8.3-1 - POST-INCIDENT RESPONSE REVIEW/DEBRIEFING FORM

PURPOSE: Review response actions and activities to determine effectiveness of procedures and action required to correct deficiencies and improve response effectiveness. This review shall be performed for all PHMSA and other regulatory agency reportable incidents.

Name of Incident:

Date:

Personnel conducting review (List names on Form 701 and attach)

DETECTION AND ISOLATION:

If pipeline leak, was leak quickly detected, pipeline immediately shutdown and affected segment isolated?

What should be changed or improved?

NOTIFICATIONS AND MOBILIZATION:

Were Operations Department personnel quickly notified and effectively mobilized?

Were agencies and local responders notified in a timely manner and within required times?

Were the Division Environmental & Regulatory Compliance personnel promptly notified?

Were OSROs quickly notified and mobilized?

Was response equipment effectively mobilized and on scene per agency time requirements?

What should be changed or improved?

INCIDENT MANAGEMENT:

Was initial ICS organization established by first responders?

Was staffing adequate and properly trained to fill all required ICS positions after 24 hours?

If contractor(s) used to supplement ICS staffing, was contractor performance satisfactory?

Was ICS Command Center of adequate size and properly equipped?

FIGURE 8.3-1 - POST-INCIDENT RESPONSE REVIEW/DEBRIEFING FORM, CONTINUED

INCIDENT MANAGEMENT (CONTINUED):

Were ICS forms completed to document incident and response?

What should be changed or improved?

INITIAL INCIDENT SCENE ACTIONS:

Was the scene properly secured and air quality assessed to protect the safety of personnel?

If local responders involved, was coordination between Plains and local responders smooth and effective?

Was an accurate and complete assessment of the situation and potential hazards made and communicated to incident management personnel?

What should be changed or improved?

COMMUNICATIONS:

Was communication within the ICS organization effective?

Was communication between the Command Center and incident site effective?

Was communication with agencies satisfactory?

Was communications and claims management with affected stakeholders quickly established and effectively organized?

Was communication with the media and investors effective and properly managed?

What should be changed or improved?

Name:

Title:

Signature:

8.3.2 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:

8.4 RESTORING PIPELINE OPERATIONS AFTER AN EMERGENCY

In the event of a known emergency or potential emergency that could affect public health and safety or impact the environment, pipeline operations will be shutdown to investigate the incident. Initial response actions will be taken as appropriate to mitigate the emergency and ensure the protection of the public and the environment. The pipeline will remain shutdown until pipeline operations can be resumed safely without a threat to the safety and health of the public or the environment.

Typically after initial response actions are taken to mitigate and stabilize an emergency and the emergency evolves into clean-up and long term mitigation, efforts will begin to restore pipeline operations. Operations will be restored as quickly as possible when it is safe to do so to limit the disruption to fuel supply networks. The process to restore service includes:

- A careful evaluation of the impact of the emergency on the integrity of the pipeline;
- An evaluation to determine the labor, material and time to repair all damages to resume safe operations;
- Perform required inspections and testing of repairs prior to resuming operations.

The Bakersfield District Manager in conjunction with Santa Maria Operations Supervisor will manage all pipeline repairs and coordinate with Santa Barbara County agencies as appropriate. Spare pre-tested pipe, fittings, and other material are maintained at Company warehouses at the District offices. Material not available may be transported in from other Company locations or purchased locally for delivery as soon as possible.

In the event an incident results in a long term loss of power, CARB permitted portable generators may be brought to a pumping station as a temporary source of pump power. If communication and SCADA capability was lost as a result of an incident, the pipeline could be operated manually. The use of temporary pumping power and manual operation of the pipeline would not be undertaken unless resumption of operation of the pipeline was deemed critical to oil producers served by the pipeline or a federal or state agency such as the Homeland Security Administration directed the Company to take all measures to resume operations for national security or other reasons.

APPENDIX A
TRAINING / EXERCISES

Last Revised: May 2008

A.1 EXERCISE REQUIREMENTS AND SCHEDULES

The Company's training and drill program has been designed to address the provisions of Oil Pollution Act (OPA) 90 and the Office of Oil Spill Prevention and Response (OSPR) Act. It was developed to be consistent with guidance provided in the following documents:

- Training Reference for Oil Spill Response, US Department of Transportation, EPA, US Department of the Interior, August, 1994.
- National Preparation for Response Exercise Program (PREP) Guidelines, US DOT, US Environmental Protection Agency, US Department of the Interior, August, 1994.

The Company has developed a comprehensive oil-spill training and drill program to facilitate the safe and effective response to any releases of oil that might be associated with the operation of its pipeline. This program includes the following elements:

- Risk Reduction Prevention Training for Company Personnel.
- HAZWOPER and First Aid training for Company Personnel involved in emergency response activities.
- Provisions for ensuring adequate HAZWOPER training for personnel conducting emergency response activities under contract to the Company.
- 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, including actual field exercises and agency participation.
- The Environmental Regulator and Compliance (ERC) Directors or designee, is responsible for the following aspects:
    - 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 or a corresponding Company form may be used, and **FIGURE A.1-4** provides a log for response equipment testing and deployment drill.

A.1 EXERCISE REQUIREMENTS AND SCHEDULES, CONTINUED

The training program specifically addresses the following competencies for all emergency response personnel:

- Be able to carry-out the assigned duties and responsibilities of the response plan.
- State the 24-hour emergency telephone number for contacting the Company.
- Name the company's qualified individual and state the procedure for contacting that person.
- Describe, in general terms, the informational summary of the response plan.
- Locate the telephone number of the National Response Center and state who is responsible for making that telephonic report.
- Describe the characteristics and hazards of an oil discharge zone.
- Describe conditions that are likely to worsen a spill situation and suggest corrective actions for each.
- Describe the steps necessary to control an oil spill and methods used to minimize potential for fire, explosion, toxicity, or environmental damage.
- Discuss the fire fighting procedures and the associated fire fighting equipment.
- 9-1-1 issues.
- Telephonic reporting of emergency events in Santa Barbara County via 9-1-1 caller (if an PPLP employee) will be instructed to inform the dispatcher answering the 9-1-1 call that the emergency event is a Level 1, 2 or 3 Emergency and is located at _____ within Santa Barbara County and that Santa Barbara County should be advised by the 9-1-1 dispatcher or that the emergency call should be transferred to the Santa Barbara County Dispatch Center.

In addition, the Company has also adopted the "Incident Command System" (ICS) emergency staffing structure and reporting guidelines. This ICS structure will ensure greater organizational consistency with outside local, county, state and federal responding agencies.

A.1 EXERCISE REQUIREMENTS AND SCHEDULES, CONTINUED

Drills serve to evaluate the thoroughness and effectiveness of the emergency response component of the plan by testing under simulated conditions. Elements of the plan will be tested during drills to observe aspects such as:

- Structure and organization
- Communications
- Equipment capability and response times
- Adequacy of action plans
- Public relations
- Emergency medical services
- Evacuation

Drills will be site-specific and scenario-specific. Drills will be performed for applicable types of equipment, including techniques for boom deployment and use, and will be scheduled during a variety of weather conditions. Safety procedures will be stressed during drills. During the drills, the practical fieldwork required to contain and clean up a spill will be broken down into a series of elements, as contained in the plan.
Although observing vendor demonstrations is worthwhile, it is not a substitute for actual hands-on practice with facility equipment.

Drills will be conducted on-site, with site-specific scenarios, using the response resources that would be used in an actual spill. The scope and scheduling of the drills will be designated by the Company to exercise either components of or the entire plan. All elements of the plan will be exercised at least once every 3 years.

The Company will consider participation in drills directed by the PHMSA, OSPR, other federal and state agencies, or other operators. Drills are designed to exercise either individual components of the plan or the entire response plan.

Spill exercises for protective response strategies are conducted by the OSRO's under contract to the Company. The Company works in conjunction with the OSRO's to conduct spill equipment deployment and tabletop exercises. The OSROs conduct annual equipment deployment exercises in order to maintain their respective certifications.

The Company will conduct drills in accordance with the Preparedness for Response Exercise Program (PREP) guidelines. The PREP was developed to establish a workable exercise program that meets the intent of section 4202 (a) of the Oil Pollution Act of 1990 (OPA 90), amending section 211(i) of the Federal Water Pollution Control Act (FWQPCA). The PREP is a unified federal effort and satisfies the exercise requirements of the Coast Guard, the EPA, the PHMSA Office of Pipeline Safety, and the Minerals Management Service (MMS). Completion of the PREP exercises will satisfy all OPA 90 mandated federal oil pollution response exercise requirements.

A.1 EXERCISE REQUIREMENTS AND SCHEDULES, CONTINUED

Many areas within and along the shorelines of major waterways support aquatic and near shore species that are potentially at risk, particularly at the lagoon environments at the mouth of these waterways. Regulatory protection of threatened and endangered species prevent the conduct of the shoreline protection strategies outlined in the plan along many sections of these waterways. Exercises will be planned and conducted to exercise the protection strategies to the greatest extent practical without entering areas known to be restricted for the protection of threatened or endangered species. Where exercise activities are allowed, they will be conducted in a way to protect all aquatic, flora, and fauna species to the greatest extent practicable.

Exercises will be conducted to test the protection strategies given in the plan in the areas that do not have restricted access. The response protection strategies for these waterways are similar to areas with restricted access; therefore, proficiencies gained through exercises conducted in permissible areas will be applicable to areas that cannot be exercised.

At certain times, the Company may conduct joint exercises with its OSRO's. In the event of a spill incident, the Company will depend upon its OSRO's to carry out certain shoreline protection strategies, such as the deployment of boom offshore or lagoon areas. Any exercise conducted by OSRO's that involves the deployment of containment boom in open ocean waters near shore or in lagoon areas will be considered by the Company as an exercise of these response protection strategies discussed in its plan. The Company will obtain the proper documentation for any exercises conducted by its OSROs for which it intends to receive credit.

Generally, in the event of any spill that impacts the environment outside the boundary of any Company facility, the Company will employ its contractor(s) to respond to the spill. The Oil Spill Response Organizations (OSROs) under contract to the Company are responsible for providing the necessary training through drills and exercises or responses to actual spills to maintain their response capability and a high degree of proficiency to effectively carry out any response protection strategies.

Field exercises are designed to assess the ability to deliver response resources to the simulated spill site in a timely and effective manner. The exercise also requires response personnel to apply tactical plans to a particular set of environmental and physical conditions. Hands-on practice of the spill response procedures is critical to determine if table top planning can be properly applied to site conditions.

The goals of the field deployed drills incorporate all the goals listed for the table top exercises in addition to:

- Locate the simulated spill site in an acceptable response time.
- Make proper notification calls to regulatory agencies.
- Deploy in-house emergency response equipment and supplies to site location (i.e., emergency response trailers, backhoes, etc.).
- Contact the necessary spill contractors and get immediate status of what manpower and equipment are available to be deployed and an estimated time of arrival.
- Demonstrate the organizational and managerial duties of the first responders in establishing a preliminary ICS structure.
- Establish a formal ICS structure an delegate responsibilities as additional manpower becomes available.
- Conduct site reconnaissance/surveillance and toxicological areas monitoring to identify hazards involved for both personnel and the environment.
- Create a Site Safety Plan based upon data gathered from site monitoring and reconnaissance.

A.1 EXERCISE REQUIREMENTS AND SCHEDULES, CONTINUED

- Create a strategic site containment and cleanup Emergency Action Plan (EAP) plan based upon actual and simulated site conditions.
- Determine and acquire outside resources needs based on calculated drain down volumes and the containment and cleanup plans.
- Determine the most effective pipeline repair strategy (i.e., Stopple, Cutouts, Sleeving, etc.) to mitigate the emergency.
- Test and review the operation and deployment of major containment and cleanup equipment (i.e., booms, generators, pumps, lighting, communications, personal protective equipment, decontamination, support equipment, etc.).
- Review and practice simulated containment and cleanup activities as allowed by site conditions.
- Establish a Unified Command and cooperative work relationship with the outside agencies, contractors, and local emergency support services.
- Review and practice decontamination procedures.
- Evaluate and assess the response effort and provide each responder the opportunity to provide feedback to one another and suggest areas for improvement.

Field exercises may be either pre-announced or unannounced, depending upon the training objectives planed to be achieved by an exercise. When appropriate, the area OCS (On-Site-Coordinator) and other supporting agencies and contractors will be invited to participate.

Normally, field exercises, will not require actual shutdown of the pipeline facilities. This measure will minimize the disruption of oil movements of both PPLP and its gathering/delivery customers.

Drill location, date and format is determined by the spill response training coordinator in conjunction with a minimum of Operations management personnel. This limited group will plan the drill scenario in advance. Major goals and objectives are carefully reviewed to ensure the drill scenario encompasses the critical response tasks and duties. Careful consideration is also given to the simulated spill site regarding the type of terrain and the public safety and environmental concerns effecting the response activities. Just prior to making the spill alert notice, the drill planning coordinator travels to the site and marks the exact location and approximate size of the spill.

The drill is typically initiated by the drill coordinator calling the Oil Movements Control Center (OMC) from a mobile phone simulating a third-party incoming spill report. A member of the spill planning group will be stationed in the OMC to oversee and evaluate the activities of the OMC Dispatchers as they receive the spill report, make the necessary regulatory notification calls as well as the actions taken to respond to the spill incident.

Field evaluators are also stationed at the site to observe the first responders and document how well they react to the environmental conditions to minimize and contain the spill and plan for its cleanup. Close attention is paid to proper use of available resources including manpower, equipment, supplies and contractor support. Evaluators may also be present at other locations, such as the field, office to monitor and evaluate response planning prior to mobilization of personnel and equipment to the spill site.

A.1 EXERCISE REQUIREMENTS AND SCHEDULES, CONTINUED

In some instances, a video recording may be made of the major training activities. This tape may be used during a post-exercise evaluation to highlight the positive and negative aspects of the spill response efforts. The post-exercise evaluation is considered very important and valuable. It provides an opportunity for all participants to review and discuss "lessons learned" for future application in an actual spill response or field exercise to improve response effectiveness.

As part of the Company FDP Conditions P-3 and P-5, the Company is required to "demonstrate the effectiveness of the Emergency Response and Oil Spill Contingency Plans by responding to one emergency response drill prior to or immediately after start-up". This drill and all follow-up drills will be coordinated with the Santa Barbara County Fire Department and Office of Emergency Management. The Company has agreed to coordinate with the Office of Emergency Services and sponsor an annual oil spill and emergency response drill either independently or concurrently with other oil gas facility operators. Consistent with State requirements, OSPR will be provided with the requisite notification of such drills and will be requested to participate.

At the locations where the facility is manned on a 24-hour a day basis, annual drills are conducted to ensure the on-site operator can perform the appropriate emergency duties. These drills include such items as initiating the fire foam system for storage tank fires, securing station valving to isolate flowpaths and notification procedures to OMC.

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

CORE COMPONENTS	DESCRIPTION
1. Notifications	Test the notification procedures identified in the contingency plan.
2. Staff Mobilization	Demonstrate the ability to assemble the spill response organization identified in the contingency plan.
3. Reserved	
• Unified Command	Demonstrate the ability of the spill response organization to work within a unified command.
• 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.
• State Representation	Demonstrate the ability to function within the unified command structure.
• Local Representation	Demonstrate the ability to function within the unified command structure.
• Responsible Party Representation	Demonstrate the ability to function within the unified command structure.
• 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.
• Operations	Demonstrate the ability to coordinate or direct operations related to the implementation of action plans developed by the unified command.
• 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.
• *(CA1) Situational Unit	Demonstrate the ability to collect, organize, and disseminate information about the current status of the spill.
• *(CA2) Resource Unit	Demonstrate the ability to maintain the status of all incident resources.
• *(CA3) Environmental Unit	Demonstrate the ability to prepare environmental data including assessments, modeling, surveillance, resources at risk, and impacts on environmentally sensitive sites.
• *(CA4) Resources at Risk Technical Specialist	Demonstrate the 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.

* California-specific requirements.

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

CORE COMPONENTS	DESCRIPTION
• Logistics	Demonstrate the ability to provide the necessary support of both the short term and long term action plans.
• Finance	Demonstrate the ability to document the daily expenditures of the organization and provide cost estimates for continuing operations.
• Public Affairs	Demonstrate the ability to form a joint information center and provide the necessary interface between the unified command and the media.
• Safety Affairs	Demonstrate the ability to monitor all field operations and ensure compliance with safety standards.
• Legal Affairs	Demonstrate the ability to provide the unified command with suitable legal advice and assistance.
• Liaison Officer	Demonstrate the ability to establish and coordinate interagency communication and cooperation.
4. Source Control	Demonstrate the ability of the spill response organization to control and stop the discharge at the source.
• Vessel Emergency Services (formerly called Salvage)	Demonstrate the ability to assemble and deploy the vessel emergency services resources identified in the response plan.
• Firefighting	Demonstrate the ability to assemble and deploy the firefighting resources identified in the response plan.
• Lightering	Demonstrate the ability to assemble and deploy the lightering resources identified in the response plan.
• 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.
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.
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, mitigate, and remove the discharged product includes mitigation and removal activities.
• On-water Recovery	Demonstrate the ability to assemble and deploy the on-water response resources identified in the response plans.
• Shore-based Recovery	Demonstrate the ability to assemble and deploy the shoreside response resources identified in the response plans.
• *(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 Contingency 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).

* California-specific requirements.

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

CORE COMPONENTS	DESCRIPTION
• *(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.
• *(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.
8. Protection	Demonstrate the ability of the spill response organization to protect the environmentally and economically sensitive areas identified in the NWACP and the respective industry response plan.
• 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.
• 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.
• 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.
• 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.
9. Disposal	Demonstrate the ability of the spill response organization to dispose of the recovered material and contaminated debris in compliance with guidance found in the NWACP.
• *(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.
10. Communications	Demonstrate the ability to establish an effective communications system for the spill response organization throughout the scope of the Plan.
• Internal Communications	Demonstrate the ability to establish an intra-organization communications system. This encompasses communications both within the administrative elements and the field units.
• External Communications	Demonstrate the ability to establish communications both within the administrative elements and the field units.

* California-specific requirements.

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

CORE COMPONENTS	DESCRIPTION
11. Transportation	Demonstrate the ability to establish effective multi-mode transportation both for execution of the discharge and support functions.
• Land Transportation	Demonstrate the ability to provide effective land transportation for all elements of the response.
• Waterborne Transportation	Demonstrate the ability to provide effective waterborne transportation for all elements of the response.
• Airborne Transportation	Demonstrate the ability to provide the necessary support of all personnel associated with the response.
12. Personnel support	Demonstrate the ability to provide the necessary logistical support of all personnel associated with response.
• 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.
• Berthing	Demonstrate the ability to provide overnight accommodations on a continuing basis for a sustained response.
• Messing	Demonstrate the ability to provide suitable feeding arrangements for personnel involved with the management of the response.
• Operational/Administrative Spaces	Demonstrate the ability to provide suitable operational and administrative spaces for personnel involved with the management of the response.
• Emergency Procedures	Demonstrate the ability to provide emergency services for personnel involved in the response.
13. Equipment maintenance and support	Demonstrate the ability to maintain and support all equipment associated with the response.
• Response Equipment	Demonstrate the ability to provide effective maintenance and support for all response equipment.
• 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.
14. Procurement	Demonstrate the ability to establish an effective procurement system.
• 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.
• Response Equipment	Demonstrate the ability to procure sufficient response equipment to mount and sustain an organized response.
• Support Equipment	Demonstrate the ability to procure sufficient support equipment to support and sustain an organized response.
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.

* California-specific requirements.

FIGURE A.1-2 - EXERCISE REQUIREMENTS

EXERCISE TYPE	EXERCISE CHARACTERISTICS
Facility/QI notification	• Conducted quarterly or in association with field exercises. • The facility initiates mock spill notification to QI to determine ability to immediately contact the Qualified Individual and/or Alternate Qualified Individual in the event of a spill response. • The Qualified Individual documents time/date of notification, name, and phone number of individual contacted. • Document in accordance with form in **FIGURE A.1-3**. • The Qualified Individual, marine facility personnel, the OSRO and the spill management team must participate in the exercise.

Equipment deployment	• Conducted semiannually.
	• Response contractors listed in the plan must participate in annual deployment exercise.
	• An exercise where response equipment is deployed to a specific site and operated in its normal operating medium.
	• Document in accordance with form in **FIGURE A.1-3**.
	• All personnel involved in equipment deployment and operation must be involved in a training program.
	• All response equipment must be in a comprehensive maintenance program.
	• The exercise must 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.
	• OSRO field equipment deployment exercises for on-water recovery and for shoreline protection will each be conducted at least once every three years.
	• The exercises will be conducted according to a schedule that includes exercising at least one of these areas annually, with a different area exercised each year until all areas have been exercised at least once each four year interval.
	• Exercises will be conducted using Company response resources or a combination of Company resources and those of one of its contracted Oil Spill Response Organizations (OSROs).
	• The following emergency response equipment may be deployed and applicable testing conducted annually during field exercises or at such other times that the Division or District Managers believe testing or response equipment is needed.
	  ◦ Emergency Response Trailers
	  ◦ Floating Booms
	  ◦ Emergency Power Generators and Lights
	  ◦ Air Quality Sensing Devices
	  ◦ Primary and Backup Communications Systems
	  ◦ Various Personal Protective Equipment
	  ◦ Decontamination Equipment
	• Annually, emergency response equipment will be visually inspected. Based on visual inspections and testing, maintenance will be performed as required to maintain the operability of the equipment.
	• Equipment designated as emergency response equipment which is owned by the Company consists primarily of spill containment and clean-up materials and requires limited maintenance.
	• Heavy equipment that would also be used in an emergency response are routinely maintained due to regular use.
	• The primary maintenance objective for Company owned emergency response equipment is to ensure that an adequate inventory of equipment and material is available at all times.
	• The Division Manager and District Supervisor are responsible for the testing and maintenance of Company owned emergency response equipment. The Manager shall ensure that semi-annual inspections are performed and documented. All testing and maintenance shall also be documented and retained in local files.

FIGURE A.1-2 - EXERCISE REQUIREMENTS, CONTINUED

OTHER EXERCISE CONSIDERATIONS	

EMT Tabletop	• Conducted annually.
	• Tests EMT's response activities/responsibilities, including:
	  • Properly role-plan and execute the duties and responsibilities of the ICS structure.
	  • Prepare a Site Safety Plan based upon site surveillance and toxicological monitoring data.
	  • Prepare a site Emergency Action Plan (EAP) that will safely and effectively minimize spill volumes, protect the environment, contain spill contents and cleanup and hazardous materials.
	  • Analyze U.S. Geological Topographic Maps to determine site elevation and runoff characteristics; identify and locate potential containment barricade areas; identify and locate logistical areas for staging, command post and work zones; identify and locate hazardous work areas (hot, warm and cold zones) with provisions for emergency egress routes.
	  • Interpret PPLP system alignment sheets to: determine pipeline elevations to calculate maximum drain down volumes; locate and identify potential public exposure areas that could require evacuation measures; locate and identify environmentally sensitive areas.
	• 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**.
	• Trainees are given a scenario packet that may include a brief description of the location, the probable cause of the incident and any relevant factors that may have an impact on the scenario outcome (i.e., weather, estimated time of arrival of outside emergency help, communication problems, etc.).
	• Exercises are carefully planned by an assigned exercise coordinator to provide realism and an opportunity to exercise as many elements of a spill response as possible.
	• Site-specific topographical maps, system alignment sheets, and the applicable Oil Spill Response Manual(s) are provided as resource material for planning the response strategy. Utilization of Company and contractor equipment, to the extent of its availability, is included in the response planning. By implementing the Incident Command system (ICS), the trainees role play the assigned tasks and responsibilities.
	• Topography is emphasized in planing the deployment of containment equipment and any directional runoff concerns that may be present. Identification of hazardous work zones is also accomplished by outlining each zone on an area map taking into account wind speed and direction.
	• Trainees are required to hypothetically evaluate the spill area and assist in creating a Site Safety Plan and a site-specific Emergency Action Plan.

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. • Government-initiated unannounced exercises will be limited to four per area per year (USCG / EPA) or 20 anually across the nation (PHMSA).

FIGURE A.1-2 - EXERCISE REQUIREMENTS, CONTINUED

OTHER EXERCISE CONSIDERATIONS	
Area	• Tests government and industry interface for spill response. • The exercise will involve some level of equipment deployment. • 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. • An evaluation report will be completed no later than 60 days after completon of the area exercise.
Shoreline Protection Strategies	• Shoreline protection response strategies must be exercised for all ACP-listed sensitive sites within the area identified as impacted. • The Company's own trajectories may be used to identify impacted areas.
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.). • Drills conducted by the Company shall be documented by the Regulatory Compliance Department or a designee. • The drills shall be documented on forms provided by and forwarded to the Regulatory Compliance Department. • All drills will be evaluated to compare drill results with drill objectives. • The record of each drill conducted will be certified by the Director of Regulatory Compliance. • Certified drill documentation copies will be forwarded to the Division office for their records and the original will be maintained in the Regulatory Compliance Department.
Evaluation and Certification of Drills	• The drills will be evaluated by the Training Manager, Safety Manager, a representative of the Regulatory Compliance Department, or a person(s) designated by the Regulatory Compliance Department. • Each drill or exercise that is conducted to comply with OPA '90 training requirements will be certified by the Director of Regulatory Compliance. • If during the evaluation period, it is determined that a revision to the plan is necessary, the revision procedures in **SECTION 1.2** will be followed.
California OSPR	• Company conducts post-exercise meetings to discuss positive items, areas for improvement, and to develop action item checklist to be implemented later. • OSPR 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. • To receive credit from OSPR for an exercise, the following notification requirements must be met:

FIGURE A.1-2 - EXERCISE REQUIREMENTS, CONTINUED

OTHER EXERCISE CONSIDERATIONS	
California OSPR (continued)	• OSPR must be invited to participate in both the equipment deployment exercises and the management team tabletop exercises. • The Company will submit written notification, including, but not limited to, the following information: company name, address, marine facility 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, and other participants of the drill. • The OSPR Exercise Notification Form (FG OSPR 1964 3/10/97) or a document that includes the same information as the Notification Form may be used for this purpose. • Notification may be made via E-mail or fax and sent to: Drills and Exercises Coordinator Executive Branch Department of Fish & Wildlife/ OSPR Post Office Box 944209 Sacramento, California, 94244-2090 Fax: Drills and Exercises Coordinator, DFG/OSPR, (916) 324-9786 • OSPR will be given advance notice of a minimum of 30 days for all exercises. Full Scale Combination Exercises and Area Exercises, however, require advance notice of a minimum of 60 days. • To receive credit from OSPR for any exercise conducted, the following documents must be provided: • The contingency plan number, including point of contact, phone number, and e-mail address. • list of all other participants and their roles, including contingency plan numbers, if applicable. • A list of all ACP-listed sensitive site protection response strategies tested and documentation of actual deployment. • 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). • A list of other regulatory agencies attending the drill or exercise, if any. • An exercise evaluation. • OSPR will give credit for all exercise objectives successfully tested during the exercise.

FIGURE A.1-2 - EXERCISE REQUIREMENTS, CONTINUED

OTHER EXERCISE CONSIDERATIONS	
California OSPR (continued)	• Objectives not successfully tested during the exercise will not receive credit and will be exercised again within the three-year cycle. • The Company must provide information that demonstrates the required drills as listed in **APPENDIX A.1** 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 three years and made available to OSPR upon request. • The Company must provide 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 Company for three years and made available to OSPR upon request. • For all tabletop exercises, the Company must provide 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 Company for three years and made available to OSPR upon request.

FIGURE A.1-2 - EXERCISE REQUIREMENTS, CONTINUED

OTHER EXERCISE CONSIDERATIONS	
California OSPR (continued)	• For all equipment deployment exercises, the Company must provide 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 Company for three years and made available to OSPR upon request. • To receive credit from OSPR for any exercise conducted, the Company must also provide a list or check sheet showing what documentation has been submitted as part of the credit request. • OSPR will issue exercise credit via e-mail for objectives met during the exercise within 90 days to the Company 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 OSPR's report must be addressed in writing by the Company within 0 days of the receipt of OSPR'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 Company's response will include a schedule for implementing the remedies. OSPR may audit all drill documentation to verify that the drill was done in accordance with the credit request. • In substitution for the exercises required by **APPENDIX A.1**, OSPR 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: • 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 • 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 - EXERCISE REQUIREMENTS, CONTINUED

OTHER EXERCISE CONSIDERATIONS	
California OSPR (continued)	• The owner/operator has received prior approval for the exercise substitution from the Administrator, and, • OSPR finds the plan components tested and evaluation criteria equal to or exceeding those of the OSPR. • The only out-of-state exercise that can be substituted 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. • In substitution for the spill management team tabletop exercises, OSPR may accept an exercise conducted by the vessel owner/operator outside of the State of California if the following conditions are met: • OSPR has been invited with the minimum notification required in Subsection 820.01(d)(2); and, • The owner/operator has received prior approval for the exercise substitution from the Administrator; and, • OSPR finds the exercise objectives and evaluation criteria equal to or exceeding those of the OSPR. • An exercise of an OSRO's services may fulfill the equipment deployment exercise requirement of this table for any marine facility 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. OSRO's who participate in the OSPR Sensitive Site Strategy Evaluation program (as defined in S. 790) may meet the shoreline protection exercise requirement above for marine facilities. • An unannounced exercise may be used to satisfy the exercise requirements of this subsection under the following conditions: • The owner/operator shall submit a written request to OSPR 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; • The exercise tests one or more of the following: 1) the marine facility's spill management team and spill response organization, 2) deployment of the facility's response equipment, or 3) deployment of other response resources identified in the facility's plan.

FIGURE A.1-2 - EXERCISE REQUIREMENTS, CONTINUED

OTHER EXERCISE CONSIDERATIONS	
California OSPR (continued)	• Actions taken in response to an actual spill may be considered for exercise credit upon request of the Company if all of the following conditions are met: • The OSPR receives the documentation, as appropriate, outlined in Section 820.01(f); and, • 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, • Activation of the spill management team is successfully accomplished; and, • OSPR or another regulatory agency responds to the spill. A written response/evaluation by the Company may be accepted by OSPR in lieu of an agency report if an agency report is not prepared; and, • 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 OSPR or Federal On-Scene Coordinator; and • The OSPR receives a report from the Responsible Party as to cause of the spill, and procedures or other measures adopted to prevent a similar reoccurrence. The Company must submit updated oil spill contingency plans showing the procedures developed.

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

Retain this form for a minimum of five years (Other versions of this form may be used). 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):	■ / ■
	Terminal Manager:	■ / ■
	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 spill 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

Operator Qualifications	• Personnel are not permitted to perform operations or maintenance functions until they are considered qualified.
	• Operator qualification is established through extensive classroom and on-the-job training.
	• All field personnel are trained beyond the "response level" and achieve the 24-hour "clean-up level" as stipulated by 29 CFR 1910.120.
	• New employee training is conducted until the employee's supervisor considers the employee qualified to perform his/her assigned duties in a proper and safe manner.
	• All new hire employees who will be assigned to a field position and expected to perform emergency response duties are provided initial technical and safety training prior to their release for field duties. The program normally consists of computer based, instructor led and hands on training and a 4-6 week limited-release period where the new hire is kept under close observation by either his/her direct supervisor or other trained co-workers.
	• A typical new hire training program would include the following topics:
	  ◦ Pipeline & Facilities Technical Familiarization
	  ◦ Operations & Maintenance Manual
	  ◦ Emergency Response Manual
	  ◦ Oil Spill Response Manual
	  ◦ Safety & Health Manual
	  ◦ Pipeline-Specific Computer Based Training Modules
	  ◦ MSDS/Hazard Communication
	  ◦ Drug and Alcohol Policies
	  ◦ Emergency Notification Reporting Procedure
	  ◦ Safety Orientation
	  ◦ Fire Extinguisher Use & Inspection
	  ◦ Safety Equipment and PPE
	  ◦ H2S & Benzene Precautions
	  ◦ Air Quality Monitor Use (Tritector)
	• Through a continuing training program, various technical and health and safety refresher training is conducted to enhance the technical skills and knowledge of qualified operators and to ensure that operations and maintenance personnel are aware and knowledgeable of the hazards associated with their job activities.

Training in use of spill response plan	• All field personnel will be trained to properly report/monitor spills. • This training is given to all new employees. • Plan will be reviewed annually with employees. • The Personnel Response Training Log is located in **FIGURE A.2-3**.

FIGURE A.2-1 - TRAINING REQUIREMENTS, CONTINUED

TRAINING TYPE	TRAINING CHARACTERISTICS
HAZWOPER training	• OSHA has identified five levels of response, each with increasing levels of required training and expertise. • Training criteria for Company employees involved in spill response activities are based on the duties and fuctions associated with the level of reponse they may be expected to perform. • These criteria also apply to contractors used by the Company in the implementation of this contingency plan. • All Company spill response team members will have the appropriate level of HAZWOPER training. • Various Hazwoper training vendors are contracted to provide an objective industry overview of the physiological hazards, proper protective equipment options, containment techniques, first aid and safety, and decontamination procedures associated with crude oil. Each vendor is screened for certification credentials, professionalism, as well as required course subject matter. • Instructor-led courses are preferred for initial Hazwoper training allowing trainees to interact with the instructor via relevant questions and thoroughly exploring the spill response alternatives. • The Company, to the extent necessary and appropriate, receives periodic training through its affiliation with Clean Seas [see also Clean Seas Regional Resource Manual (ENSR 1994)]. • The Company also uses the Coastals Clarity Net computer-based learning system to develop and enhance the knowledge level of its employees. This program consists of multiple modules dealing with both the technical and safety aspects of operating a modern pipeline. • The Company has further customized the programs to more accurately reflect the equipment, procedures, and operational policies of the Company. Each module requires the trainee to review the written and graphic material and then interface with the computer by taking a number of review exercises as well as a graded end-of-module exam. On the average, each module requires 1.5 to 1.75 hours of interactive instruction. • Once the basic Hazwoper information is provided (via Vendor and CBT training), the trainee is then given more customized, site-specific Hazwoper instruction associated with Company policies and procedures. These sessions are typically conducted by in-house training, safety, and operations supervisory personnel. These sessions include Incident Command System roles and responsibilities, table top drill scenarios for highly sensitive public and environmental areas, and field response procedures and techniques as applied to Company situations. • Periodic spill simulation spills are used to reinforce classroom discussion and written procedural guidelines. Trainees experience the application of theory by responding to field simulations where equipment setup and use is practiced, site demarcation zones (hot, warm and cold) are established, safety concerns are identified, and containment strategies are reviewed and implemented consistent with actual site conditions.

FIGURE A.2-1 - TRAINING REQUIREMENTS, CONTINUED

TRAINING TYPE	TRAINING CHARACTERISTICS
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 offsite 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.
Spill management team personnel training	• See recommended PREP Training Matrix (**FIGURE A.2-2**).
Local emergency services training	• The Company has provided spill response training to fire departments along the ROWs in Southern California. • Fire departments have and will be invited to participate in Company drills as geographically appropriate.
OSRO and other contractor training	• Selected OSRO and other contractor personnel may fill roles in the Company's spill response organization. • These contractors participate in the Company training program, as appropriate for their assigned functions. • OSROs and other key support contractors may participate in drills conducted by the Company. • OSROs and other key support contractors are required to provide adequately trained personnel, per OSHA's 29 CFR 1910.120, to assist with the cleanup effort. • USCG-Classified OSRO's must comply with recommended spill response training, including equipment deployment to ensure their preparedness and readiness to respond to an oil spill on the Company pipeline system. • Contractor personnel who are under written contract with the Company to respond to spill emergencies are required to have the OSHA specific 40 hour cleanup training. • The Company's primary oil spill response contractors are classified by the U.S. Coast Guard as Oil Spill Response Organizations (OSROs) who establishes that they comply with recommended spill response training, including equipment deployment to ensure their preparedness and readiness to respond to an oil spill on the Company pipeline system.
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.

FIGURE A.2-1 - TRAINING REQUIREMENTS, CONTINUED

TRAINING TYPE	TRAINING CHARACTERISTICS
Training documentation and record maintenance	• Training activity records will be retained for five years for all personnel following completion of training. • Company will retain training records indefinitely for individuals assigned specific duties in the Plan. • Training records will be maintained at the Corporate Headquarters. • Training qualification records for contract personnel will be maintained by the individual response contractor at a location they deem appropriate. • Initial "contractor" responders will be required to show proof of proper Hazwoper training by submitting some type of documentation (i.e., certification card, training certificate copies, written statement of Hazwoper Certification, etc.) prior to site entry. • All training activities, including field deployment drills, are reported to the Senior Director of Environmental and Regulatory Compliance in the Houston office. • Except for the CBT training program (which has a separate reporting function), all reports must be submitted on the "Record of Training or Drill"), PAALP Form No. 701 (**SECTION 5.9.4**). • All information must be thoroughly completed and accompanied by any course related materials (i.e., course outlines, student materials, class schedule of events, etc.). • If available, a certificate of completion is also included in the report packet for filing.

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
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
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
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			
Facility personnel responsibilities and procedures for use of facility equipment which may be available to mitigate or prevent an oil discharge		x	x
Operational capabilities of the contracted OSROs to respond small, medium, and large discharges		x	x
Responsibilities and authority of the Qualified Individual (QI) as described in the Spill Response Plan and Company response organization		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 • Spill response operations • Planning • Logistics support • Finance		x	x
The responsibilities and duties of each Emergency Management Team (EMT) within the organization structure		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			
The Area Contingency Plan (ACP) for the area in which the facility is located		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	
Contracting and ordering procedures to acquire OSRO resources identified in the Plan	x	x	
OSHA requirements for worker health and safety (29 CFR 1910.120)	x	x	x
Incident Command System/Unified Command System	x	x	
Public affairs		x	
Crisis management		x	
Procedures for obtaining approval for dispersant use or in-situ burning of the spill			
Oil spill trajectory analyses			
Sensitive biological areas		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	
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	
Hazard recognition and evaluation		x	
Site safety and security procedures		x	
Personnel management, as applicable to designated job responsibilities		x	
Procedures for directing the deployment and use of spill response equipment, as applicable to designated job responsibilities		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 applicable • Explosion or fire • Equipment failure • Failure of secondary containment system			x
QI's name and how to contact him or her			x

FIGURE A.2-3 - PERSONNEL RESPONSE TRAINING LOG

Training records are maintained at the terminal office (Other versions of this form may be used).

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: June 18, 2014

CONTRACTOR RESPONSE EQUIPMENT

B.1 Cooperatives and Contractors

B.1.1 OSRO Classification

Figure B.1-1 - Evidence of Contracts and Equipment Lists

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 classification, response capabilities, and equipment 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
Clean Seas, LLC 990 Cindy Lane Unit B Carpinteria CA 93013 Term of contract: To	Los Angeles and Long Beach - DISTRICT 11		4 hours
NRC Environmental Service Pier D, Berth – D47 Long Beach CA 90802 Term of contract: To	San Francisco		4 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								

The following contractors are retained by the Company, but are not USCG classified OSROs within this Area:

- Witt O'Brien's
  2929 E. Imperial Hwy, Suite 290
  Brea,CA
  92821
  Response Time:4 hours
  Term of contract:
  To
- M.P. Environmental Services, Inc.
  3400 Manor
  Bakersfield,CA
  93310
  Response Time:1 hours
  Term of contract:
  To
- Worley Catastrophe Response
  303 Timber Creek
  Hammond,LA
  70403
  Response Time:0 hours
  Term of contract:
  To
- Center for Toxicology and Environmental Health, LLC
  (CTEH)
  5120 North Shore Drive
  North Little Rock,AR
  72118
  Response Time:24 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 and equipment lists for OSROs and contractors without USCG classification.

FIGURE B.1-1 - EVIDENCE OF CONTRACTS AND EQUIPMENT LISTS

(Only print one copy of each companies contract)

- **Amergent Tech, Long Beach,CA**
- **Center for Toxicology and Environmental Health, LLC (CTEH), North Little Rock,AR**
- **Clean Seas, LLC, Carpinteria,CA**
- **Clean Seas, LLC - Cascade Equipment List**
- **M.P. Environmental Services, Inc., Bakersfield,CA**
- **M.P. Environmental Services, Inc. - Cascade Equipment List**
- **NRC Environmental Service, Long Beach,CA**
- **NRC Environmental Service - Cascade Equipment List**
- **Witt O'Brien's , Brea,CA**
- **Worley Catastrophe Response, Hammond,LA**

PLAINS MARKETING, L.P.

Contract Number C-5507

PROFESSIONAL SERVICES AGREEMENT

This Professional Services Agreement (the "Agreement") is made and entered into on February 3, 2014 (the "Effective Date") by and between **PLAINS MARKETING, L.P.** ("**Plains**"), located at 333 Clay Street, Suite 1600, Houston, Texas 77002, and **AMERGENT TECHS, LLC** ("**Contractor**"), with its office located at 3553 N. Atlantic Avenue, Suite A-158, Long Beach, California 90807. Either Plains or Contractor may singularly be hereinafter referred to as "Party" and collectively referred to as "Parties".

RECITALS

WHEREAS, Plains desires to obtain the services of an experienced and qualified firm to provide Consulting services and other services for Plains;

WHEREAS, Contractor is experienced and qualified to provide the services required by Plains and Contractor is ready and willing to provide such services; and

WHEREAS, Plains has elected to engage Contractor for the work, and Contractor is willing and able to perform the services upon the terms and conditions hereinafter set forth.

NOW THEREFORE, for and in consideration of the recitals and covenants herein set forth, the Parties agree as follows:

AGREEMENT

1. Recitals. The foregoing recitals are incorporated into this Agreement by reference, as if fully set forth herein at length, and shall be considered terms of the Agreement.

2. Effective Date. This Agreement is considered effective as of the Effective Date as set forth above.

3. Services to be Provided.
   A. Contractor shall provide consulting services at Contractor's office located at 3553 N. Atlantic Avenue, Suite A-158, Long Beach, CA 90807 and at Plains' offices located at _____ (the "Services") in accordance with the terms and conditions of this Agreement. Services shall be provided as needed and as requested by Plains, from time to time during the term of this Agreement by issuing Statements of Work to Contractor. There is no guaranty or assurance of any minimum hours or work to be requested hereunder.
   B. The results of Services and all work product ("Deliverables") shall become the exclusive property of Plains and shall remain with Plains upon completion of the Services.

4. Personnel.

a) The personnel provided to perform the Services hereunder shall be employees or independent contractors of Contractor unless agreed otherwise in writing by Plains.
b) Contractor warrants that it will provide personnel who have been properly educated and trained and are capable of performing the Services with that degree of care and skill practiced by like personnel practicing in the relevant industry at the level for which they are engaged.

5. Independent Contractor.

a) Contractor shall perform the Services hereunder as an independent contractor and shall furnish such Services in its own manner and method, and under no circumstances or conditions shall any agent, servant, or employee of Contractor be considered an employee of Plains.
b) Plains reserves no control over Contractor or any of Contractor's employees, agents or assigns as to how the Services shall be furnished or performed. Plains is interested only in the results to be achieved; the manner and method of the work shall be at the sole discretion and responsibility of Contractor. Contractor shall have no power to bind Plains other than that specifically authorized and granted, in writing, to Contractor by Plains in the course of the Services. Plains reserves no control whatsoever over the employment, discharge or compensation for Services rendered by an employee or agent assigned by Contractor. Plains shall not be responsible for the acts or omissions of Contractor or its employees, agents, or assigns.

6. Performance. Contractor personnel shall undertake and carry on the Services performed for Plains diligently to conclusion, using that standard of care, skill, and diligence normally provided by a professional person in the performance of such Services.

7. Compensation. Plains shall pay Contractor for expenses and work performed pursuant to Attachment A, Schedule of Rates, which is attached hereto and incorporated in this Agreement as if expressly set forth herein. The rates in Attachment A include the salary of the Contractor employees and Contractor's overhead and profit. Plains or Plains' representative shall approve time sheets and expense reports monthly as Services are provided and expenses are incurred. Contractor shall invoice Plains monthly pursuant to Attachment A and Plains shall make payment on invoice within thirty (30) days of receipt of invoice. The Schedule of Rates, Attachment A, cannot be increased unless agreed to in writing by both Parties.

Plains shall not be responsible for the direct payment of any withholding taxes, social security payments, payments under workmen's compensation or other insurance premiums or other charges of any kind or nature.

8. Right to Audit. Contractor agrees that prior to or for a period of three (3) years subsequent to making any payment required hereunder, Plains, at its cost, shall have the right to audit the books, records and invoices of Contractor involved in the performance of the Services provided hereunder in order to verify any and all charges so made by Contractor. Contractor shall provide reasonable access to such books, records and invoices in its corporate offices or at another mutually convenient location upon five (5) days written notice from Plains.

9. Taxes. Contractor shall be solely responsible for all applicable income taxes and assessments arising from providing the Services under this Agreement, including, but not limited to, corporate and individual federal and state income taxes, social security taxes (FICA), Medicare taxes, unemployment taxes and all other taxes and assessments of every type and description due under this Agreement. Contractor hereby certifies that it will deduct and pay to the proper governmental

authority any withholding taxes or similar assessments that an employer is required to deduct and pay. Contractor accepts exclusive liability for any payroll taxes or contributions imposed by any federal, state or other governmental authority covering its agents or employees. **CONTRACTOR SHALL INDEMNIFY, DEFEND AND HOLD HARMLESS PLAINS AND ITS AFFILIATES FROM ANY LIABILITY, CLAIMS, DEMANDS OR LITIGATION (INCLUDING COURT COSTS AND REASONABLE ATTORNEY'S FEES) FOR THE TAXES, INTEREST AND ANY PENALTIES RELATED TO THE SUBJECT TAXES AND ASSESSMENTS.**

10. **HOLD HARMLESS. CONTRACTOR SHALL DEFEND, HOLD HARMLESS AND INDEMNIFY PLAINS AND ITS AFFILIATES FROM AND AGAINST ANY AND ALL CLAIMS, LIABILITIES, DEMANDS, AND CAUSES OF ACTION OF EVERY KIND AND CHARACTER (INCLUDING ANY ATTORNEY'S FEES, COURT COSTS, EXPERT COSTS, PENALTIES AND INTEREST INCURRED BY PLAINS IN DEFENSE OF SAME) ARISING OUT OF OR IN ANY WAY RELATED TO ANY ACTS OR FAILURE TO ACT INCIDENTAL TO THE SERVICES PERFORMED BY CONTRACTOR, INCLUDING ANY CLAIM BY ANY THIRD PARTY THAT THE RELATIONSHIP BETWEEN CONTRACTOR AND PLAINS IS OTHER THAN THAT OF AN INDEPENDENT CONTRACTOR.**

11. Equipment. Contractor owned or rented tools, equipment or machines employed for the performance of the Services shall be brought to and kept at work at Contractor's sole cost, risk and expense and Plains shall have no liability for loss or damage thereto. Any insurance policies carried by Contractor on said tools, equipment or machines shall provide for waiver of underwriter's right of subrogation against Plains.

12. Term. This Agreement will begin as of the Effective Date for an initial term of one (1) year and month to month thereafter until terminated upon either Party's fifteen (15) days written notice to the other Party.

13. Permits, Licenses and Applicable Law. Contractor agrees to obtain all necessary business permits and licenses and to be in compliance at all times with any and all laws and regulations applicable to the work to be performed under this Agreement.

14. Assignment. This Agreement is not assignable, either in whole or in part, without the prior written consent of the Parties, provided, however, Plains may assign to a subsidiary or affiliate without the consent of Contractor and, provided further, the Services to be provided by Contractor under this Agreement may be conducted for any affiliate or subsidiary of Plains.

15. Notices. For purposes of this Agreement, notices and all other communications shall be in writing and shall have been duly given when personally delivered or when mailed by United States mail, first class postage prepaid addressed as follows:

If to Plains:
Plains Marketing, L.P.
333 Clay Street, Ste 1600
Houston, Texas 77002
Attn: Christopher Etter,
Contracts and Insurance
Phone: 713-993-5111
Fax: 713-993-5820

With copy to:
Plains Marketing, L.P
333 Clay Street, Ste 1600
Houston, Texas 77002
Attn: Lawrence J. Dreyfuss,
Vice President
Phone: 713-646-4100
Fax: 713-646-4216

If to Contractor:
Amergent Techs, LLC
3553 N. Atlantic Avenue, Suite A-158
Long Beach, CA 90807

Attention: Frank Whipple
Phone: 714-892-0085
Fax: 619-236-1416

16. Insurance.

a) 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 Plains, 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 Plains, which consent is solely in the discretion of the Plains:

   a. 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.
   b. 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:
      i. Contractual Liability to cover liability assumed under this Agreement;
      ii. Independent Contractor's Contingent coverage;
      iii. Personal Injury Liability;
      iv. Premises Liability.
   c. 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
   d. Professional Liability Insurance, contractor agrees to and shall maintain in full force and effect, at all times a policy or policies of insurance containing a minimum Two Million Dollars ($2,000,000) coverage per occurrence for errors and omissions for professional liability. Such policy shall be issued by a company authorized by law to transact insurance business in the state the work is performed or any state as requested by Plains.
   e. 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. 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.

b) Special Provisions Concerning Policies Placed by Contractor, all policies (except Worker's Compensation, Employer's Liability, and Professional Liability) shall include Plains and its affiliates 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 Plains and its affiliates when permitted by law. The insurance coverages required by Contractor hereunder shall be primary over any coverages maintained by Plains and its affiliates. All of Contractor's policies must include thirty (30) days written notice of cancellation to Plains.

The policy limits specified above are minimum requirements and not limits of liability and shall not be construed in any way as Plains' 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 Plains with Certificates of Insurance and statements, which document that all coverages and endorsements required by this Agreement have been obtained. A Certificate of Insurance of Contractor reflecting the limits specified below is attached hereto as Attachment B, which is incorporated in this Agreement as if expressly set forth herein. Contractor shall obtain renewal certificates as and when necessary and copies thereof shall be forwarded to Plains 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 Plains prior to change or cancellation of any policy. In no event shall Plains' acceptance of an insurance certificate that does not comply with this paragraph constitute a waiver of any requirement of this Section.

17. Confidentiality.

a) In the course of performing the Services hereunder and in order to prepare Deliverables, Contractor will review certain business information of Plains, its partners, subsidiaries, affiliates, and or related companies as well as information related to the possible acquisition and disposition of assets owned and/or controlled by parties not affiliated with Plains; all such information is deemed to be and shall be considered secret, confidential and proprietary (the "Sensitive Information"). Contractor agrees that for so long as the confidential, secret or proprietary nature of the Sensitive Information shall continue to exist, and in no event prior to three (3) years from the date of termination of this Agreement, Contractor shall not use the Sensitive Information or information derived therefrom for any purpose whatsoever, except in connection with providing the Services to Plains. Contractor further agrees not to disclose to any third party the Sensitive Information or information derived therefrom. No right or license is granted by Plains to Contractor to use such information except as expressly set forth herein. Contractor agrees that the Deliverables, including any and all drawings or documents generated by Contractor for Plains are confidential and proprietary. Upon request by Plains, Contractor shall return no later than fifteen (15) days after receipt of request all documents and other records containing Sensitive Information to Plains. Contractor shall never disclose to third parties any interpretive results of any Services provided pursuant to this Agreement. The provisions of this paragraph shall survive the termination of this Agreement as stated herein.

b) In the course of performing the Services hereunder, Contractor employees and independent contractors will review the Sensitive Information of Plains as well as information related to the possible acquisition and disposition of assets owned and/or controlled by parties not affiliated with Plains; all such Sensitive Information is deemed to be and shall be considered secret, confidential and proprietary. Contractor agrees that Plains may enter into a confidentiality agreement with any Contractor employee or independent contractor performing Services for Plains.

18. Accordance with Laws, Regulations and Ordinances. Contractor agrees to perform and cause its employees to perform all Services in accordance with all applicable federal, state and local laws, regulations and ordinances.

19. Amendment. This Agreement shall not be amended, modified, changed, or waived, except by writing expressly stating an intent to amend, modify, change, or waive this Agreement signed by Contractor and an authorized representative of Plains.

20. Severability. If any provision of the Agreement is held to be illegal, invalid, or unenforceable for any reason, such provision shall be fully severable and this Agreement shall be construed and enforced as if such illegal, invalid, or unenforceable provision had never comprised a part hereof and the remaining provisions hereof shall remain in full force and effect.

21. Entire Agreement. This Agreement constitutes the entire agreement of the Parties, supersedes any and all prior written or oral agreements between the Parties, and contains all of the covenants, promises, representations and agreements between the Parties with respect to the Services being provided hereunder.

22. Applicable Law and Venue. This Agreement shall be governed by the laws of the State of Texas. Any disputes between the Parties to this Agreement concerning its subject matter or interpretation shall be submitted for determination to the exclusive jurisdiction of the state or federal courts located in Harris County, Texas.

23. Interpretation. The Parties stipulate and agree that this Agreement and the language used herein are the product of both Parties' efforts and each Party hereby irrevocably waives the benefit of the rule of contract that disfavors the drafter of an agreement.

24. Third-Party Discussion. It is expressly understood and agreed that either Party may initiate or continue relationships and discussions with third parties regarding comparable or alternative employment recruiting or placement opportunities and that neither Party is limited solely to the relationship described in this Agreement.

25. Remedies. Neither Party shall be liable to the other hereunder for punitive damages, exemplary damages, speculative damages, special damages, indirect damages or consequential damages resulting from or arising out of the Agreement, including without limitation, loss of value, loss of production, loss of financial advantage, loss of profit or business interruptions, however same may be caused, but shall be limited to actual damages only.

26. Waiver. No waiver by either Party of any breach of any of the covenants or conditions herein contained shall be construed a waiver of any succeeding breach of the same or of any other covenant or condition.

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed by respective officers duly authorized.

PLAINS MARKETING, L. P.
By: Plains GP LLC,
Its General Partner

By: _____

Printed Name: James L. Ferrell

Title: Vice President, Supply Chain Management

Date: Mar 18, 2014

AMERGENT TECHS, LLC

By: Frank Whipple (Mar 17, 2014)

Printed Name: Frank Whipple

Title: President

Date: Mar 17, 2014

Taxpayer ID #: 25-1919480

COMPLIANT WITH ALL REQUIREMENTS

vw (Mar 18, 2014)

Attachment A

Schedule of Rates

This Attachment A is attached to and incorporated in the Professional Services Agreement as executed on the Effective Date (hereinafter referred to as the "Agreement") between Plains Marketing, L.P. ("Plains") and Contractor.

The Schedule of Rates cannot be increased unless agreed to in writing by both Parties.

Attachment B

Proof of Insurance Coverage

See attached.

PLAINS MARKETING, L.P.

Contract No. 026450-04830-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 **27th** day of **July, 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 **Center For Toxicology And Environmental Health, LLC ("CTEH")** with a mailing address of **5120 North Shore Drive, North Little Rock, Arkansas 72118** (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"). Due to the time constraints inherent in the initiation of emergency response Work, which is a principal part of CONTRACTOR's service offerings, a standing Work Order will apply to such Work. The standing emergency response Work Order is attached as Exhibit E, and incorporated by reference as if fully set forth herein. It shall take precedence over any conflicting term or provision in this Contract. "Emergency response" shall mean all of CONTRACTOR'S services for COMPANY in connection with a fire, explosion, natural disaster, terrorist attack, unexpected release of hazardous substances or other events of similar character.

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 appropriately trained 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 Contractor will perform the Work with reasonable diligence consistent with sound professional practices, 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 **July 27, 2011** to **July 26, 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.

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 Upon any inspection of the Work, 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 Unless otherwise provided in a Work Order, all Work will be performed under Contractor's Rate Sheet then in effect, which shall not be increased more than once per calendar year.

ARTICLE 5 - PAYMENT

5.1 For lump sum Work, CONTRACTOR shall have the right to request that COMPANY make partial payments; provided, however, with respect to such lump sum work only, 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 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 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 any disputed items in an invoice, without interest, until such dispute is resolved, but no longer than 180 days.

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 project manager not to exceed a value of $50,000.00. 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 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 accordance with generally accepted professional standards and practices as applied to similar projects performed under similar conditions, and in a manner reasonably 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 such remedies as it may have under law subject to its obligations thereunder including, without limitation, the mitigation of damages.

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 indemnify and save harmless COMPNY GROUP and its officers, directors, employees, and agents from and against any and all liabilities, losses, penalties, fines, claims, costs and expenses incidental thereto (including costs of defense, settlement, and reasonable attorneys' fees), which any or all of them may hereafter suffer, incur, be responsible for or pay out as a result of bodily injuries (including death), or property damage, or any violation or alleged violation of statutes, ordinances, laws, orders, rules or regulations caused by a negligent act or omission, or willful misconduct, of CONTRACTOR or its employees, agents or contractors in the performance of this Agreement. COMPANY shall, within ten days of its receipt of notice, notify CONTRACTOR in writing of any claim set forth above for which COMPANY GROUP demands indemnity, and thereafter, at CONTRACTOR'S expense, CONTRACTOR may assume the defense of COMPANY GROUP, provided that COMPANY GROUP shall have the right to assist in the control and management of the defense.

COMPANY agrees to indemnify and save harmless CONTRACTOR and its contractors, and their respective officers, directors, employees, and agents ("CONTRACTOR GROUP") from and against any and all liabilities, losses, penalties, fines, claims, costs and expenses incidental thereto (including costs of defense, settlement, and reasonable attorneys' fees), which any or all of them may hereafter suffer, incur, be responsible for or pay out as a result of (i) bodily injuries (including death), or property damage, or any violation or alleged violation of statutes, ordinances, laws, orders, rules or regulations caused by a negligent act or omission, or willful misconduct, of COMPANY GROUP or its employees,

agents or contractors, or (ii) any violation of the Resource Conservation and Recovery Act, as amended, the Comprehensive Environmental Response, Compensation and Recovery Act, as amended, the Toxic Substances Control Act, as amended, and other laws and regulations relating to the mere existence, generation, ownership, transportation, or arrangement for disposal of any hazardous substances or wastes, except where such violations result from the negligent act or omission or willful misconduct of CONTRACTOR GROUP in the performance of its services. CONTRACTOR shall, within ten days of its receipt of notice, notify COMPANY in writing of any claim set forth above for which CONTRACTOR GROUP demands indemnity, and thereafter, at COMPANY'S expense, COMPANY may assume the defense of CONTRACTOR GROUP, provided that CTEH shall have the right to assist in the control and management of the defense.

In no event shall either party be liable for any incidental, special or consequential damages whatsoever (including, but not limited to lost profits or interruption of business) arising out of or related to the services provided under this CONTRACT, even if advised of the possibility of such damages.

8.2 Notwithstanding anything in this Agreement to the contrary, neither Company nor Contractor shall have any contractual liability to the other for personal injury, death or property damage unless (1) the party against which such a claim is asserted would have had liability in the absence of this Agreement, or (2) such party has assumed the tort liability of the other party in this Section 16. Tort liability means a liability that would be imposed by law in the absence of any contract or agreement.

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 reasonably 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. Standard broad form 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. [Deleted] and
L. 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 One Million Dollars ($1,000,000) 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.

9.1.6 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.

9.1.7 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 CONTRACTOR's liabilities. 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, to the extent of CONTRACTOR'S liability. The insurance coverages required by CONTRACTOR hereunder, to the extent of CONTRACTOR'S liability, 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 or the maximum time provided by CONTRACTOR'S insurer.

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 to the extent consistent with current insurance industry practices for issuing certificates of insurance. 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, or the maximum time provided by CONTRACTOR'S insurer. 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.

9.1.8 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.

9.1.9 THIS PARAGRAPH 9.1.9 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.

10.3 Nothing in this Article 10, or otherwise in this Contract, shall relieve the COMPANY from its obligations under its policies, currently accepted industry safety standards, and relevant law.

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.

ARTICLE 13 - LIENS

13.1 [Deleted] 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 and CONTRACTOR each 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 or COMPANY. 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.

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 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 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 Section 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 Section 16.6.

SECTION 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 Section 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 Section 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 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.

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.

17.5 In the event of a dispute between the parties, CONTRACTOR and COMPANY agree to arrange a prompt meeting between one or more officers of each party to determine if the dispute can be

resolved by negotiation. If such negotiation is not successful, CONTRACTOR and COMPANY agree to submit to a non-binding mediation process, to be conducted on an expedited basis, prior to instituting any legal action. If that process has not occurred or been successful within sixty (60) days of the first written notice of dispute, then either party may elect to proceed with litigation.

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. Notwithstanding the foregoing, CONTRACTOR may retain one copy of the confidential information subject to its continuing obligations.

18.3 The obligations shall in this Article 18 shall not apply with respect to the disclosure of any confidential information that otherwise is in the public domain without fault of CONTRACTOR, or which is made in response to a subpoena or other legal process.

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. Notwithstanding the foregoing, CONTRACTOR may retain one copy for its files.

19.3 The provisions of this Article 19 shall not apply with respect to any Work or work product that relates primarily to CONTRACTOR'S business operations including, without limitation, its means and methods of providing services.

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, and CONTRACTOR shall be bound thereby provided that COMPANY has provided reasonable notice thereof to CONTRACTOR.

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 [Deleted]

ARTICLE 21 - INDEPENDENT CONTRACTOR

21.1 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.

21.2 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 22 - FORCE MAJEURE

22.1 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.

22.2 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 23 - SUBCONTRACTING AND ASSIGNMENTS

23.1 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 excluding, however, the financial terms and conditions thereof. 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.

23.2 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.

23.3 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."

23.4 "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 Directive 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 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 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 24 - GOVERNING LAW

24.1 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 25 – PERMITS

25.1 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 26 – NOTICES

26.1 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
Email: cnetter@paalp.com

26.2 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
Email: ljdreyfuss@paalp.com

26.3 Any correspondence or notices that would be subject to this Article if provided by CONTRACTOR to COMPANY, will be provided by COMPANY to CONTRACTOR by the same means to:

Center for Toxicology and Environmental Health, LLC
5120 North Shore Dr.
North Little Rock, AR 72118
Attn: John E. Ross
Facsimile: 501-801-8550
Email: jross@cteh.com

ARTICLE 27 - ENTIRETY OF CONTRACT

27.1 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.

27.2 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.

27.3 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 28 – SEVERABILITY

28.1 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 29 – BINDING EFFECT

29.1 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.

29.2 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 30- EXHIBITS AND WORK ORDERS

30.1 Each Exhibit to this Contract and any Work Orders issued pursuant hereto are incorporated herein and made a part hereof for all purposes.

ARTICLE 31- WAIVER

31.1 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 32 - ETHICAL BUSINESS PRACTICES

32.1 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.

32.2 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 33 - SURVIVAL

33.1 Except as otherwise provided herein warranties, covenants and obligations at Articles 4, 5, 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.

CENTER FOR TOXICOLOGY AND ENVIRONMENTAL HEALTH, LLC (CTEH)

By:____
Printed Name: John E. Ross
Title: Director, Business Affairs

Date: February 6, 2013

Taxpayer ID #: 62-1679336

PLAINS MARKETING, L. P.
By Plains Marketing GP LLC
Its General Partner

By:____
Printed Name: Phil Smith
Title: Vice President -- Operations

Date: February 6, 2013

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
   (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 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 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.	)	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-[redacted] 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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CTEH CENTER FOR TOXICOLOGY AND ENVIRONMENTAL HEALTH, LLC

Schedule of Fees 2012

Subject to notes on page 4

Position	Rate
Industrial Hygiene	
Senior Industrial Hygienist	$195.00
Industrial Hygiene Project Manager	$155.00
Industrial Hygienist	$125.00
Industrial Hygienist I	$105.00
Industrial Hygienist II	$95.00
Environmental Science	
Senior Environmental Scientist	$195.00
Env. Science Project Manager	$175.00
Environmental Scientist	$125.00
Environmental Scientist I	$115.00
Environmental Scientist II	$95.00
Environmental Specialist I	$95.00
Environmental Specialist II	$85.00
Toxicology/Risk Assessment	
Principal Toxicologist/Risk Assessor	$395.00
Senior Toxicologist/Risk Assessor	$325.00
Project Toxicologist/Risk Assessor	$275.00
Toxicologist/Risk Assessor	$225.00
Toxicologist I/Risk Assessor I	$150.00
Toxicologist II/Risk Assessor II	$125.00
Environmental Chemistry	
Senior Environmental Chemist	$195.00
Project Environmental Chemist	$150.00
Environmental Chemist	$120.00
Environmental Chemist I	$110.00
Environmental Chemist II	$95.00
Environmental Engineering	
Env. Engineering Project Manager	$195.00
Senior Environmental Engineer	$175.00
Project Environmental Engineer	$165.00
Environmental Engineer	$155.00
Environmental Engineer I	$130.00
Environmental Engineer II	$115.00
Finance Support	
Finance Manager	$150.00
Finance Coordinator	$85.00

Position	Rate
Chemical Engineering	
Senior Chemical Engineer	$325.00
Project Chemical Engineer	$275.00
Chemical Engineer	$185.00
Chemical Engineer I	$155.00
Chemical Engineer II	$125.00
Occupational Medicine	
Sr. Physician/Medical Toxicologist	$450.00
Occupational Physician	$400.00
Senior Medical Specialist	$160.00
Project Medical Specialist	$120.00
Medical Specialist	$109.00
Medical Specialist I	$96.00
Information Technology	
IT Project Manager	$170.00
IT Specialist	$130.00
IT Specialist I	$115.00
IT Specialist II	$105.00
Field Services	
Program Manager	$195.00
HazMat Specialist	$180.00
Project Manager	$150.00
Site Safety Officer	$155.00
Safety Supervisor	$125.00
Safety Specialist I	$95.00
Safety Specialist II	$85.00
Library Science	
Senior Information Specialist	$105.00
Project Information Specialist	$95.00
Project Support	
Senior Project Coordinator	$95.00
Project Coordinator	$85.00
Project Assistant I	$75.00
Project Assistant II	$65.00

5120 North Shore Drive • North Little Rock, AR 72118 • P 501.801.8500 • F 501.801.8501
WEBQUESTION@CTEH.COM • WWW.CTEH.COM

CTEH CENTER FOR TOXICOLOGY AND ENVIRONMENTAL HEALTH, LLC

Equipment Rate Sheet 2012

Subject to notes on page 4

INDUSTRIAL HYGIENE		
Instrument	**Rate / Day**	**Rate / Week**
Analytical Pump Battery Set (5 pack)	$50.00	$145.00
AreaRAE 5-gas Monitor	$275.00	$700.00
CAL2000 Gas Generator	$120.00	$400.00
Drager Accuro Pump	$15.00	$40.00
DryCal DC-Lite Primary Flow Meter	$50.00	$145.00
EntryRAE	$50.00	$150.00
Formaldehyde Monitor	$65.00	$200.00
GasTec GV-100 Piston Pump	$25.00	$75.00
Hapsite GC/MS Headspace Unit**	$500.00	$3,500.00
Hapsite GC/MS Service Module**	$500.00	$3,500.00
Hapsite GC/MS**	$1,500.00	$10,500.00
HVS3 Vacuum	$500.00	$1,600.00
IAQ Calc	$40.00	$125.00
IQ Express Docking Station	$50.00	$175.00
Jerome 431-X Mercury Vapor Analyzer	$275.00	$825.00
Meteorological Station	$250.00	$1,500.00
Meteorological Station with SAFER Dispersion Modeling Software	$1,000.00	$7,000.00
MiniRAE 2000	$200.00	$600.00
MultiRAE Plus 5-gas Monitor	$100.00	$300.00
OHD Fit Tester 3000	$225.00	$575.00
Ohio Lumex	$650.00	$2,500.00
ppbRAE Plus	$275.00	$700.00
ProRAE Host Control Kit	$100.00	$300.00
Quest NoisePro DL (5 pack)	$195.00	$505.00
Quest QC Calibrator	$70.00	$200.00
Quest SoundPro SLM	$225.00	$700.00
Quick Take Hi-Vol Pump	$70.00	$210.00
RAE Link	$75.00	$250.00
SapphIRe IR with Thermomatch Software	$200.00	$600.00
Scentometer	$25.00	$65.00
Single Point Monitor (SPM)	$275.00	$600.00
SKC Analytical Pump Set (5 pack)	$150.00	$435.00
SKC PCXR-8 (5 pack)	$150.00	$435.00
ToxiPro Personal Monitor	$30.00	$120.00
ToxiRAE Plus PID Personal Monitor	$50.00	$150.00
TSI AM510 Aerosol Monitor	$115.00	$305.00
TSI DustTrak Aerosol Monitor	$115.00	$305.00
TSI DustTrak-DRX	$275.00	$700.00
TSI SidePak Analytical Pump Set (5 pack)	$150.00	$435.00
TVA-1000B (PID/FID)	$200.00	$600.00
UltraRAE PID	$275.00	$700.00
Zefon Aerosol Pump	$40.00	$125.00

CTEH CENTER FOR TOXICOLOGY AND ENVIRONMENTAL HEALTH, LLC

Equipment Rate Sheet 2012

Subject to notes on page 4

ENVIRONMENTAL		
Instrument	**Rate / Day**	**Rate / Week**
D.O. Meter (YSI 55)	$100.00	$250.00
HACH Ammonia Kit	$20.00	$60.00
HACH Surface Water Quality Kit	$50.00	$200.00
Hazcat Kit	$100.00	$400.00
Hazmat ID (FTIR)	$800.00	$5,600.00
Kemmerer Sampler	$50.00	$250.00
Manta II Datalogger	$500.00	$2,500.00
Manta II Dataport – computer interface	$50.00	$250.00
pH Meter	$50.00	$150.00
Ponar	$75.00	$350.00
Stream Flow Meter	$50.00	$150.00
Turbidity Meter	$50.00	$200.00
YSI Multi-probe	$200.00	$750.00

SUPPORT		
Instrument	**Rate / Day**	**Rate / Week**
CTEH Command Center (24 feet and 44 feet)	$1,500.00	$10,000.00
DIG Video Camera	$50.00	$150.00
Digital Camera	$50.00	$150.00
GPS Navigation Unit	$50.00	$150.00
Hand-held Data Collection PDA	$125.00	$500.00
Internet Junction Box	$50.00	$150.00
Kestrel Weather Monitor	$50.00	$150.00
Printer	$50.00	$150.00
Radio	$30.00	$210.00
Satellite Internet	$500.00	$2,500.00
Satellite Phone	$50.00	$150.00
Thermal Imaging Camera	$500.00	$3,500.00
Trailer (6 x 8 feet)	$250.00	$1,500.00
Vehicle - Car	$100.00	$700.00
Vehicle - Sports Utility Vehicle	$150.00	$1,050.00
Vehicle - Truck	$200.00	$1,400.00

**Up to a 12-hour shift, if 24-hours bill two shifts

Daily Environmental/Analytical Data Service Fees

<100 Transactions per Day	$100.00
101-500 Transactions per Day	$350.00
>500 Transactions per Day	$1,000.00

CTEH CENTER FOR TOXICOLOGY AND ENVIRONMENTAL HEALTH, LLC

Notes

- Subject to periodic review and adjustment.
- Laboratory expenses will be charged at the provider's regular, scheduled rate including any charges for expedited processing.
- An additional 15% will be added to all non-labor project expenses including, without limitation, laboratory charges and lodging, in order to cover administrative expenses.
- Payment terms are net 30 days from receipt of invoice. Interest overdue payments will be charged at 1.5% per month or, if different than that rate, the maximum charge permitted applicable to law.
- Overtime will be charged at 1.5 times the billable rate for all work for CLIENT by any employee over 40 hours per week. The work week will begin at 0000 hours on Sunday and end at 2400 hours on Saturday.
- Travel time will be charged at the scheduled rates, including travel from CTEH offices to the location of the work and, in connection with an emergency response or other work requiring overnight stay, from the employee's local accommodations to the worksite.
- Standby time will be charged up to 8-hrs per day for any chargeable individual whose presence at the work location is required in staging for operations or in the event of any suspension of work at CLIENT'S discretion.
- Per Diem for meals will be billed according to current General Services Administration (GSA) rates.
- Lodging will be charged at the greater of cost or $125/night for each billable employee for accommodations rated 3 diamonds or higher by AAA.
- Project finance managers and coordinator personnel will be billed on any emergency response project requiring NIMS/ICS documentation or client specified invoice and documentation procedures or requirements beyond CTEH standard operating practice.
- Transportation using the CTEH airplane will be charged at $2,500 per flight hour plus a crew charge of $550 per day (including lodging, meals and other expenses).
- Consumable Supplies are charged at Manufacturer's Suggested Retail Price (MSRP).

RESPONSE READINESS FEE

- CLIENT will be charged $2,000 per month to support CTEH in maintaining the stand-by assets and qualified personnel required for emergency response services.

INTERNATIONAL

- Any extraordinary expenses including, without limitation: security, legal fees, local taxes, local business fees, and accounting fees incurred as a result of operating outside of the United States shall be reimbursable at cost plus 15%.
- All CTEH invoices will be paid to CTEH in the US in US Dollars.
- A surcharge of 50% will apply to all other rates and charges in this rate sheet.

Clean Seas, LLC

Clean Seas LLC, a California Limited Liability Company, is comprised of member companies that own and operate OCS Platforms and facilities in the Santa Barbara Channel, the Santa Maria Basin and along the coast of California.
Clean Seas LLC acts as a resource to its member companies by providing an inventory of state-of- the-art oil spill response equipment, trained personnel, and expertise in the planning and execution of oil spill response techniques. The Clean Seas response concept is similar to that of a fire department in that trained personnel and equipment are on standby ready to respond to a spill 24 hours a day, 365 days a year. Clean Seas is an Oil Spill Response Organization (OSRO) classified by the United States Coast Guard and rated by the State of California Office of Spill Prevention and Response. Clean Seas' designated area of response comprises the open oceans and coastline of the South Central Coast of California from Cape San Martin to Point Dume including the Ventura, Santa Barbara, and San Luis Obispo Counties, and the Channel Islands.

Clean Seas has an extensive inventory of spill containment and recovery equipment, response vessels, vehicles, sorbents, and miscellaneous support equipment. From its office and storage yard in Carpinteria, Clean Seas provides equipment and personnel for the protection of the California coast between Cape San Martin to the north and Point Dume to the south. This area includes the offshore islands and waters extending to the Outer Continental Shelf. To facilitate a rapid response to a spill emergency, Clean Seas' equipment is stationed throughout the Area of Responsibility and on response vessels. The Support Yard is Clean Seas' primary equipment maintenance and storage facility. It is located in Carpinteria off of Carpinteria Avenue. The address is:

Clean Seas
G.E. "Ike" Ikerd, General Manager
990 Cindy Lane
Carpinteria, California 93013
(805) 684-3838 (24-hour phone number)

Clean Seas maintains storage and maintenance yard in Carpinteria, California, The Yard supports ongoing land and sea operations for Clean Seas and member companies upon request. The personnel maintain a continual readiness for responding to an oil spill emergency through ongoing training exercises and maintaining the preparedness of all Clean Seas equipment.

Response Mobilization

Clean Seas provided Primary Response for several member companies. To meet our member OSRP needs, Clean Seas maintains a vessel mooring at Cojo anchorage [redacted] An OSRV will normally be located in the Point Conception/Point Arguello/Point Pedernales area. During adverse weather and/or sea conditions or for safety reasons, the vessel may move at the Vessel Master's discretion to safe moorage (i.e., at Cojo Bay or Santa Barbara Harbor). Clean Seas additionally maintains OSRVs in Santa Barbara, [redacted] Harbors, all of the vessels are subject to rapid mobilization should an oil release occur. Transit to and from the offshore area should be made during daylight hours and during the normal work period when possible. The OSRVs will rotate between mooring and harbors to facilitate logistical and maintenance requirements. If the vessel needs to temporarily move out of the area for adverse weather or personnel safety, the Company or Clean Seas will provide notification to the BSEE and other appropriate agencies prior to the vessel movement.

Clean Seas equipment and resources, including the OSRVs and the SRVs, are summarized throughout. Specific information on the four (4) OSRV(s) most likely to be mobilized in primary and secondary responses is listed below in Table 1.

Table 1

Oil Spill Response Vessels (OSRV)

Ocean Class - Oil Spill Recovery Vessels

OCEAN SCOUT / OCEAN GUARDIAN / OCEAN SENTINEL / OCEAN DEFENDER

Type	Size/Model	Quantity/Capacity	Manufacturer
Oil Spill Response Vessel	65' x 22'	(b) (7)(F), (b) (3)	N/A
Boom – Ocean	43" Reel Pack		Kepner
Boom – Sweep	LAMOR		LAMOR
Storage – TSC	Internal tanks		N/A
Skimmer	3Chain Brush		Lamor
Transfer Pump	GT-A50		LAMOR
Crane	Deck Mounted		ESI
Absorbent boom	8"		3M
Dispersant	9500		Nalco
Dispersant Spray System	Fully Integrated AFEDO Distribution System		N/A
Site Entry Kit	4 gas/benzene chip		Industrial Sc./Dragger
Tracking Buoys	DFB		Fastrack
Infrared Camera System	M626L		FLIR
Radios	P400		Motorola
Radios	VHF Base		Motorola
Radios	VHF Mobile		Motorola
Computer w/broadband			Dell/ATT
*This list is not intended to correspond to temporary relocation and/or movem periods when equipment is out of service for repairs or maintenance.			Area of Response nor to

When called by a facility for spill response the facility "person in charge" will contact the Clean Seas duty officer at 1805 684-3838 and request assistance. The Clean Seas duty officer will mobilize the OSRVs positioned at Cojo anchorage, Santa Barbara or Ventura Harbor(s) depending on the location of the potential spill. Given the initial assessment provided by the facility, Clean Seas may mobilize two additional OSRVs should the estimated spilled oil volume prescribe additional resources. Depending on actual conditions (i.e., weather/sea conditions, maintenance activities), response to the spill site for initial site characterization and investigation should be within the response times listed below. Depending upon specific conditions, equipment deployment operations may be initiated by Clean Seas' personnel simultaneously with the site characterization. However, containment (and exposure of personnel to the potential health hazards of the spill) will not be initiated until after the Clean Seas initial response crew has completed a site characterization.

Once the site has been cleared to initiate response operations, facility personnel will continue to conduct operations associated with stopping any additional spill release. The specially trained Clean Seas personnel will be engaged in spill containment and recovery operations. The OSRVs have advancing skimmer units and accessory equipment, booms on a hydraulic reel, 5-ton crane, dispersant system with dispersant, absorbent boom and pads, oil transfer pumps, site characterization kit, infrared camera system, and oil storage.

Based upon Clean Seas' estimated response times for their OSRV normally located at the Cojo anchorage, containment and recovery equipment can be mobilized to the Company's OCS area platforms in the following approximate timeframes:

Xxxxxx

OSRV(s) berthed at Santa Barbara and Ventura Harbors, containment and recovery equipment can be mobilized to the Company's platforms in the following approximate timeframes:

xxxxx

Actual timeframes may vary due to sea/current conditions and/or activities engaged in at the time of the call (i.e., re-supply, refueling, training, minor maintenance). Response times are based on an average vessel speed of 26 knots for the primary responding OSRV, including an allowance for approximately 5-10 minutes for engine warm-up and getting off the mooring buoy. It is important to note that these response times are not meant to be used as a measure of performance during a spill or a drill, but instead as a tool to estimate estimated time of arrivals.

Secondary Response Equipment

Clean Seas is also considered the secondary responder for spills entering marine waters in the area because of their extensive capability to deploy additional equipment. A complete listing of response equipment is provided below.

2012 Cleans Seas' four new 65' OSRVs began operate in a rotational schedule between berthing locations in the Northern and Southern AOR, with one vessel positioned normally at the COJO mooring in the Northern AOR. The additional three OSRVs are positioned in Santa Barbara and Ventura Harbors. These vessels replaced the retired Mr. Clean III and the charted vessel Clean Ocean, and will initially serve as secondary oil spill response equipment Northern and Southern Operating areas. OSRVs are rotated based on maintenance and resupply needs. During vessel rotational movements one of the OSRVs will enter the Northern AOR before the stationed vessel departs; insuring response coverage is not compromised. The four new OSRVs are named the *Ocean Scout, Ocean Guardian, Ocean Sentinel and Ocean Defender*. These OSRVs have advancing skimmer units and accessory equipment, booms on a hydraulic reel, 4.5-ton crane, dispersant system with dispersant, absorbent boom and pads, oil transfer pumps, site characterization kit, infrared camera system, and oil storage. The vessels are capable of reaching speeds of 26 knots. Table 1 summarizes some of the key equipment available from Clean Seas on these vessels. In the event a spill dictates additional skimming assets clean Seas maintains additional skimming assets inventory. Table 2 summarizes Vessel of Opportunity skimming systems, the spill response vessel, "CLEAN SWEEP" and given the appropriate situation the OSRB OCEAN KEEPER, which is outfitted with an advancing open ocean skimming system.

Other Response Vessel/Support Vessels/Support Equipment

Table 2

Spill Response Vessel (SRV) 'Clean Sweep'

Type	Size/Model	Quantity/Capacity	Manufacturer
Spill Response Vessel	32' x 11'	(b) (7)(F), (b) (3)	Kvickak Marine
Boom – Sweep	26" Sweep		Lamor
Storage -TSC	Internal tanks		
Skimmer	3 Chain Brush		Lamor
Site Entry Kit	4 gas/benzene chip		Industrial Sc./Dragger
Radios	VHF Base		Motorola
Radios	VHF Mobile		Motorola
Marine Booming/			
Type	**Size/Model**		**Manufacturer**
'Ajax'	32' x 8'		WorkBoats N.W.
'Comet'	32' x 8'		WorkBoats N.W.
'Sea Ark'	21' x 7.5'		Sea Ark Boats
OSRB OCEA			
Barge	181' x 56' x 14'		1
Boom - Ocean	Reel Pac/Oil stop		3000'/6000'
Skimmer-LAMOR	LAMOR 4 BRUSH		2 @ 9904
Pump	DOP 250		10/629
Storage -TSC	Internal Tanks		15000
Crane	HP 50		HydraPro
Site Entry Kit	4 gas/benzene chip		Industrial Sc./Dragger
Radios	VHF Mobile		Motorola

Computer w/broadband crd.		1	Dell/ATT
Shoreline Protection Skiffs			
Aluminum Skiff on trailer	16’ w/outboard motor (15+ HP)	12	N/A
Hydraulic Power Units			
Hydraulic Power Unit	DA45	2 – 45 gpm	Diesel America
Hydraulic Power Unit	DA33	2 – 35 gpm	Diesel America
Hydraulic Power Unit	DA30	4 – 30 gpm	Diesel America
Hydraulic Power Unit	DA10	5 – 10 gpm	Diesel America

Containment Equipment

In addition to the 7,500 of containment boom stored on the three OSRVs Clean Seas maintains and additional inventory of ocean boom and shoreline protection boom in readily available trailers and storage bins at the Carpinteria yard.

Ocean and Shoreline Protection Boom			
Type	**Size/Model**	**Quantity/Capacity**	**Manufacturer**
Boom - Ocean	43” SPI auto-boom	3,000’	Oil Stop
Boom - Ocean	43” Solid Foam	4,500’	CCB Company
	Non OSRV Ocean Boom	7,500’	
Shoreline Protection Boom			
Type	**Size/Model**	**Quantity/Capacity**	**Manufacturer**
Boom	10”	3,000’	Oil Stop
Boom	18”	1,100’	American Marine
Boom	20”	18,600’	Kepner
Boom	30”	8,600’	Kepner
	Total Shoreline Boom	31,300’	

Recovery Equipment

Various skimmers are stored at the Clean Seas yard, or pre-staged on vessels near deployment sites. The *Ocean Scout, Ocean Guardian, Ocean Sentinel, and Ocean Guardian* each have 7,420 barrels of EDRC, and the *Clean Sweep* has 3,710 barrels of EDRC and the OSRB *Ocean Keeper* has 9,904 barrels of EDRC. This is a total of 39,584 barrels of EDRC pre-staged on-water recovery capacity. A total of 13 additional skimmers with the total EDRC of 42,823 are also available for use by VOSS applications for both light and heavy viscosity oils, in open sea and protected environments.

Skimmers (Open Ocean, Nearshore & Inland)			
Type	**Size/Model**	**Quantity/Capacity**	**Manufacturer**
Weir	Terminator	2 @ 3,017 = 6,034 EDRC	Desmi
Weir	GT-185	4 @ 1,371 = 5,484 EDRC	Pharo Marine
Weir	GT-260	1 @ 3,019 = 3,019 EDRC	Pharo Marine
Drum/Weir	Roto-30	2 @ 3,017 = 6,034 EDRC	Roto-Trading
Oleophillic Brush	2 – Brush	4 @ 2,472 = 9,888 EDRC	Lamor

Oleophillic Brush	5 – Brush	2 @ 6,182 = 12,364 EDRC	Lamor
	Total Non OSRV/SRV (EDRC) Skimming	(b) (7)(F), (b) (3) EDRC	

Transfer Pumps			
Type	**Model**	**Quantity/Capacity**	**Manufacturer**
Pump	Framo TK 150	2 – 3,142 bph	FrankMoen
Pump	DOP 250	11 - 629 bph	Desmi
Pump	Master	3 – 125 bph	Desmi
	Total Pumping Capacity	13,578 bph	

Temporary Storage Capacity

In addition to the 215 barrels (each) of storage capacity on the *Ocean Scout, Ocean Guardian, Ocean Sentinel and Ocean Defender*, and 29 barrels of storage capacity on the *Clean Sweep*, Clean Seas maintains an additional 15,000 barrels on the Ocean Keeper and 10,526 barrels of storage capacity in the Santa Barbara Harbor and Carpinteria areas.

Oil Spill Response Storage			
Type	**Size/Model**	**Quantity/Capacity**	**Manufacturer**
'Ocean Keeper – Oil Spill Response Barge	181' x 56' x 14'		Dakota Creek Ind.
Storage –TSC	Internal tanks	8 @ 1,875 bbl..= 15k bbl	
Transfer Pump	DOP 250	8 @ 629 bph.	Desmi
OSRVs	Internal tanks	4@ 215 bbl = 860 1@ 28 bbl	Rozema Kv
Towable Storage Bladders	Kepner 590	1 @ 590 bbls. = 590 bbls. 3 @ 120 bbls. = 360 bbls.	Kepner
Towable Storage Bladders	Kepner 28	4 @ 28 bbls. = 112 bbls.	Kepner
Towable Storage Bladders	Dunlop Dracone	1 @ 140 bbls. = 140 bbls.	Dunlop UK
Rigid Dracone Barges	Eagle Aluminum	8 @ 100 bbls. = 800 bbls.	Eagle Marine
Portable (land)	Fastank-1200	12 @ 57 bbls. = 684 bbls.	Fastank
	Temporary Storage Cap.	18,564 bbl.	

Dispersants, Application Equipment and Absorbent Boom

In addition to the 1,000 gallons of Corexit 9500 dispersant aboard the *Ocean Scout, Ocean Guardian, Ocean Sentinel and Ocean Defender* (250 gallons each) the vessels are equipped with a built-in fully integrated dispersant application system. Additionally, Clean Seas also maintains a large inventory of dispersants at their storage yard in Carpinteria. Clean Seas inventory of Corexit 9527 is 8,150 gallons and 8,900 gallons of Corexit 9500. Clean Seas also maintains absorbents including 9,600' of 8" absorbent boom, and absorbent pads. Inventories are stored in the Carpinteria Yard and the OSRVs. Additional quantities are available as back-up supplies from different vendors throughout the state.

Dispersants			
Type		**Quantity/Capacity**	**Manufacturer**
Corexit 9527		8,150 gals.	Nalco
Corexit 9500		8,900 gals	Nalco
	Total Non OSRV Dispersant	17, 050 gals.	

Clean Seas also maintains a contract with Aspen Helicopter Inc., located in Oxnard California, and may utilize its services for aerial application of dispersants as well as to assess and track marine oil spills and coordinate marine oil spill response vessels. Aspen Helicopters Inc. has trained on numerous occasions with Clean Seas aerial dispersant spray buckets from the Oxnard airport and remote landing zones throughout the Clean Seas area of response. Aerial dispersant application and surveillance equipment includes:

Aerial Dispersant Applicant Equipment
Bell 206 L-III (Long Ranger) Helicopter
Bell 206 B-III (Jet Ranger) Helicopter
Bell 212 Medium Twin Helicopter
2 - Simplex helicopter dispersant spray unit with 250-gallon capacity and 32’ spray boom
Aerial Surveillance/Tracking
2 – Partenavia P68–C
1 – Partenavia P68-OBS
2 – Piper Chieftain PA-31-350

Vehicles/Trailers

An assortment of trucks and response vehicles are available for immediate response operations and contracts are in place for additional equipment as needed.

Table C-10. Motor Pool (Trucks, Cranes, Forklifts & Trailers)			
Type	**Model**	**Quantity/Capacity**	**Manufacturer**
Crane Truck	F-800	1 – 12 Ton	Ford
Stake Bed truck	F-550	1	Ford
Stake Bed Truck	F-350	1	Ford
4x4 Passenger Truck	F-350	1	Ford
Passenger Vehicle	Expedition	1	Ford
Passenger Truck	F-150	1	Ford
Passenger Truck	Ranger	1	Ford
ATV	Big Bear	2	Yamaha
Forklift	V330	1 – 33,000 lbs.	Caterpillar
Forklift	M8	1 – 8,000 lbs.	Wiggens
Mobile Ops. Field Office	22’ Attitude	1	Southwind
Open Deck Trailer	18’	1	Texas Trailer Co.

Radio Communications System

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

[redacted]

Miscellaneous

Clean Seas maintains portable response trailers for decontamination, shoreline protection and dispersant support for remote operations.

CLEAN SEAS, LLC
2012 RESPONSE EQUIPMENT LIST

MARINE CONTAINMENT AND RECOVERY PLATFORMS

OSRVs / SRVs /OSRB

Location	Type	Model	Warehoused	Quantity / Capacity
OCEAN SCOUT	Vessel	65' x 22' OSRV	Santa Barbara Channel	1
	Boom - Ocean	43" Reel Pak	OCEAN SCOUT	1500'
	Boom - Sweep	LAMOR Sweep	OCEAN SCOUT	2 / 36'
	Storage -TSC	Internal Tanks	OCEAN SCOUT	215 bbl.
	Skimmer-LAMOR	3 Chain Brush	OCEAN SCOUT	3710 edrc
	Skimmer-LAMOR	3 Chain Brush	OCEAN SCOUT	3710 edrc
	Pump - Offloading	GT-A50	OCEAN SCOUT	388 bph.
	Crane	Deck Mounted	CLEAN OCEAN	1/4.5 Ton
	FLIR Camera	M-Series	OCEAN SCOUT	1
	Absorbent Boom	8"	OCEAN SCOUT	5 @ 40'= 200'
	Dispersant	9500	OCEAN SCOUT	250 gallons
	Inagrated Dispersant System	Application System	OCEAN SCOUT	AFEDO Nozzle
	Site Entry Kit	4 gas/benzene chip	OCEAN SCOUT	1
	Tracking Buoy	RDF	OCEAN SCOUT	1
	Radios	P 400	OCEAN SCOUT	(b) (7)(F), (b) (3)
	Radios	VHF Base	OCEAN SCOUT	
	Radios	VHF Mobile	OCEAN SCOUT	Marine
	(b) (6)	NA	OCEAN SCOUT	1
	Computer w/ Brdbnd crd.	na	OCEAN SCOUT	1

CLEAN SEAS, LLC
2012 RESPONSE EQUIPMENT LIST
OSRVs / SRVs /OSRB (continued)

Location	Type	Model	Warehoused	Quantity / Capacity
OCEAN GUARDIAN	Vessel	65' x 22' OSRV	Santa Barbara Channel	1
	Boom - Ocean	43" Reel Pak	OCEAN GUARDIAN	1500'
	Boom - Sweep	LAMOR Sweep	OCEAN GUARDIAN	2 / 36'
	Storage -TSC	Internal Tanks	OCEAN GUARDIAN	215 bbl.
	Skimmer-LAMOR	3 Chain Brush	OCEAN GUARDIAN	3710 edrc
	Skimmer-LAMOR	3 Chain Brush	OCEAN GUARDIAN	3710 edrc
	Pump - Offloading	GT-A50	OCEAN GUARDIAN	388 bph.
	Crane	Deck Mounted	OCEAN GUARDIAN	1/4.5 Ton
	FLIR Camera	M-Series	OCEAN GUARDIAN	1
	Absorbent Boom	8"	OCEAN GUARDIAN	5 @ 40'= 200'
	Dispersant	9500	OCEAN GUARDIAN	250 gallons
	Inagrated Dispersant System	Application System	OCEAN GUARDIAN	AFEDO Nozzle
	Site Entry Kit	4 gas/benzene chip	OCEAN GUARDIAN	1
	Tracking Buoy	RDF	OCEAN GUARDIAN	(b) (7)(F), (b) (3)
	Radios	P 400	OCEAN GUARDIAN	
	Radios	VHF Base	OCEAN GUARDIAN	
	Radios	VHF Mobile	OCEAN GUARDIAN	Marine
	(b) (6)	NA	OCEAN GUARDIAN	1
	Computer w/ Brdbnd crd.	na	OCEAN GUARDIAN	1
OCEAN SENTINEL	Vessel	65' x 22' OSRV	Santa Barbara Channel	1
	Boom - Ocean	43" Reel Pak	OCEAN SENTINEL	1500'
	Boom - Sweep	LAMOR Sweep	OCEAN SENTINEL	2 / 36'
	Storage -TSC	Internal Tanks	OCEAN SENTINEL	215 bbl.
	Skimmer-LAMOR	3 Chain Brush	OCEAN SENTINEL	3710 edrc
	Skimmer-LAMOR	3 Chain Brush	OCEAN SENTINEL	3710 edrc
	Pump - Offloading	GT-A50	OCEAN SENTINEL	388 bph.
	Crane	Deck Mounted	OCEAN SENTINEL	1/4.5 Ton
	FLIR Camera	M-Series	OCEAN SENTINEL	1
	Absorbent Boom	8"	OCEAN SENTINEL	5 @ 40'= 200'
	Dispersant	9500	OCEAN SENTINEL	250 gallons
	Inagrated Dispersant System	Application System	OCEAN SENTINEL	AFEDO Nozzle
	Site Entry Kit	4 gas/benzene chip	OCEAN SENTINEL	1
	Tracking Buoy	RDF	OCEAN SENTINEL	1
	Radios	P 400	OCEAN SENTINEL	(b) (7)(F), (b) (3)
	Radios	VHF Base	OCEAN SENTINEL	
	Radios	VHF Mobile	OCEAN SENTINEL	Marine
	(b) (6)	NA	OCEAN SENTINEL	1
	Computer w/ Brdbnd crd.	na	OCEAN SENTINEL	1

CLEAN SEAS, LLC
2012 RESPONSE EQUIPMENT LIST

CLEAN SEAS, LLC
2012 RESPONSE EQUIPMENT LIST
OSRVs / SRVs /OSRB (continued)

Location	Type	Model	Warehoused	Quantity / Capacity
OCEAN DEFENDER	Vessel	65' x 22' OSRV	Santa Barbara Channel	1
	Boom - Ocean	43" Reel Pak	OCEAN DEFENDER	1500'
	Boom - Sweep	LAMOR Sweep	OCEAN DEFENDER	2 / 36'
	Storage -TSC	Internal Tanks	OCEAN DEFENDER	215 bbl.
	Skimmer-LAMOR	3 Chain Brush	OCEAN DEFENDER	3710 edrc
	Skimmer-LAMOR	3 Chain Brush	OCEAN DEFENDER	3710 edrc
	Pump - Offloading	GT-A50	OCEAN DEFENDER	388 bph.
	Crane	Deck Mounted	OCEAN DEFENDER	1/4.5 Ton
	FLIR Camera	M-Series	OCEAN DEFENDER	1
	Absorbent Boom	8"	OCEAN DEFENDER	5 @ 40'= 200'
	Dispersant	9500	OCEAN DEFENDER	250 gallons
	Inagrated Dispersant System	Application System	OCEAN DEFENDER	AFEDO Nozzle
	Site Entry Kit	4 gas/benzene chip	OCEAN DEFENDER	1
	Tracking Buoy	RDF	OCEAN DEFENDER	(b) (7)(F), (b) (3)
	Radios	P 400	OCEAN DEFENDER	
	Radios	VHF Base	OCEAN DEFENDER	
	Radios	VHF Mobile	OCEAN DEFENDER	Marine
	(b) (6)	NA	OCEAN DEFENDER	1
	Computer w/ Brdbnd crd.	na	OCEAN DEFENDER	1

CLEAN SEAS, LLC
2012 RESPONSE EQUIPMENT LIST

Location	Type	Model	Warehoused	Quantity / Capacity
OCEAN KEEPER	Barge	181' x 56' x 14'	Santa Barbara Channel	1
	Boom - Ocean	60" Reel Pack	OCEAN KEEPER	3000
	Boom - Ocean	43" SPI Oil Stop	OCEAN KEEPER	6000
	Skimmer-LAMOR	LAMOR 4 BRUSH	OCEAN KEEPER	2 @ 9904
	Pump	DOP 250	OCEAN KEEPER	10/629
	Storage -TSC	Internal Tanks	OCEAN KEEPER	15000
	Crane	HP 50	OCEAN KEEPER	15 ton
Location	**Type**	**Model**	**Warehoused**	**Quantity / Capacity**
CLEAN SWEEP	Vessel	32' x 11' SRV	Santa Barbara Channel	1
	Boom	26" Sweep Boom	Ventura Harbor	30'
	Storage -TSC	Internal Tanks	Ventura Harbor	29 bbls
	Skimmer	LAMOR 3 BRUSH	Ventura Harbor	3710 edrc
	Site Entry Kit	4 gas/benzene chip	Ventura Harbor	1
	Radios	VHF Base	Ventura Harbor	(b) (7)(F), (b) (3)
	Radios	VHF Mobile	Ventura Harbor	Marine
MARINE BOOMING / SUPPORT VESSELS				
Location	**Type**	**Model**	**Warehoused**	**Quantity / Capacity**
AJAX	Boat	32' x 8'	Carpinteria Support Yard	1
COMET	Boat	32' x 8'	Santa Barbara Harbor	1
RHIB RINCON	Boat	18' x 7.5'	Carpinteria Support Yard	1
SEA ARK	Boat	21' x 7.5'	Carpinteria Support Yard	1
OCEAN BOOM				
Location	**Type**	**Model**	**Warehoused**	**Quantity (Feet)**
CS Yard Building #2	Boom - Ocean	43" SPI auto-boom	Carpinteria Support Yard	3000
CS Yard Conex # 40-1	Boom - Ocean	43" Solid Foam	Carpinteria Support Yard	1500
CS Yard Conex # 40-2	Boom - Ocean	43" Solid Foam	Carpinteria Support Yard	1500
CS Yard Conex # 40-3	Boom - Ocean	43" Solid Foam	Carpinteria Support Yard	1500
			Total Boom in Feet	7500

CLEAN SEAS, LLC
2012 RESPONSE EQUIPMENT LIST

STORAGE - Towable Storage Bladders, Rigid Hull Dracones & Portable Land based				
Location	**Type**	**Model**	**Warehoused**	**Quantity / Capacity**
CS Yard	Storage - TSB	Kepner 120	Carpinteria Support Yard	3 @120 bbls =360 bbl
CS Yard	Storage - TSB	Kepner 590	Carpinteria Support Yard	1 @590 bbl
CS Yard	Storage - TSB	Kepner 28	Carpinteria Support Yard	4 @ 28 bbl = 112 bbl
CS Yard	Storage - TSB	Dunlop Dracone	Carpinteria Support Yard	1 @ 140 bbl
CS Yard	Storage - Rigid Dracone	Eagle alum barge	Carpinteria Support Yard	4 @ 100 bbl = 400 bbl
CS Yard	Storage - Rigid Dracone	Eagle alum barge	Carpinteria Support Yard	4 @ 100 bbl = 400 bbl
CS Yard	Storage - Portable Land	FASTANK	Carpinteria Support Yard	12 @ 57 bbl = 684 bbl
			Total (Non OSRV/SRV) Temporary Storage	**2686 bbl**

SKIMMERS - Open Ocean, Nearshore & Inland				
Location	**Type**	**Model**	**Warehoused**	**Capacity/EDRC**
Building #2	Weir	Terminator	Carpinteria Support Yard	3017
Building #2	Weir	Terminator	Carpinteria Support Yard	3017
CONEX # 20-2	Oleophilic Brush	2 Brush	Carpinteria Support Yard	2476
CONEX # 20-2	Oleophilic Brush	2 Brush	Carpinteria Support Yard	2476
CONEX # 20-2	Oleophilic Brush	2 Brush	Carpinteria Support Yard	2476
CONEX # 20-3	Oleophilic Brush	2 Brush	Carpinteria Support Yard	2476
CONEX # 20-3	Oleophilic Brush	5 Brush	Carpinteria Support Yard	6182
CONEX # 20-3	Oleophilic Brush	5 Brush	Carpinteria Support Yard	6182
Building #2	Weir	GT-185	Carpinteria Support Yard	1371
Building #2	Weir	GT-185	Carpinteria Support Yard	1371
Building #2	Weir	GT-185	Carpinteria Support Yard	1371
Building #2	Weir	GT-185	Carpinteria Support Yard	1371
Building #2	Weir	GT-185	Carpinteria Support Yard	1371
Building #2	Weir	GT-185	Carpinteria Support Yard	1371
Building #2	Weir	GT-260	Carpinteria Support Yard	3019
Building #2	Drum/Weir	Roto-30	Carpinteria Support Yard	3017
Building #2	Drum/Weir	Roto-30	Carpinteria Support Yard	3017
			Total EDRC Recovery	**45581**

CLEAN SEAS, LLC
2012 RESPONSE EQUIPMENT LIST

PUMPS - Transfer & Offloading				
Location	**Type**	**Model**	**Warehoused**	**Capacity / BPH**
CS Yard FT	Pump	FRAMO TK150	Carpinteria Support Yard	2571
CS Yard FT	Pump	FRAMO TK150	Carpinteria Support Yard	2571
CS Yard FT	Pump	DOP 250	Carpinteria Support Yard	629
Building #2	Pump	Master	Carpinteria Support Yard	125
Building #2	Pump	Master	Carpinteria Support Yard	125
Building #2	Pump	Master	Carpinteria Support Yard	125
			Total Pumping Capacity	**6146**

SHORELINE PROTECTION BOOM -Inland / Nearshore				
Location	**Type**	**Model**	**Warehoused**	**Quantity (Feet)**
Trailer #2	Boom	20"	Carpinteria Support Yard	1500
Trailerl #4	Boom	18"	Carpinteria Support Yard	1100
Trailer. #5	Boom	20"	Carpinteria Support Yard	1500
Trailer #6	Boom	20"	Carpinteria Support Yard	1500
Trailer #8	Boom	20"	Carpinteria Support Yard	1500
Trailer #10	Boom	20"	Carpinteria Support Yard	1500
Trailer #11	Boom	20"	Carpinteria Support Yard	1500
CONEX # 20-1	Boom	10"	Carpinteria Support Yard	3000
CONEX #40-11	Boom	30"	Carpinteria Support Yard	1200
CONEX # 40-4	Boom	30"	Carpinteria Support Yard	2800
CONEX # 40-5	Boom	30"	Carpinteria Support Yard	3300
CONEX # 40-6	Boom	30"	Carpinteria Support Yard	1300
CONEX # 40-7	Boom	20"	Carpinteria Support Yard	5000
CONEX # 40-9	Boom	20"	Carpinteria Support Yard	4600
			Total Shoreline Boom	**31300**

SHORELINE PROTECTION Skiffs w 15 to 30 hp outboards				
Location	**Type**	**Model**	**Warehoused**	**Quantity**
SKIFF TRAILER # 1	Skiffs-alum.	16' w/outboard	Carpinteria Support Yard	4
SKIFF TRAILER # 2	Skiffs-alum.	16' w/outboard	Carpinteria Support Yard	4
SKIFF TRAILER # 3	Skiffs-alum.	16' w/outboard	Carpinteria Support Yard	1
SKIFF TRAILER # 4	Skiffs-alum.	16' w/outboard	Carpinteria Support Yard	1
SKIFF	Skiffs-alum.	16' w/outboard	Carpinteria Support Yard	1
SKIFF	Skiffs-alum.	16' w/outboard	Carpinteria Support Yard	1

CLEAN SEAS, LLC
2012 RESPONSE EQUIPMENT LIST

HYDRAULIC POWER UNITS				
Location	**Type**	**Model**	**Warehoused**	**Quantity / Capacity**
Building #2	Hydraulic Power Unit	DA45	Carpinteria Support Yard	2 / 45 gpm
	Hydraulic Power Unit	DA33	Carpinteria Support Yard	2 / 35 gpm
	Hydraulic Power Unit	DA30	Carpinteria Support Yard	4 / 30 gpm
	Hydraulic Power Unit	DA10	Carpinteria Support Yard	5 / 10 gpm
MOTOR POOL - Trucks, Cranes, Forklifts and Trailers				
Location	**Type**	**Model**	**Warehoused**	**Quantity / Capacity**
SUPPORT YARD	Crane Truck	Ford 800	Carpinteria Support Yard	1 / 12 TON CRANE
	Stake Bed Truck	Ford 550	Carpinteria Support Yard	1
	Stake Bed Truck	Ford 350	Carpinteria Support Yard	1
	Passenger 4x4 Dually	Ford 350	Carpinteria Support Yard	1
	Passenger	Expedition	Carpinteria Support Yard	1
	Passenger	F150	Carpinteria Support Yard	2
	Passenger	Ranger	Carpinteria Support Yard	1
	ATV	Big Bear	Carpinteria Support Yard	1
	ATV	Big Bear	Carpinteria Support Yard	1
	Forklift	Caterpiller 30k	Carpinteria Support Yard	1 / 33,000 lbs
	Forklift	Caterpiller 8k	Carpinteria Support Yard	1 / 8,000 lbs
	Mobile Ops fld. Office	22' Attitude	Carpinteria Support Yard	1
	Open Deck Trailer	18' Texas Trl.	Carpinteria Support Yard	1

CLEAN SEAS, LLC
2012 RESPONSE EQUIPMENT LIST

PPE, HANDTOOLS & ABSORBENT MATERIAL Boom, Pads and Snare

Location	Type	Model	Warehoused	Quantity / Capacity
Trailer. # 3	Absorbent Boom	8"	Carpinteria Support Yard	8400'
Trailer #7	Absorbent Boom	8"	Carpinteria Support Yard	1200'

PORTABLE RESPONSE SUPPORT TRAILER

CONEX # 40-12

Beach Clean-up

	Quantity
Rakes	15
Shovels Flat	15
Shovels Round	15
Pitch Forks	4
Plastic Buckets	15
18" Wire Flags	1000

Decon

	Quantity
Hand Cleaner	10
First Aid Kits	10
5 Gallon Water Bottles	5
Tables	5
Stackable Chairs	20
Dish Pans	6
Gatoraid	6
Kiddie Pools	4
Hudson Sprayer	2
Short Handle Brushes	12
Long Handle Brushes	18
Eye Wash Station	1
Pallets	3
Barrier Fence	6

PPE

	Quantity
Gloves	3000
Tyvec	1000
Rain Gear	250
Rubber Boots	300
Hip Waders	10
Safety Glasses	200
Barrier Cream	6
Back Braces	24
Sun Screen	300
Sun Screen	300

Miscellaneous

	Quantity
Rags	10 cs
Tie Wraps	400
Trash Bags	4000
Work Vests	250
Traffic Cones	25
Wooden Stakes	100
Duct Tape	20 rolls
Chem Lights	100
Tarps	6
Visqueen	2 rolls
Sand Bags	1000
Bike Flags	100
1/4" Line	1200'
6" PVC Pipe	20'
1/2" Line	600'

CLEAN SEAS, LLC
2012 RESPONSE EQUIPMENT LIST

AERIAL DISPERSANT SUPPORT TRAILER & SUPPLIES

Location	Type	Model	Warehoused	Quantity / Capacity
LAY-DOWN	Dispersant	COREXIT 9527	Carpinteria Support Yard	7150
LAY-DOWN	Dispersant	COREXIT 9500	Carpinteria Support Yard	9400
			Total Shoreside	**16550**

Trailer #1	Item	Quantity	Item	Quantity
	250 gal. Simplex sprayer	1	ear muffs	2
	24 gal containers	6	hard hats	4
	2 gal. gas cans (empty)	2	tyvek suits	1
	box paper rags	1	disinfection wipes	1
	tool kit	1	reflective vests	4
	sorbent pads	2	push squeegee	1
	8" sorbent boom	1	½ x 20' lines	4
	½ liter drinking water	18	extension cords	2
	first aid kit	1	goggles	2
	1500 watt floodlights	2	5 Gal. Buckets	30
	35 gal trash can	1		
	5 gal plastic buckets	11	MSDS for 9527 & 9500	
	hand truck	1		
	25' hose w/camlock fittings	2		
	folding chairs	4		
	folding tables	2		
	brooms	2		
	tarp	1		
	easyup tent	1		
	55 gal trash bags	1		
	duct tape	2		
	eyewash station	1		
	plastic sheeting	1		
	face shields	2		
	safety glasses	2		
	master pump	1		
	fire extinguisher	1		
	spill absorbent material	2		

CLEAN SEAS, LLC
2012 RESPONSE EQUIPMENT LIST

Trailer # 2	Item	Quantity	Item	Quantity
	250 gal. Simplex sprayer	1	hard hats	4
	24 gal containers	6	tyvek suits	1
	2 gal. gas cans (empty)	2	disinfection wipes	1
	box paper rags	1	reflective vests	4
	tool kit	1	push squeegee	1
	sorbent pads	2	½ x 20' lines	4
	8" sorbent boom	1	extension cords	2
	½ liter drinking water	18	goggles	2
	first aid kit	1	5 Gal. Buckets	30
	1500 watt floodlights	2		
	35 gal trash can	1	MSDS for 9527 & 9500	
	5 gal plastic buckets	11		
	hand truck	1		
	25' hose w/camlock fittings	2		
	folding chairs	4		
	folding tables	2		
	brooms	2		
	tarp	1		
	easy-up tent	1		
	55 gal trash bags	1		
	duct tape	2		
	eyewash station	1		
	plastic sheeting	1		
	face shields	2		
	master pump	1		
	fire extinguisher	1		
	spill absorbent material	2		

CLEAN SEAS, LLC
2012 RESPONSE EQUIPMENT LIST

PERSONNEL DECONTAMINATION SUPPORT TRAILER SUPPLIES				
Location	**Type**	**Model**	**Warehoused**	**Quantity / Capacity**
Trailer # 4	Portable Decon Pool	NA	Carpinteria Support Yard	1 / 20"x 40'
	Folding Tables	NA	Carpinteria Support Yard	2 / 24" x 72"
	heavy tarps	NA	Carpinteria Support Yard	3
	chairs	NA	Carpinteria Support Yard	6
	41 gal plastic trash can	NA	Carpinteria Support Yard	3
	easy-up tent	NA	Carpinteria Support Yard	1
	fishtote	NA	Carpinteria Support Yard	1
	short handle brush	NA	Carpinteria Support Yard	1 case
	sorbent pads	NA	Carpinteria Support Yard	2 bales
	sorbent boom	NA	Carpinteria Support Yard	2 bales
	sorbent roll	NA	Carpinteria Support Yard	1 roll
	degreaser	NA	Carpinteria Support Yard	10 gal
	hand cleaner	NA	Carpinteria Support Yard	4 gal
	kiddy pools	NA	Carpinteria Support Yard	4
	hudson sprayers	NA	Carpinteria Support Yard	4
	plastic trays	NA	Carpinteria Support Yard	4
	Rakes	NA	Carpinteria Support Yard	5
	round shovels	NA	Carpinteria Support Yard	5
	pitch forks	NA	Carpinteria Support Yard	2
	plastic buckets	NA	Carpinteria Support Yard	5
	4"x 5' PVC Pipe	NA	Carpinteria Support Yard	1
	sand bags	NA	Carpinteria Support Yard	100
	hard hats	NA	Carpinteria Support Yard	10
	gloves	NA	Carpinteria Support Yard	100 pr
	tyvek suits	NA	Carpinteria Support Yard	48
	rubber boots	NA	Carpinteria Support Yard	48 pr
	safety glasses	NA	Carpinteria Support Yard	24
	sun screen	NA	Carpinteria Support Yard	1 bx
	work vest	NA	Carpinteria Support Yard	10

CLEAN SEAS, LLC
2012 RESPONSE EQUIPMENT LIST

PERSONNEL DECONTAMINATION SUPPORT TRAILER SUPPLIES (continued)				
Location	**Type**	**Model**	**Warehoused**	**Quantity / Capacity**
	rain suits	NA	Carpinteria Support Yard	5
	rags	NA	Carpinteria Support Yard	3 cs
	zip ties	NA	Carpinteria Support Yard	1 bag
	trash bags	NA	Carpinteria Support Yard	2 bx
	traffic cones	NA	Carpinteria Support Yard	10
	duct tape	NA	Carpinteria Support Yard	8 rolls
	¼" manila rope	NA	Carpinteria Support Yard	600'
	visqueen	NA	Carpinteria Support Yard	1 roll
	barrier tape	NA	Carpinteria Support Yard	3 rolls
	water	NA	Carpinteria Support Yard	1 cs

CLEAN SEAS, LLC
2012 RESPONSE EQUIPMENT LIST

SURVEILLANCE, AERIAL TRACKING and DISPERSANT APPLICATION PLATFORMS
(Contracted Resources)

Surveillance and Aerial Tracking

Clean Seas has been utilizing aerial platforms to assess marine oil spills, track and control marine oil spill response vessels since the early 1970's. ASPEN HELICOPTER Inc. has responded by contract to Clean Seas beginning in 1982 and has easily responded to over 70 spill response call-outs ranging from one day to multiple day events. ASPEN HELICOPTER Inc. brings state of the art technology via GPS tracking, on-site logistical and mechanical support. ASPEN HELICOPTER Inc. has trained on numerous occasions with Clean Seas AERIAL DISPERSANT SPRAY BUCKETS from Oxnard Airport and remote LZ throughout Clean Seas Response Area.

Below is a Table listing available Helicopter and Fixed Wing Aircraft available to Clean Seas:

Helicopter	Fixed Wing
Bell 206 L-III (Long Ranger)	2-Partenavia P68-C (High wing survey)
Bell 206 B-III (Jet Ranger)	1-Partenavia P68- OBS (Observer)
Bell 212 Medium Twin Helicopter	2-Piper Chieftain PA-31-350 (all weather)

Radio Directional Tracking Buoys

Type	Manufacter	Location	Quantity	Model
Tracking Buoy	DFB	OCEAN SCOUT	1	Fastrack
Tracking Buoy	DFB	OCEAN GUARDIAN	1	Fastrack
Tracking Buoy	DFB	OCEAN SENTINAL	1	Fastrack
Tracking Buoy	DFB	OCEAN DEFENDER	1	Fastrack

PLAINS MARKETING, L.P.

Contract No. 026450-02856-PMLP.2.17

MAJOR SERVICE CONTRACT
PLAINS MARKETING, L. P.

333 Clay, Suite 1600
Houston, Texas 77002

THIS CONTRACT TERMINATES AND SUPERSEDES CONTRACT BY AND BETWEEN ALL AMERICAN PIPELINE, L.P. AND ITS AFFILIATES AND FURTHER ASSIGNED TO PLAINS PIPELINE L. P. BY NAME CHANGE AND MP ENVIRONMENTAL SERVICES, INC. CONTRACT NUMBER 026450-00990-AAPLP COMMENCING SEPTEMBER 24, 2001 AND TERMINATING SEPTEMBER 30, 2006.

THIS CONTRACT is entered into as of the 8th day of August, 2006, 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 **MP Environmental Services, Inc.** with a mailing address of 3400 Manor Street, Bakersfield, California 93308 (hereinafter "CONTRACTOR"). For purposes of this Contract, the term "COMPANY" includes Plains Marketing, L. P. and Its Affiliates, including but not limited to Plains Pipeline, L.P., Plains Marketing Canada, L.P., Plains LPG Services, L.P. and Basin Pipeline Holdings, L.P., 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 August 8, 2006 and ending on August 8, 2007, and continuing 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.

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, 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, 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

(V) 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

(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 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.

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 also acknowledges receipt of, and shall abide by COMPANY's Contractor Safety Rules and Procedures Manual, if applicable, while performing any Work hereunder.

19.5 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.

19.6 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.

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.

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: Carolyn S. Calhoun, Land & Contracts
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 Associate 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.

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.

ARTICLE 29 - HEADINGS

29.1 The subject headings in this Contract are for convenience only and are not determinative of the substance of the subject clause.

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.

MP ENVIRONMENTAL SERVICES, INC.

By: Don Adams

Printed Name: Don Adams

Title: Manager

Date: 8-17-06

Taxpayer ID #: 77-0262888

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: 8-31-06

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
(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;

(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; and

(7) 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	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 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.

12. OPERATOR QUALIFICATION PROGRAM

Contractor acknowledges and agrees to comply with Company's OQ Program described in Exhibit D attached to this agreement and entitled "Operator Qualification Program" and "Covered Tasks". This would apply to all individuals performing covered tasks as described in Exhibit D whether or not they were employed by Company. Contractor, subcontractor, or any other entity performing covered tasks on behalf of the Company.

MP Environmental Services, Inc.
3400 Manor Street
Bakersfield, CA 93308
(661) 393-1151 (800) 458-3036

Emergency Response Rate Schedule for: Plains Pipeline **Date: 10/21/2009**

Description		Rate
Trucks and Trailers		
50-65 BBL Vacuum Truck		95.00/hr
100-120 BBL Vacuum Truck		100.00/hr
120-140 BBL Vacuum Truck (Stainless)		125.00/hr
Super Sucker Vacuum (For Heavy Solids)		225.00/hr
Flatbed		100.00/hr
Van		100.00/hr
End Dump		100.00/hr
End Dump High Side		125.00/hr
Low Bed		125.00/hr + permits
Roll-Off Truck - Single or Double		100.00/hr
One Ton Flatbed		60.00/hr
Two Ton Flatbed		68.00/hr
Other Equipment (All rates based on 10 hour workday)		
Bobcat Loader		400.00/Day
Extend-A-Hoe (Backhoe)		105.00/hr or 750.00/Day
Front Loader		125.00/hr or 900.00/Day
Haul Truck Off Road		1150.00/Day
973 Cat Track Loader or equivalent		1100.00/Day
D6 Cat Dozer		1200.00/Day
325 Cat w/ Thumb or equivalent		1250.00/Day
325 Cat w/ 4500lb breaker or equivalent		1760.00/Day
330 Cat w/40R Shearer or equivalent		2200.00/Day
Misc. Equipment		
Drum Crusher (per Job Quote) or	+ Operator	72.00/hr
Diesel Power Pump	+ Operator	110.00/hr
Centrifugal Pump (Trailer Mounted)	+ Operator	22.00/hr
Pressure Washer	+ Operator	250.00/Day
Hydro Blaster (10,000 PSI)	+ Operator	360.00/Day
Emergency Light Plant/Generator		115.00/Day
Tanks and Bins		
Roll-Off Bins (5-40 Cubic Yards Max)		11.00/Day
Vacuum Bins		50.00/Day
Dewatering Bins		35.00/Day
Labor		
General Labor		42.00/hr
Equipment Operator		48.00/hr
Health & Safety Coordinator/Chemist		85.00/hr
Project Manager		85.00/hr

Protective Clothing

Tyvek	(or equivalent)	9.00/ea
Polyethylene	(or equivalent)	14.00/ea
Saranex	(or equivalent)	38.00/ea
Ty Chem (hooded)	(or equivalent)	75.00/ea
Ty Chem (Encapsulated-Level B)	(or equivalent)	190.00/ea
Responder Level A	(or equivalent)	800.00/ea
Acid Suit	(or equivalent)	25.00/ea
Boot Covers (Light Duty)		5.00/ea
Boot Covers (Heavy Duty)		15.00/ea
Nomex Suits		30.00/Day
Nomex Hoods		25.00/Day

Gloves

Surgical	1.50/pr
Chemical Resistant (Light Duty)	5.00/pr
Chemical Resistant (Medium Duty)	10.00/pr
Chemical Resistant (Heavy Duty)	Special Order

Respiratory Protection

Hoseline System Complete	360.00/Day
SCBA	45.00/Day
Respirator, Half or Full Face	N/C
Respirator Cartridges	12.00/Set

Monitoring/Sampling Equipment

Single Gas Detection Meter	35.00/Day
Multi Gas Detection Meter	70.00/Day
Radiation Detection Meter	70.00/Day
pH Meter	25.00/Day
Photoionization Meter	95.00/Day
Gas Detector w/o Tubes	50.00/Day
Gas Detector Tubes	10.00/ea
Soil Sampler	50.00/Day
Soil Sampler Brass N/Caps	15.00/ea
Bottle-Safety Coated N/Teflon Lid	12.00/ea
Petroflag Kit Meter	100.00/Day
Petroflag Reagents	57.50/per sample
Chlor-N-Oil 50	30.00/ea
Haz Cat Test Meter	150.00/Day
Haz Cat Test Reagents	20.00/per chart

Consumable Supplies

Roll-Off Bin Liners (20 yard tapers up sides)	40.00/ea
End Dump Liners (Tapers on floor & sides)	60.00/ea
End Dump Liners (Floor only)	25.00/ea
Visqueen 6 mil (20'x100')	105.00/ea
Visqueen 6 Mil (40'x100')	240.00/ea
Asbestos Bags	4.00/bag
Sure Pak Solidification (Sole)	10.00/bag
Clean-up 3/4 Solidification (Sole)	7.00/bag
Vermiculite (20lb)	15.00/bag
Absorbent (50lb)	10.00/bag
Soda Ash (50lb)	62.00/bag
Organic Acid - Dry Powder (50lb)	85.00/bag

Liquid Surfactant		17.00/gal
Dry Surfactant		8.50/lb
Hazardous Material Sample Shipping Container		45.00/ea
Chemical Light Stick		5.00/ea
Barricade Tape		22.00/roll
State of California NEZ Waste Manifests	(if applicable)	at cost

Disposal or other outside services and outside purchase of materials and supplies will be billed at cost plus 15%

Fuel surcharge applies to all rolling stock

All rates are charged portal to portal

MP Environmental Services, Inc.
3400 Manor Street
Bakersfield, CA 93308
(661) 393-1151 (800) 458-3036

Emergency Response Rate Schedule for: Plains Pipeline **Date: 10/21/2009**

Description		Rate
Trucks and Trailers		
50-65 BBL Vacuum Truck		95.00/hr
100-120 BBL Vacuum Truck		100.00/hr
120-140 BBL Vacuum Truck (Stainless)		125.00/hr
Super Sucker Vacuum (For Heavy Solids)		225.00/hr
Flatbed		100.00/hr
Van		100.00/hr
End Dump		100.00/hr
End Dump High Side		125.00/hr
Low Bed		125.00/hr + permits
Roll-Off Truck - Single or Double		100.00/hr
One Ton Flatbed		60.00/hr
Two Ton Flatbed		68.00/hr
Other Equipment (All rates based on 10 hour workday)		
Bobcat Loader		400.00/Day
Extend-A-Hoe (Backhoe)		105.00/hr or 750.00/Day
Front Loader		125.00/hr or 900.00/Day
Haul Truck Off Road		1150.00/Day
973 Cat Track Loader or equivalent		1100.00/Day
D6 Cat Dozer		1200.00/Day
325 Cat w/ Thumb or equivalent		1250.00/Day
325 Cat w/ 4500lb breaker or equivalent		1760.00/Day
330 Cat w/40R Shearer or equivalent		2200.00/Day
Misc. Equipment		
Drum Crusher (per Job Quote) or	+ Operator	72.00/hr
Diesel Power Pump	+ Operator	110.00/hr
Centrifugal Pump (Trailer Mounted)	+ Operator	22.00/hr
Pressure Washer	+ Operator	250.00/Day
Hydro Blaster (10,000 PSI)	+ Operator	360.00/Day
Emergency Light Plant/Generator		115.00/Day
Tanks and Bins		
Roll-Off Bins (5-40 Cubic Yards Max)		11.00/Day
Vacuum Bins		50.00/Day
Dewatering Bins		35.00/Day
Labor		
General Labor		42.00/hr
Equipment Operator		48.00/hr
Health & Safety Coordinator/Chemist		85.00/hr
Project Manager		85.00/hr

Protective Clothing

Tyvek	(or equivalent)	9.00/ea
Polyethylene	(or equivalent)	14.00/ea
Saranex	(or equivalent)	38.00/ea
Ty Chem (hooded)	(or equivalent)	75.00/ea
Ty Chem (Encapsulated-Level B)	(or equivalent)	190.00/ea
Responder Level A	(or equivalent)	800.00/ea
Acid Suit	(or equivalent)	25.00/ea
Boot Covers (Light Duty)		5.00/ea
Boot Covers (Heavy Duty)		15.00/ea
Nomex Suits		30.00/Day
Nomex Hoods		25.00/Day

Gloves

Surgical	1.50/pr
Chemical Resistant (Light Duty)	5.00/pr
Chemical Resistant (Medium Duty)	10.00/pr
Chemical Resistant (Heavy Duty)	Special Order

Respiratory Protection

Hoseline System Complete	360.00/Day
SCBA	45.00/Day
Respirator, Half or Full Face	N/C
Respirator Cartridges	12.00/Set

Monitoring/Sampling Equipment

Single Gas Detection Meter	35.00/Day
Multi Gas Detection Meter	70.00/Day
Radiation Detection Meter	70.00/Day
pH Meter	25.00/Day
Photoionization Meter	95.00/Day
Gas Detector w/o Tubes	50.00/Day
Gas Detector Tubes	10.00/ea
Soil Sampler	50.00/Day
Soil Sampler Brass N/Caps	15.00/ea
Bottle-Safety Coated N/Teflon Lid	12.00/ea
Petroflag Kit Meter	100.00/Day
Petroflag Reagents	57.50/per sample
Chlor-N-Oil 50	30.00/ea
Haz Cat Test Meter	150.00/Day
Haz Cat Test Reagents	20.00/per chart

Consumable Supplies

Roll-Off Bin Liners (20 yard tapers up sides)	40.00/ea
End Dump Liners (Tapers on floor & sides)	60.00/ea
End Dump Liners (Floor only)	25.00/ea
Visqueen 6 mil (20'x100')	105.00/ea
Visqueen 6 Mil (40'x100')	240.00/ea
Asbestos Bags	4.00/bag
Sure Pak Solidification (Sole)	10.00/bag
Clean-up 3/4 Solidification (Sole)	7.00/bag
Vermiculite (20lb)	15.00/bag
Absorbent (50lb)	10.00/bag
Soda Ash (50lb)	62.00/bag
Organic Acid - Dry Powder (50lb)	85.00/bag

Liquid Surfactant		17.00/gal
Dry Surfactant		8.50/lb
Hazardous Material Sample Shipping Container		45.00/ea
Chemical Light Stick		5.00/ea
Barricade Tape		22.00/roll
State of California NEZ Waste Manifests	(if applicable)	at cost

Disposal or other outside services and outside purchase of materials and supplies will be billed at cost plus 15%

Fuel surcharge applies to all rolling stock

All rates are charged portal to portal

MP Environmental Services, Inc.

Response Function: This response contractor is maintained under contract to only provide vacuum truck services and roll-off bins for solid waste storage. Although MP Environmental Services, Inc. has other equipment and response capability, the contractor would function only in a support role to recover released crude oil by vacuum truck and transport recovered oil to a designated location. A second support role by this contractor is to provide storage bins for solid waste storage associated with a response and to transport solid waste to appropriate disposal sites.

A list of the contractor's equipment inventory and maintenance procedures for this vacuum truck fleet follows.

Equipment List:

180	Tractor Units
55	Stainless Steel Semi Vacuum Tankers
40	Black Iron Semi Vacuum Tankers (Used for Crude Oil Service; De-rated capacity 105 bbls/each)
3	Kynar Lined Vacuum Tankers
4	Black Iron Bobtail Vacuum Trucks
1	Stainless Steel Bobtail Double Compartment Tank
3	Agitated Vacuum Tankers
20	Semi End Dumps
55	Roll-Off Trucks
1000	Roll-Off Bins (5 to 40 cubic yard capacity)
100	48' Dry Vans with secondary containment
5	Flat beds
3	Lowbeds or Drop Decks

Other Miscellaneous Equipment:

1	Truck Mounted Hydro Crane
1	Portable Drum Crusher
2	Super Sucker Vacuum Trucks
3	Cat 516 Backhoes
2	Cat 950 Loaders
3	Sets Portable Truck Scales
3	Portable Pressure Washers/Hydroblasters

VEHICLE MAINTENANCE PLAN

MP ENVIRONMENTAL SERVICES operates a large fleet of late model tractor units along with a variety of trailer types. MP is aware of the importance of maintaining this fleet and has established the following maintenance plan for all equipment.

Most routine maintenance and repair work, with the exception of internal engine machining, is performed at our in-house shop located in Bakersfield. Each terminal takes care of minor maintenance and emergency repairs utilizing local resources.

Phase One – Drive Inspections

Prior to using any equipment, each driver must complete a pre-trip inspection (see attached form). The drive must check all items indicated on this form and must note any problem areas. This form must also be completed at the end of the trip.

These forms are then submitted to the Shop Foremen. Equipment requiring repair or maintenance work is then scheduled in the shop based on the severity of the item.

Phase Two – Regularly Scheduled Service

In addition to daily inspections by the drivers, all equipment also undergoes a regular maintenance. Trailers are serviced every 60 days, while power units are serviced every 10,000 miles. This maintenance includes such items as brakes, air hoses, transmission, drive line, etc. A sample check list is attached.

MP Environmental Services tire replacement policy is as follows:

Steering axle – minimum tread groove 4/32
All other axles – minimum tread groove 2/23
No recaps permitted on steering axle

Phase Three – Safety Inspections

All equipment also undergoes a safety inspection every 90 days. This inspection includes such items as fire extinguishers, first aid kits and other safety related items.

As required by the Department of Transportation and California Highway Patrol, written documentation of all service and maintenance work in maintained for a period of 3 years.

VEHICLE MAINTENANCE PLAN

DRIVER'S VEHICLE INSPECTION REPORT

AS REQUIRED BY THE D.O.T. FEDERAL MOTOR CARRIER REGULATIONS

CARRIER: _____
ADDRESS: _____
DATE: _____TIME:_____AM _____PM
TRACTOR/
TRUCK NO. _____ODOMETER READING _____

- ☐ Air Compressor
- ☐ Air Lines
- ☐ Battery
- ☐ Body
- ☐ Brake Accessories
- ☐ Brakes, Parking
- ☐ Brakes, Service
- ☐ Clutch
- ☐ Coupling Devices
- ☐ Defroster/Heater
- ☐ Drive Line
- ☐ Engine
- ☐ Exhaust
- ☐ Fifth Wheel
- ☐ Frame and Assembly
- ☐ Front Axle
- ☐ Fuel Tanks
- ☐ Generator
- ☐ Horn
- ☐ Lights
  - Head – Stop
  - Tail – Dash
  - Turn Indicators
- ☐ Mirrors
- ☐ Muffler
- ☐ Oil Pressure
- ☐ Radiator
- ☐ Rear End
- ☐ Reflectors
- ☐ Safety Equipment
  - Fire Extinguisher
  - Reflective Triangles
  - Flags – Flares – Fuses
  - Spare Bulbs & Fuses
  - Spare Seal Beam
- ☐ Suspension System
- ☐ Starter
- ☐ Steering
- ☐ Tachograph
- ☐ Tires
- ☐ Tire Chains
- ☐ Transmission
- ☐ Wheels and Rims
- ☐ Windows
- ☐ Windshield Wipers
- ☐ Other

TRAILER(S) NO.(S) _____

- ☐ Brake Connections
- ☐ Brakes
- ☐ Coupling Devices
- ☐ Coupling (King) Pin
- ☐ Doors
- ☐ Hitch
- ☐ Landing Gear
- ☐ Lights – All
- ☐ Roof
- ☐ Suspension System
- ☐ Tarpaulin
- ☐ Tires
- ☐ Wheels and Rims
- ☐ Other

Remarks: _____

☐ CONDITION OF THE ABOVE VEHICLE IS SATISFACTORY
DRIVERS SIGNATURE: _____
☐ ABOVE DEFECTS CORRECTED
☐ ABOVE DEFECTS NEED NOT BE CORRECTED FOR SAFE OPERATION OF VEHICLE

MECHANIC'S SIGNATURE _____ DATE _____

DRIVER'S SIGNATURE _____ DATE _____
ORIGINAL

MP SERVICE, INC.

TRUCK # _____ DATE _____ ODOMETER _____

TRAILER _____ MECHANIC _____ TOTAL HRS _____

☐ OTHER MAINTENANCE

☐ CORRECT ANY DEFICIENCY NOTED ON DRIVERS VEHICLE INSPECTION REPORT

☐ PERIODIC SAFETY INSPECTION

INCLUDES, BUT IS NOT LIMITED TO ALL THE FOLLOWING

1. BRAKE ADJUSTMENT
2. BRAKE SYSTEM COMPONENTS & LEAKS
3. STEERING & SUSPENSION SYSTEMS
4. VEHICLES CONNECTING DEVICES
5. TIRES & WHEELS
6. LIGHTING SYSTEMS
7. CARGO TANK CONDITION
8. FIRE EXTINGUISHER _____

SCHEDULED PREVENTIVE MAINTENANCE

☐ LUBRICATION
☐ MOTOR OIL CHANGE
☐ OIL FILTER CHANGE
☐ FUEL FILTER CHANGE
☐ TRANS OIL CHANGE
☐ DIFF. OIL CHANGE
☐ AIR FILTER CHANGE
☐ UPDATE INSPECTION STICKER

INSPECTED BY _____
SIGNATURE

REPAIR RECORD

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

M.P. SERVICES
QUARTERLY TRUCK DRIVE SAFETY CHECK PROCEDURE – TRACTORS

TRUCK UNIT # _____ DATE: _____

		OK	UNSATISFACTORY
1.	When approaching vehicle, check on ground for oil, coolant or fuel leaks.		
2.	Check crankcase oil level BEFORE starting engine.		
3.	Check coolant level, belts, exhaust system, condition of hoses, etc.		
4.	Check all emergency equipment – fire extinguisher, fuses, reflectors, reflective triangles, first aid kit and safety equipment bag.		
5.	Enter cab or tractor and:		
	a. Make sure parking brake is set.		
	b. Depress clutch pedal and move shift level to neutral position.		
	c. Check clutch clearance/adjustment.		
	d. Start engine with clutch depressed.		
	e. As soon as engine starts observe oil pressure gauge for reading. CAUTION: IF YOU GET NO OIL PRESSURE, SHUT OFF ENGINE AT ONCE.		
	f. With engine running at a fast idle, release clutch pedal to allow transmission to warm up.		
	g. Check all instruments for proper operation and readings.		
	h. Check low air warning devices (cut out at 55-75 pel).		
	i. Listen to engine for unusual noises.		
	j. Check windshield wipers, heater, defroster, air conditioner and horn for proper operation.		
	k. Check the play of steering wheel.		
	l. Check brake and throttle pedals for looseness.		
	m. Adjust left and right mirrors.		
	n. Turn on all lights (head, clearance, etc.) and turn signals.		
	o. Is cab clean?		
	p. Any unsecured items in cab that could be a hazard?		
6.	Get our of cab and start outside check of vehicle		
	a. Check tractor headlights and start outside check of vehicle.		
	b. Check tractor turn signals and emergency flashers.		
	c. Check wheel lug nuts, wheels, tire condition, springs, shackles, u-bolts, tirod ends and kingpins for looseness.		
	d. Reach into cab and activate high beam headlight switch.		
	e. Check high beam operation of headlights.		

TRACTOR INSPECTION CHECK LIST

	OK	UNSATISFACTORY	
f. Check fuel tanks for leaks.			
g. Check frame for cracks.			
h. Drain any fluids from tractor air tanks.			
i. Check tractor drive axle lug nuts, wheels, tire condition, springs, u-bolts, and other suspension components for cracks, missing bolts, movement, etc.			
7. Return to the tractor cab, shut down engine.	AIR PRESSURE		
Note air pressure loss in one minute (2/3/5 psl).	Start	Stop	Difference
Depress brake pedal and note air pressure loss in one minute (3/4/6 psl).			
COMMENTS:			

_____ _____

SIGNED (INSPECTED BY) DATE

_____ _____

SIGNED (DRIVER) DATE

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

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.

****

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 (b) (7)(F), (b) (3) (b) (7)(F), (b) (3) 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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EXHIBIT D

RATE SHEET

PRICE LIST

Effective February 18, 2014

Price List Terms: Customer's request for NRC Environmental Services Inc. (NRC) to perform services constitutes an agreement to pay for those services under the Personnel, Equipment and Material Terms of this Price List, regardless of any estimates provided by NRC. Charges will be based on the most current published Price List. Surcharges to current published rates may apply in non-local areas. Surcharges may also apply to cover unanticipated cost increases for items, including but not limited to fuel and insurance, resulting from circumstances beyond the control of NRC. Rates are based upon net 10 payment terms unless otherwise agreed by prior written contract with NRC. Balances outstanding more than ten (10) days after the invoice date shall be deemed delinquent and shall earn interest at the rate of 1.5 % per month. Customers without a pre-existing NRC contract are subject to a minimum charge of $5,000.00 to be paid at time of call out for emergency response services and any charges for services estimated to exceed the minimum are also payable in advance. All rates are in U.S. dollars.

PERSONNEL

ITEM #	DESCRIPTION	HOURLY RATE
SP	Senior Project Manager	135
CH	Certified Industrial Hygienist / Training Manager (NRC only)	125
PM	Project Manager	110
SU	Superintendent	95
AM	Assistant Project Manager (Operations, Planning, Logistics, Finance)	92
HS	Health & Safety	100
SA	Senior Accountant	85
SM	Support Manager (Purchasing, Communications, Transportation, Decon)	80
PS	Project Scientist / Field Chemist	75
PR	Purchaser / Subcontracts Administrator	65
AS	Administrative Support / Accountant	50
FS	Field Supervisor	73
MC	Mechanic / Welder	70
EO	Equipment Operator	62
DR	Driver (Commercial)	58
SF	Site Foreman	60
RT	Confined Space / Rescue Technician	57
LO	Licensed Vessel Operator	85
VO	Vessel Operator	60
DH	Deckhand	50
TE	Technician – HAZWOPER	48
RC	Resource Coordinator (Dispatch, Warehouse, Logistics)	57
MT	Marine Technician	60
ST	Specialist Technician (Tanker Rollover/Tank Car/Compressed Gas)	69

Personnel Terms:

1. Minimum call out is 4 hours per person, except for projects over 50 miles from office location require 8-hour daily minimum.

2. Rates for SA, AS, FS, MC, EO, DR, SF, RT, LO, VO, DH, TE, RC, MT and ST are subject to the following: a) Weekdays: 0700 to 1500 hours charged at Straight Time (ST = Hourly Rate); 1500 to 1900 hours charged at Overtime (OT = 1½ times the Hourly Rate); 1900 to 0700 hours charged at Double Time (DT = 2 times the Hourly Rate). Changes to start times for Weekday ST, OT and DT may be requested by Client and may be approved by NRC on a case-by-case basis for longer projects. b) Saturday: First 8 hours charged at OT; hours over first 8 hours charged at DT. c) Sundays and Holidays: All time charged at DT. d) The following are included holidays: New Year's Day, Presidents Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, Day after Thanksgiving and Christmas Day. Other holidays may apply when employing certain union personnel, including but not limited to: Martin Luther King, Jr. Day, Cesar Chavez's Birthday, Veterans Day, day before Christmas and day after Christmas. e) The above Rates are applied regardless of the number of hours worked for any Client on any particular day. Rates for hours subsequent to a break of less than 8 hours are charged at the appropriate OT or PT rate continuous to hours prior to break.

3. All project specific personnel, including accounting, administrative, personnel support, logistics and management, whether on site, at NRC offices, or at support locations, are chargeable. All personnel are charged according to the above rates, regardless of full-time, part-time or third party labor source status, unless provided as part of a specified subcontracted service. Surcharges apply for remote sites and prevailing-wage projects. Personnel charged per their standard category rates for participation in any activity provided on behalf of the Customer including depositions, interviews, document preparation, etc.

4. Time charges begin with equipment and personnel mobilization activities and terminate at the conclusion of the services, including transportation of equipment and personnel back to operations centers and any necessary demobilization activities. Personnel time is charged in half-hour increments for all personnel. All hourly rates will be charged Portal-to-Portal from the location of personnel when dispatched, including but not limited to NRC office, personnel home, hotel or other jobsite as applicable. Personnel on standby for Customer will be charged at 8 hours per 24-hour period.

5. Transportation and any incidental costs for all emergency response personnel, both on site, at support locations and traveling to and from the site or support locations, are charged at cost plus 20%. Per Diem charges for food in metropolitan areas are $50.00 per person per day. Typical per diem rates for lodging, based on double occupancy, are $100.00 per person per day. Rates for premium areas and remote sites determined at time of service.

EQUIPMENT

CATEGORY	ITEM	DESCRIPTION	UNIT	RATE
BOOM	1001	Anchor Gear	Each/Day	30
	1002	Boom Mooring Light	Each/Day	13
	1003	Contractor Boom, up to 21”	Ft/Day	2
	1004	Petro Barrier, up to 24”	Ft/Day	3
	1005	Ocean Boom, up to 42”	Ft/Day	7
RECOVERY / SKIMMERS	2001	Air Conveyor, VS-50	Day	3,030
	2002	Belt Skimmer, Marco Class XI-C	Day	4,040
	2003	Belt Skimmer Vessel, JBF DIP 3001	Hour	354
	2004	Belt Skimmer Vessel, Marco I C	Hour	379
	2005	Brush Skimmer, Lamor	Day	3,636
	2006	Brush Skimmer, Aquaguard RBS-40	Day	2,525
	2007	Brush Skimmer, Aquaguard RBS-25 or 10 Twin	Day	2,020
	2008	Brush/Drum/Disc Skimmer, Aquaguard RBS-05	Day	859
	2009	Disc Skimmer, MI-30, Komara 12K	Day	1,818
	2010	Disc Skimmer, Vikoma Sea Skimmer	Day	2,020
	2124	Disc Skimmer, X-150, Elastec	Day	4,545
	2011	Drum Skimmer, Roto 70	Day	3,535
	2012	Drum Skimmer, Action Petroleum Model 60	Day	1,414
	2013	Drum Skimmer, Action Petroleum Model 36	Day	1,212
	2014	Drum Skimmer, Action Petroleum Model 24	Day	808
	2015	Rope Mop Skimmer, II-9	Day	808
	2016	Rope Mop Skimmer, I-4, II-4, ll-6	Day	606
	2017	Rope Mop Skimmer, extra rope, 100’	Day	111
	2018	Vacuum/Transfer Unit (VTU)	Day	1,818
	2019	Weir Skimmer, Desmi 250	Day	3,535
	2020	Weir Skimmer, Foilex, vacuum	Day	1,515
	2021	Weir Skimmer, Foilex, hydraulic	Day	2,525
	2022	Weir, Cascade LP 3000 or Vikoma Fastflowec	Day	1,616
	2023	Weir Skimmer, Skimpak or Oleo, 2” or 3”	Day	303
TEMPORARY STORAGE	3001	Bladder Tank, 24 barrel	Day	253
	3002	Bladder Tank, 25 - 100 barrel	Day	505
	3003	Bladder Tank, 101 - 240 barrel	Day	1,010
	3004	Container, Intermodal or Connex Storage, 20’	Day	22
	3005	Container, Intermodal or Connex Storage, 40’	Day	44
	3006	Roll-off Bins, up to 20 cu. yd.	Day	22
	3007	Roll-off Bins, over 20 to 40 cu. yd.	Day	44
	3008	Storage Tank, 500 to 2,499 gallon	Day	20
	3009	Storage Tank, 2,500 to 4,499 gallon	Day	25
	3010	Storage Tank, 4,500 to 6,000 gallon	Day	35
	3015	Storage Tank, 20,000 gal	Day	61
	3011	Tank Barge, up to 210 bbls (NRC only)	Day	1,515
	3014	Tank Barge, Pebble Beach	Day	9,848
	3012	Tote Tank, DOT approved, 275 to 300 gal	Day	81
	3013	Vacuum Box, up to 25 cu. yd.	Day	81
VESSELS / SUPPORT	4001	Deck Barge, up to 110’	Day	505
	4002	Response Vessel, 65’	Hour	379
	4003	Response Vessel, 35’ - 55’	Hour	227
	4004	Response Vessel, 30’ - 34’	Hour	162
	4005	Response Vessel, 25’ - 29’	Hour	126
	4006	Response Vessel, 16’- 24’	Hour	101
	4007	Skiffs w/outboard, 15’ or less	Hour	51
	4008	Skiffs w/o outboard	Hour	25
EXCAVATION	5001	Backhoe, 710 or equivalent	Day	379

CATEGORY	ITEM	DESCRIPTION	UNIT	RATE
	5002	Backhoe, 580 or equivalent	Day	328
	5003	Backhoe Attachment, Breaker	Day	222
	5004	Backhoe Attachment, Compactor	Day	126
	5022	Compaction, Sheepsfoot or Roller	Day	250
	5006	Dump Bed, Morooka 5-10 cu. yd.	Day	354
	5021	Dump Truck, 5 cu. yd., w/ Plow & Sander	Hour	177
	5007	Excavator, Mini	Day	328
	5008	Excavator, up to 37,000 lb	Day	859
	5009	Excavator, 38,000 to 53,000 lb	Day	1,061
	5010	Excavator, over 53,000 lb	Day	1,515
	5017	Excavator, over 100,000 lb	Hour	253
	5011	Excavator Attachment, Thumb or Wheel	Day	354
	5012	Excavator Attachment, Hammer	Day	556
	5013	Loader, Bobcat, Skidsteer or equivalent	Day	354
	5014	Loader Attachment, Breaker, Compactor or Grapple	Day	177
	5015	Loader, up to 4 yds.	Day	657
	5023	Snowcat	Day	950
TRAILERS	6001	Trailer, Confined Space Entry/Rescue	Day	2,020
	6002	Trailer, Decon, up to 24’	Day	354
	6003	Trailer, Dump, 7,000 – 12,000 lb	Day	253
	6004	Trailer, Dump, Side/End, 18 yd.	Hour	35
	6005	Trailer, Emergency Response, up to 24’	Day	354
	6006	Trailer, Emergency Response, 40’- 48’	Day	505
	6007	Trailer, Equipment, Utility, 1-2 ton	Day	101
	6008	Trailer, Equipment, Utility, 3-10 ton	Day	253
	6009	Trailer, Flatbed, up to 48’	Day	253
	6010	Trailer, Incident Command Center, 24’	Day	657
	6011	Trailer, Incident Command Center, 48’	Day	1,515
	6012	Trailer, Low Boy	Day	303
	6013	Trailer, MTR (boom, boat, skimmer add’l if deployed)	Day	354
	6014	Trailer, Office	Day	202
	6015	Trailer, Rocket (Roll Off Bin) Launcher	Hour	40
	6016	Trailer, Side Dump, 3 axle	Day	606
	6017	Trailer, Tilt Top, 26 ton	Day	253
	6018	Trailer, Van, up to 48’	Day	354
	6019	Trailer, Water Buffalo (up to 500 gallons, with pump)	Day	202
	6020	Trailer, Wildlife Response and Rehab (supplies add’l)	Day	2,525
	6021	Trailer, Wildlife Search & Collection	Day	1,010
	6022	Trailer, Wildlife Support	Day	354
TRUCKS	7001	Tractor, Diesel	Hour	45
	7002	Truck, Camera	Hour	126
	7003	Truck, Crane, 1 ton - 6 ton	Hour	66
	7004	Truck, Crane, 7 ton - 10 ton	Hour	76
	7005	Truck, Crane, 10 ton - 18 ton	Hour	96
	7006	Truck, Crane, 40 ton	Hour	141
	7007	Truck, Dump, up to 10 yard	Hour	61
	7008	Truck, Dump, over 10 yard	Hour	66
	7009	Truck, Dump, over 10 yard with pup	Hour	71
	7016	Truck, Flatbed or Van, 2-Axle, up to 24’	Hour	45
	7010	Truck, Gear, less than 1 ton	Day	126
	7012	Truck, Gear, 1 ton	Day	152
	7014	Truck, Gear, 2 ton - 5 ton	Day	227
	7017	Truck, Hazmat Response, up to 24’	Hour	76
	7018	Truck, Marine Response	Hour	51
	7019	Truck, Roll Off Bin, Bobtail	Hour	71
	7020	Truck, Roll Off Bin, Bobtail with trailer	Hour	81
	7021	Truck, Water, up to 3000 gallons	Hour	111

CATEGORY	ITEM	DESCRIPTION	UNIT	RATE
VACUUM TRUCKS / TRAILERS	8001	Guzzler/Air Mover (filters add'l)	Hour	152
	8002	Vactor/Jetter - Combo Unit (attachments add'l)	Hour	187
	8003	Vacuum Trailer, 120 -130 bbl, black iron	Hour	30
	8004	Vacuum Trailer, 120 -130 bbl, stainless	Hour	45
	8005	Vacuum Truck, less than 35 bbl	Hour	51
	8006	Vacuum Truck, 35 - 80 bbl	Hour	61
	8007	Vacuum Trailer, less than 50 bbl	Hour	25
VEHICLES	9001	All-Terrain Vehicle	Day	242
	9002	All-Terrain Vehicle, Cargo Carrying	Day	379
	9003	Auto, Personnel or Support	Day	101
	9004	Van, MTR (boom, boat, skimmer add'l if deployed)	Day	404
	9005	Van, Maintenance, Personnel or Support	Day	152
	9006	Wildlife Transport-Care Vehicle	Day	606
BLOWERS / COMPRESSORS	1101	Air Compressor, up to 100 CFM	Day	152
	1102	Air Compressor, 100 to 185 CFM	Day	227
	1103	Air Compressor, 210 to 375 CFM	Day	328
	1104	Blower, Coppus, Electric/Pneumatic	Day	101
	1105	Blower, Negative Air Exhaust, 6" (consumables add'l)	Day	76
	1106	Blower, Negative Air Exhaust, 12" (consumables add'l)	Day	111
	1107	Blower, Venturi, Horn	Day	30
	1109	Corken Compressor (291T / Corrosive Compatible)	Day	758
	1110	Corken Compressor (490T / Corrosive Compatible)	Day	1,010
	1108	Exhaust Duct, 25' x 6", 10" or 12"	Day	25
PRESSURE WASHERS	1202	Hydroblaster, 6,000 psi	Hour	51
	1203	Hydroblaster, 10,000 psi	Hour	71
	1204	Hydroblaster, 20,000 psi	Hour	182
	1209	Jetter Trailer	Hour	96
	1206	Flexible Lance, 50', nozzle, foot-pedal, up to 5k p si	Day	76
	1212	Flexible Lance, 50', nozzle, foot-pedal, 5k plus to 20k	Day	120
	1211	Flexible Lance, 150', nozzle, and foot-pedal, up to 5k	Day	126
	1214	Dump-Style Gun, Foot Operated, up to 20k psi	Day	85
	1215	Dump-Style Gun, Single, Safety Surround, up to 40k	Day	125
	1216	Dump-Style Gun, Dual, Safety Surround, up to 20k psi	Day	125
	1217	Dump-Style Gun, Multi Gun Valve Control System	Day	105
	1219	Flange Mount Anti-Withdrawl Device	Day	15
	1218	Pipe Centralizer, 8" – 36" Diameter	Day	30
	1207	Pressure Washer, up to 3,000 psi, single	Day	253
	1210	Pressure Washer, up to 3,000 psi, dual w/ tank	Day	606
	1208	Pressure Washer, 3,000 to 5,000 psi	Day	354
	1205	Remote Tank Cleaning (Gamajet) Head	Day	303
	1201	Specialty Nozzles up to 5k psi (Roto, fogging, etc.)	Day	45
	1213	Specialty Nozzles over 5k psi (Rotating multi-tip)	Day	80
PUMPS	1311	Drum Vacuum (consumables add'l)	Day	152
	1301	Pump, up to 1", Petroleum	Day	61
	1302	Pump, up to 1", Chemical	Day	96
	1313	Pump, 1" or 2", Jet (Gas Eductor)	Day	253
	1303	Pump, 2", Petroleum	Day	86
	1304	Pump, 2", Chemical	Day	197
	1305	Pump, 2", Chemical Peristaltic	Day	354
	1306	Pump, 3", Petroleum	Day	101
	1307	Pump, 3", Chemical	Day	298
	1312	Pump, 3", Hydraulic (Archimedes/MT30) w/power pack	Day	1,515
	1308	Pump, 4", Petroleum	Day	177
	1309	Pump, 4", Petro-Submersible	Day	328
	1310	Pump, 5"- 6", Petroleum	Day	404

CATEGORY	ITEM	DESCRIPTION	UNIT	RATE
	1314	Pump, Blackmer Stainless Steel Sliding Vane	Day	657
	1315	Pump, Corken, Coro Vane or Equivalent	Day	657
	1316	Pump, Double Diaphragm, Stainless Steel, 1”	Day	202
	1317	Pump, Double Diaphragm, Stainless Steel, 2”	Day	303
	1318	Pump, Fire/Dispersant	Day	253
HOSES / PIPES FITTINGS	1405	Guzzler/Air Mover Vacuum Breaker	Day	30
	1406	Guzzler/Air Mover/Jetter Fittings (elbows, tees, etc.)	Day/Each	8
	1423	Hose, Chlorine Transfer, certified	Ft/Day	45
	1415	Hose, Discharge (lay flat), 2”	50 Ft/Day	10
	1416	Hose, Discharge (lay flat), 3”	50 Ft/Day	12
	1417	Hose, Discharge (lay flat), 4”	50 Ft/Day	15
	1418	Hose, Discharge (lay flat), 6”	50 Ft/Day	25
	1401	Hose, Fire, 1.5”	50 Ft/Day	15
	1402	Hose, Fire, 2.5”	50 Ft/Day	18
	1403	Hose, Guzzler/Air Mover, Pipe, 4”	Ft/Day	4
	1404	Hose, Guzzler/Air Mover, Pipe, 6”	Ft/Day	5
	1420	Hose, Hydraulic	50 Ft/Day	25
	1428	Hose, Hydroblaster, up to 20,000 psi	50 Ft/Day	121
	1421	Hose, LPG/NH_3, 1” Vapor	Ft/Day	10
	1422	Hose, LPG/NH_3, 2” Liquid Transfer	Ft/Day	20
	1407	Hose, Pneumatic	50 Ft/Day	10
	1429	Hose, Pressure Washer, up to 6,000 psi	50 Ft/Day	20
	1425	Hose, Stainless Steel	Ft/Day	35
	1408	Hose, Suction & Discharge, 2”, Petro	25 Ft/Day	15
	1409	Hose, Suction & Discharge, 2”, Chemical	25 Ft/Day	30
	1410	Hose, Suction & Discharge, 3”, Petro	25 Ft/Day	25
	1411	Hose, Suction & Discharge, 3”, Chemical	25 Ft/Day	40
	1412	Hose, Suction & Discharge, 4”, Petro	25 Ft/Day	35
	1413	Hose, Suction & Discharge, 4”, Chemical	25 Ft/Day	61
	1414	Hose, Suction & Discharge, 6”, Petro	25 Ft/Day	45
	1424	Hose, Teflon, 1” Rubber Jacketed or 2” Stainless Braid	Ft/Day	35
	1419	Hose, Wash, up to 1”	50 Ft/Day	10
	1426	Stinger, 2”, CPVC/SS/Carbon	Day	101
	1427	Transfer Fittings (gauges, nipples, risers, etc.,)	Transfer	253
SUPPORT	1501	Air Knife	Day	152
	1554	Airless Sprayer	Day	86
	1555	Bag Filter System, Single (bag filters add’l)	Day	61
	1502	Bag Filter System, Dual Pod (bag filters add’l)	Day	76
	1567	Banding Equipment, 2-inch	Hour	30
	1568	Banding Equipment, 2-inch	Day	242
	1503	Carbon Filtration System, 55 gal drum	Each	354
	1504	Chipping Gun, Pneumatic	Day	40
	1505	Compactor, Hand Operated	Day	152
	1506	Decon Cleaning Pool, Portable 10’ x 15’	Day	126
	1507	Decon Cleaning Pool, Portable 10’ x 30’	Day	202
	1508	Decon Cleaning Pool, Portable 20’ x 100’	Day	556
	1509	Decon Cleaning Pool, Portable 25’ x 50’	Day	278
	1510	Decon Station, Personnel 2 Stage (supplies add’l)	Day	51
	1553	Decon Station, Personnel 3 Stage (supplies add’l)	Day	76
	1511	Electrical Accessories (cords, GFCI, adaptors)	Day	14
	1559	Flare, Ground Set, 2”	Day	202
	1560	Flare, Ground Set, 3”	Day	303
	1561	Flare, Stack, 2”	Day	101
	1573	Floor Buffer (pads add’l)	Day	75
	1562	Flow Meter, 2”, Stainless Steel	Day	152
	1512	Forklift, 5K to 10K lb	Day	278

CATEGORY	ITEM	DESCRIPTION	UNIT	RATE
	1513	Forklift, Attachment	Day	101
	1514	Generator, less than 4 kW	Day	51
	1515	Generator, 4 kW to less than 7.5 kW	Day	116
	1516	Generator, 7.5 kW to 12.5 kW	Day	167
	1574	Generator, 67 kW	Day	325
	1517	Handheld Pipeline Locator System	Day	152
	1569	Hydrogen Peroxide System (consumables add'l)	Day	242
	1518	Jackhammer	Day	152
	1519	Ladder, Extension, Folding or Jacobs	Day	40
	1557	Laser Level Kit, 1/16" x 100'	Day	56
	1558	Laser Level Kit, 1/4" x 100'	Day	15
	1520	Light Tower, Trailer Mounted	Day	177
	1521	Light, Explosion-Proof	Day	44
	1570	Light, Explosion-Proof, LED String (10 lights/each)	Day	444
	1522	Light, Stand, Regular, 500W	Day	16
	1523	Light, Stand, Regular, 1000W	Day	61
	1571	Manway Adapter, 14"-22", Stainless Steel	Day	303
	1524	Office Space (for command post at NRC as available)	Day	1,515
	1525	Pipe Plug 4" to 18" (includes 20' airline hose)	Day	96
	1526	Pipe Plug 18" to 24" (includes 20' airline hose)	Day	157
	1527	Pipe Plug 24" to 36" (includes 20' airline hose)	Day	177
	1528	Pipe Plug 36" to 48" (includes 20' airline hose)	Day	217
	1529	Pipe Plug 48" to 60" (includes 20' airline hose)	Day	354
	1572	Portable Toilet, (includes service, wash basin)	Day	101
	1563	Portable Breathing Air Compressor	Day	379
	1530	Power Pack, Hydraulic, 1 hp (<0.75 kW)	Day	51
	1531	Power Pack, Hydraulic, 16 hp (0.75 kW < 12 kW)	Day	139
	1532	Power Pack, Hydraulic, 40 hp (12 kW < 30 kW)	Day	278
	1533	Power Pack, Hydraulic, 60 hp (30 kW < 45 kW)	Day	505
	1564	Power Pack, Hydraulic, 75 hp (45 kW - 56 kW)	Day	758
	1534	Road Closure Signs, reflective	Day/Each	51
	1535	Road Closure, Barricades, Cones, Delineators	Day/Each	5
	1536	Sand & Floor Dry Spreader Attachment	Day	96
	1537	Saw, Chain	Day	61
	1538	Saw, Cutoff	Day	126
	1575	Scissor Lift, 24'	Day	120
	1539	Soil Sampler, Hollow Stem	Day	51
	1556	Surf Rake, Model 600 HD	Day	758
	1540	Tools, Hand (brooms, shovels, etc.)	Each/Day	5
	1541	Tools, Mechanical Set	Each/Day	51
	1542	Tools, Non-Sparking	Each/Day	15
	1543	Tools, Power, Small (drills, Sawzall, etc.)	Each/Day	35
	1565	Trident Magnetic Patch	Day	1,010
	1544	Truck Ramps	Day	152
	1545	Vacuum, HEPA (filters add'l)	Day	253
	1546	Vacuum, Shop (filters add'l)	Day	51
	1547	Vactor/Jetter Attachment (hydro-exca, Drum-It head, nozzles)	Day/Each	96
	1566	Vapor Extraction System, Portable	Day	354
	1548	Welding Unit / Torch Set, Portable	Day	86
	1549	Wildlife Rehabilitation Pool	Day	202
	1550	Wildlife Shelter, 19' x 35'	Day	2,020
	1551	Wildlife Shelter, 20' x 20'	Day	758
	1552	Yokohama Fenders, 8' diameter	Day	177
COMMUNICATIONS	1601	Base Station	Day	76
	1602	Cellular Phone (airtime over $10 per day add'l)	Day	35
	1603	Computer and/or Printer	Day	96

CATEGORY	ITEM	DESCRIPTION	UNIT	RATE
	1604	GPS Unit	Day	51
	1605	High Power Repeater System w/Generator	Day	303
	1606	Radio, UHF or VHF, Portable	Day	25
	1607	Satellite Phone (includes 20 minutes airtime per day)	Day	76
	1608	Satellite Dish for HS Internet	Day	126
SAFETY	1701	Air Sampling Kit (tubes add'l)	Day	40
	1702	Chest or Hip Waders, Insulated Cooling Vests	Day	25
	1703	Chlorine A/B/C Response Kits (gaskets add'l)	Day	505
	1726	Cylinder Containment Device	Day	2,020
	1727	Complete Turnout/Bunker Gear	Day	278
	1704	Eyewash Station	Day	35
	1705	Drager CMS Meter	Day	202
	1706	Floatation Work Suit	Day	51
	1707	Floatation Work Vest, PFD	Day	10
	1710	Harness (including Lanyard or SRL)	Day	25
	1730	Hazcat Kit	Day	152
	1733	Manometer	Day	75
	1711	Meter, 4EC Radiation	Day	354
	1712	Meter, LEL/O2/H2S/CO	Day	152
	1725	Meter, LEL/O2/H2S/CO/PID	Day	253
	1713	Meter, Jerome Mercury	Day	606
	1723	Meter, Lumex Mercury	Day	859
	1714	Meter, Personal / Gillian, Single/4-gas	Each/Day	40
	1715	Meter, Personal / Particulate Monitoring	Day	152
	1716	Meter, PID	Day	202
	1717	Mercury Vacuum (consumables add'l)	Day	758
	1728	Midland Capping Kit	Day	1,010
	1724	Remote Drum Drilling Unit	Day	606
	1708	Respirator, Full Face (cartridges add'l)	Day	25
	1709	Respirator, Half Face (cartridges add'l)	Day	20
	1718	Salvage Cylinder/Coffin	Day	1,515
	1719	SCBA or Egress Bottles w/ lines	Day/Each	126
	1729	SCBA or Egress Bottles w/ lines, Refill	Day/Each	25
	1731	Shin and Metatarsal Guards, Aluminum	Day	25
	1720	Six Pack / Regulated Air Supply (includes up to 300' airline)	Day	303
	1721	Tripod and Winch	Day	253
	1722	Truck Rollover/Cylinder Drill Kit/Betts Valve	Day	404
	1732	Turtle Armor Suit (Torso, Chaps, Gaiters, Gauntlets)	Day	85

Equipment Terms:

1. NRC does not rent equipment in a bare condition. All equipment shall be operated and controlled by NRC Personnel only. All equipment sent to site by NRC shall be in a basic operating condition. Additional components charged to Customer include, but are not limited to, multiple hose lengths, blast shields, specialty tips or fittings, specialty connections, noise abatement, catalytic converters, etc. Equipment prices do not include fuel, operator or mobilization unless otherwise stated. Fuel consumed in non-mileage related operation of equipment, including vehicle and non-vehicle equipment and vessels, will be charged at cost plus 20%. Vacuum truck washouts will be charged at cost plus 20%. Regulatory permits and environmental fees (HP Fees, BTU Fees, etc.) shall be assessed at cost plus 20% based upon the equipment and duration of such unit.
2. Time charges are calculated portal to portal, including any demurrage beginning with equipment mobilization activities from the NRC office or operations center unless otherwise specified, including all time at the site. Time charges terminate at the conclusion of the operation, which includes transportation of equipment back to NRC office or operations center and completion of any necessary demobilization activities, including disposal, cleaning, repair, replacement and/or delivery to NRC of restored equipment.
3. Day rates are based on 8 hours of operation. Equipment will be charged in half-day increments for additional hours over 8, up to a total of 3 days charge during a 24-hour period. Minimum charge for daily rate equipment is daily charge per day. Minimum call out for hourly equipment is four hours per day for local projects and eight hours per day for projects over 50 miles from mobilization site. Customers will be charged for unused requested equipment until released and returned to service per Note 2.
4. Equipment not specified on the Price List will be charged at cost (including rental, insurance, freight, fuel, etc.) plus 20%.
5. In addition to payment of rental charges, Customer agrees to pay NRC, in accordance with rates contained in this Price List, for any cleaning or repairs necessary to return all equipment to the same condition as at the commencement of services (with the exception of normal wear and tear). Customer is also responsible for the payment of all transportation and disposal charges for any waste generated during cleaning. Only NRC or its subcontractors shall perform any cleaning and decontamination operations on all equipment owned, rented or subcontracted by NRC. If NRC determines that equipment cannot be returned to the condition it was in at the commencement of the services, Customer shall pay for all costs at cost plus 20%, including freight and other expenses incurred by NRC to replace this equipment. All boom, whether new or used, that is damaged beyond repair shall be replaced by NRC with new boom at Customer's expense at cost plus 20%, including freight and other expenses. Customer shall pay for all costs of verification sampling, including wipe testing, fluid analysis, filter change outs, etc., per regulations of any equipment that requires such prior to returning to unlimited operations, whether at NRC facilities or rental yards.

MATERIALS AND SUPPLIES

CATEGORY	ITEM #	DESCRIPTION	UNIT	RATE
BAGS/SHEETING	M100	Bulk Bag, 1 yard	Each	31
	M101	Plastic Bag, 36” x 60”, 6 mil, 50/roll or box	Roll/Box	101
	M102	Plastic Bag, 36” x 60” (drum liner)	Each	3
	M103	Roll Off Bin Liner	Each	35
	M104	Sheeting, 20’ to 32’ x 100’, 10 mil	Roll	157
	M105	Sheeting, 20’ to 32’ x 100’, 6 mil	Roll	116
	M110	Sheeting, 8”-12” x 100’, 4 mil	Roll	122
	M111	Sheeting, 20’ x 100’, Flame Retardant, 6 mil	Roll	79
	M112	Sheeting, 12’ x 100’, Flame Retardant, 6 mil	Roll	51
CLEANERS	M205	Cleaner, Hand, 14 oz. tub n	Each	5
	M200	Cleaner, Hand, 1 gallon	Each	30
	M201	Cleaner, Marine/Industrial (Simple Green or equivalent)	Gallon	25
	M202	Disinfectant (bleach, A-33, or equivalent)	Gallon	5
	M204	Decon Solvent (HD Citrus Degreaser, BioSolve, PES-51)	Gallon	81
	M209	Encapsulant Solution	Gallon	45
	M208	Hydrogen Peroxide System Chemical	Gallon	61
	M210	Mastic Remover	Gallon	14
	M207	Mercury Cleaning Solution	Gallon	66
	M206	Mercury Vapor Suppressant	Pound	35
CONTAINERS	M318	1 Gallon, Poly Pail	Each	10
	M301	5 Gallon, Bucket w/ Lid	Each	18
	M313	5 Gallon, Plastic Carboy	Each	20
	M302	10 Gallon, Open Top, Steel	Each	96
	M319	15 Gallon, Open Top, Poly	Each	80
	M303	20 Gallon, Open Top, Steel	Each	67
	M304	30 Gallon, Open or Close Top, Refurbished	Each	81
	M320	30 Gallon, Open or Close Top, Steel, New	Each	91
	M305	55 Gallon, Close Top, Steel, Refurbished	Each	61
	M314	55 Gallon, Close Top, Steel, New	Each	91
	M306	55 Gallon, Open Top, Steel, Refurbished	Each	65
	M315	55 Gallon, Open Top, Steel, New	Each	91
	M316	55 Gallon, Open or Close Top, Poly, Refurbished	Each	72
	M307	55 Gallon, Open or Close Top, Poly, New	Each	91
	M308	85 Gallon, Overpack, Unlined, Black	Each	227
	M309	85 Gallon, Overpack, Lined, Yellow	Each	258
	M310	95 Gallon, Overpack, Poly	Each	268
	M317	275-300 Gallon, Liquid Tote, DOT, Recon	Each	232
	M311	275-300 Gallon, Liquid Tote, DOT, New	Each	455
	M321	Fluorescent Tube Disposal Container, 4’	Each	38
	M322	Fluorescent Tube Disposal Container, 8’	Each	69
	M312	Triwall Box, Cubic Yard, DOT Approved	Each	126
SAFETY	M400	Acid Suit, 1 Piece	Each	91
	M401	Boot, Steel Toed, PVC/Nitrile	Pair	28
	M442	Face Shield	Each	10
	M402	Glove, Work Glove	Pair	3
	M403	Glove, Inner, Cotton, Latex or Nitrile	Pair	1
	M404	Glove, Inner, Cotton, Latex or Nitrile	50/Box	30
	M405	Glove, Silver Shield	Pair	5
	M406	Glove, Medium Duty, PVC	Pair	4
	M407	Glove, Heavy Duty, PVC	Pair	8
	M408	Glove, Heavy Duty, Butyl Rubber	Pair	30
	M409	Hard Hat	Each	28
	M410	Overboot, Disposable	Pair	7

CATEGORY	ITEM #	DESCRIPTION	UNIT	RATE
	M425	Protective Gear Level A	Each	1,414
	M426	Protective Gear Level B	Each	455
	M427	Protective Gear Level B, Change	Each	303
	M428	Protective Gear Level C	Each	86
	M429	Protective Gear Level C, Change	Each	56
	M430	Protective Gear Level D	Each	35
	M431	Protective Gear Level D, Change	Each	20
	M432	Rain Gear, 2 Piece	Set	20
	M445	Rescue Rope, Lifeline or Tagline	10 Ft	12
	M433	Respirator Cartridge, Single, OV, Acid Gas, P100	Pair	28
	M443	Respirator Cartridge, Combo	Pair	39
	M434	Respirator Cartridge, Mercury/Chlorine	Pair	54
	M436	Safety Eyewear	Each	7
	M438	Safety Vest	Each	32
	M444	Thermo Pro	Each	455
	M439	Tyvek Suit, Saran-Coated, Disposable	Each	30
	M440	Tyvek Suit, Uncoated, Disposable	Each	12
	M441	Tyvek Suit, Poly-Coated, Disposable	Each	14
SORBENTS	M500	Absorbent, Chemical Stabilizer, 35 lb	Bag	131
	M501	Absorbent, Absorb X	Bag	18
	M512	Chemical Pads, 15” x 9”, 100/Bale	Bale	91
	M502	Floor Dry 25 lb	Bag	11
	M503	Neutralizer (citric acid, soda ash or bicarbonate)	Bag	162
	M519	Neutralizer, Liquid	Gallon	40
	M504	Oil Snare on Rope, 50 ft/Bag	Bag	136
	M505	Oil Snare, 30/Carton	Carton	111
	M513	Orange Construction Fence, 4’x100’	Roll	65
	M506	Sorbent Boom 5” x 10’, 4/Bale	Bale	101
	M507	Sorbent Boom 8” x 10’, 4/Bale	Bale	187
	M508	Sorbent Roll, SXT 638, 38” x 144’ x 3/8”	Roll	187
	M509	Sorbent Sheet 17” x 19” x 3/8”, 100/Bale	Bale	76
	M510	Sorbent Sweep 17” x 100’ x 3/8”	Each	131
	M514	Straw Waddles, 25 ft/Roll	Roll	51
	M511	Vermiculite, 4 cu.ft. /Bag	Bag	30
MISCELLANEOUS	M627	Abatement Supplies (scrapers, mop-heads, etc.)	Each	10
	M621	Air Mover Dry Filter Sock	Each	18
	M600	Banner Tape, 3”	Roll	20
	M619	Catch Basin Filter	Each	54
	M626	Chemtape	Roll	40
	M601	Cotton Rags, 25 lb Box/Bale	Each	51
	M602	Decon Pool, Small Personnel	Each	30
	M617	Flex Hose, Consumable, 4”	Foot	2
	M618	Flex Hose, Consumable, 6”	Foot	3
	M628	Floor Buffer Pads	Each	50
	M604	Duct Tape, 2”	Roll	8
	M622	HEPA Vacuum Consumables, Standard	Each	51
	M625	HEPA vacuum Consumables, Tornado Filter	Each	253
	M623	HEPA Vacuum Consumables, Complete	Each	455
	M629	Masking Tape, 3”	Roll	9
	M606	Mercury Vacuum Consumables Change Out	Each	76
	M620	Negative Air Exhaust Consumables Change Out	Each	172
	M607	Petro Flag Test Kit	Per Test	35
	M612	Photo Documentation, Disposable or Digital	Each	35
	M613	Poly Rope, 600’, up to 1/2”	Roll	91
	M630	Scrubbing Pads	Each	3

CATEGORY	ITEM #	DESCRIPTION	UNIT	RATE
	M624	Sample Pump	Each	25
	M603	Sampling Tubes and Supplies	Each	7
	M614	Sand Bags, Filled	Each	9
	M616	Sprayer, Hand Held (Hudson), 3 gallon	Each	56
	M801	Water, Drinking, 24/case	Case	14
	M850	Mileage for Car (M850 + Eq Item#)[Note 7]	Mile	0.65
	M851	Mileage for Trucks/Vans (M851+ Eq Item#)[Note 7]	Mile	0.75
	M852	Mileage for Commercial Trucks (M852+Eq Item#)[Note 7]	Mile	0.95
	M860	Equipment Fuel (Gasoline) (M860 + Eq Item#)[Notes 7, 8]	Gallon	4.50
	M870	Equipment Fuel (Diesel) (M870+ Eq Item#)[Notes 7, 8]	Gallon	5.00
	M880	Bridge Toll, Vehicle	Each	8
	M881	Bridge Toll, Vehicle w/ Trailer	Each	28
	M882	Bridge Toll, Semi w/ Trailer	Each	30
	M901	Transportation to TSDF, Triwalls	Each	162
	M902	Transportation to TSDF, Drums	Each	45
	D903	Disposal of Non-Haz Liquid Waste at NRC	Gallon	0.35

Materials and Supplies Terms:

1. All materials and supplies utilized, whether listed in daily reports or not, are chargeable. Any materials or supplies not listed on Price List, including Wildlife Trailer supplies and expendables and third-party invoices for services, charged at cost plus 20%.

2. Quotes for waste disposal are based on meeting approved profiles. NRC will assist Customer in identifying disposal facility options and provide price quotes. However, this does not constitute a referral and it is the sole responsibility of the Customer to designate the disposal facility. NRC will not take title to any wastes: dangerous, hazardous or non-hazardous.

3. The number of change-outs of Personal Protective Equipment (PPE) are based on conditions occurring in the work area. PPE shall be changed at a frequency that conforms to safety practices to prevent exposure to employees during the work activity. PPE categories:
   Level D: Coveralls/Uniform, Steel Toe Boots, Safety Glasses, Work Gloves, Hard Hat and Safety Vest as applicable;
   Level C: Level D plus, Disposable Tyvek, Full Face or Half Face Respirator (excluding cartridges);
   Level B: Level C plus SBCA or supplied air (includes mask, 100' air supply hose, supplied air, bottle manifold and egress bottle);
   Level A: Quoted per Price List for specific project requests and requirements

4. Petroleum based products prices subject to change at any time based on increased manufacturing costs.

5. NRC reserves the right to substitute products of equal quality and construction without affecting the performance. NRC applies the Brand Name of a product as a reference only, and reserves the right to substitute the product for similar and or equivalent products as it deems necessary.

6. NRC use of facility-directed or Customer-directed decontamination products, including but not limited to degreasing agents, cleaners, strippers, conditioners, cutter stock, etc., shall be done at the facility's or Customer's risk.

7. Fuel increase surcharges will be applied as follows to Mileage and Equipment Fuel rates: $0.01 per mile added to Car rate (M850) for every $0.05 over $3.50 per gallon for gas; $0.02 added to Truck rate (M851) for every $0.05 and $0.03 added to Commercial rate (M852) for every $0.05 over $4.00 per gallon for diesel; Equipment Fuel rate increased $0.0125 per gallon for every $0.01 per gallon increase over $3.50 per gallon for gas (M860) and $4.00 per gallon for diesel (M870). Surcharges calculated using gas and diesel prices at time of service for the applicable city or region of service per U.S. Energy Information Administration statistics available at **www.eia.gov**.

8. Vehicle and Equipment fuel usage (non-driving) charges are applied at the following burn rates: Extra Heavy Equipment (Guzzler, Jetter, etc.) = 6 gals/hr operated; Heavy Equipment (Tractors, Vac Trucks, >50 HP Compressors, Water Blasters, Large Generators, etc.) = 3 gals/hr operated; Light Equipment (Pressure Washers, Compressors <50 HP, Light Towers, Small Generators) = 1 gal/hr operated.

NRC WEST OFFICE LOCATIONS

PACIFIC NORTHWEST

SEATTLE
9520 10th Ave. S., Ste 150
Seattle, WA 98108
206-607-3000
Fax: 206-607-3001

SPOKANE
21 N. Julia Street
Spokane, WA 99202
509-536-5960
Fax: 509-536-5961

PASCO
1810 E James Street
Pasco, WA 99301
509-545-6110
Fax: 509-342-7453

PORTLAND
6211 North Ensign
Portland, OR 97217
503-283-1150
Fax: 503-289-6568

NORTHERN CALIFORNIA / NEVADA

ALAMEDA
1605 Ferry Point
Alameda, CA 94501
510-749-1390
Fax: 510-749-4150

CHICO
1111 Marauder Street
Chico, CA 95973
530-343-5488
Fax: 530-343-4356

EUREKA
11 'T' Street
Eureka, CA 95501
707-441-0723
Fax: 707-441-0743

SACRAMENTO
6701 32nd Street, Units K & L
North Highlands, CA 95660
916-371-7202
Fax: 916-344-2974

RENO
800 Bennie Lane #2
Reno, NV 89512
775-473-3183
Fax: 775-473-3168

SOUTHERN CALIFORNIA

LONG BEACH
3777 Long Beach Blvd.
Long Beach, CA 90807
562-432-1304
Fax: 562-432-1826

BLOOMINGTON
9950 Alder Avenue
Bloomington, CA 92316
909-543-1203
Fax: 909-543-1017

VENTURA
3284 Ventura Avenue
Ventura, CA 93001
805 667-8424
Fax: 805 667-8571

PORT HUENEME
Port Hueneme Harbor, Bldg. #432
Port Hueneme, CA 93041
805-488-3999
Fax: 805-488-0022

SAN DIEGO
2950 Kurtz Street
San Diego, CA 92110
619-235-3320
Fax: 619-232-4093

EL CENTRO
118 E. Ross Road, Ste A
El Centro, CA 92243
800-337-7455
Fax: 631-615-7084

www.nrcc.com

EXCELLENCE IN ENVIRONMENTAL & EMERGENCY SOLUTIONS

PLAINS MARKETING, L.P.

Contract No. 026450-03042-PPS.2.17

MAJOR SERVICE CONTRACT
PLAINS MARKETING, L. P.

333 Clay, Suite 1600
Houston, Texas 77002

THIS CONTRACT is entered into as of the 18th day of April, 2007, 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 **The O'Brien's Group,** with a mailing address of 2929 E. Imperial Hwy, Suite 290, Brea, California 92821 (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 Marketing Canada, L.P., Plains LPG Services, L.P., Basin Pipeline Holdings, L.P., Pacific Pipeline System LLC, Pacific Marketing and Transportation LLC, Rocky Mountain Pipeline System LLC, Ranch Pipeline LLC, Pacific Terminals LLC, Pacific Atlantic Terminals LLC, 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 Primary Term effective April 18, 2007 to May 18, 2007 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.

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, 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,

MR KTP 5/17/07 JB

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

(V) 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

(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 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.

MKS KTP 5/17/07

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 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.

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.

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, 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.

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 also acknowledges receipt of, and shall abide by COMPANY's Contractor Safety Rules and Procedures Manual, if applicable, while performing any Work hereunder.

19.5 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.

19.6 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.

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.

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: Carolyn S. Calhoun, Land & Contracts
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 Associate 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.

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.

ARTICLE 29 - HEADINGS

29.1 The subject headings in this Contract are for convenience only and are not determinative of the substance of the subject clause.

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.

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

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	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 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.

12. OPERATOR QUALIFICATION PROGRAM

Contractor acknowledges and agrees to comply with Company's OQ Program described in Exhibit D attached to this agreement and entitled "Operator Qualification Program" and "Covered Tasks". This would apply to all individuals performing covered tasks as described in Exhibit D whether or not they were employed by Company. Contractor, subcontractor, or any other entity performing covered tasks on behalf of the Company.

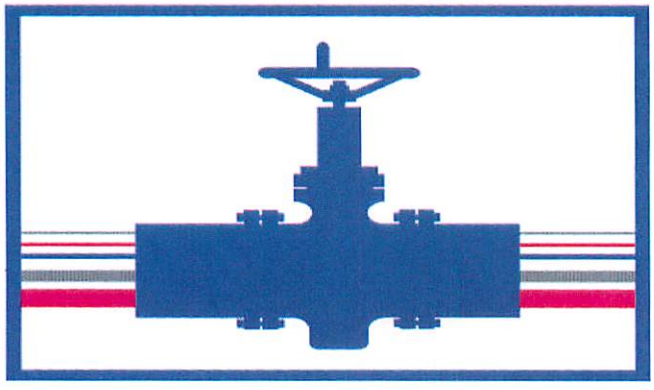
EXHIBIT D

PLAINS ALL AMERICAN PIPELINE, L.P.

Operator Qualification Plan

for

DOT Regulated Pipelines



PLAINS ALL AMERICAN PIPELINE, L.P.

TABLE OF CONTENTS

Operator Qualification Program

Section **Page**

PLAINS ALL AMERICAN PIPELINE, L.P.

OPERATOR QUALIFICATION PROGRAM

INTRODUCTION

The Accountable Pipeline Safety and Partnership Act of 1996 (the Act) requires the Research and Special Programs Administration (RSPA) of the U.S. Department of Transportation (DOT) to adopt regulations requiring that "all individuals who operate and maintain pipeline facilities be qualified to operate and maintain the pipeline facilities." The Act also requires that the "qualifications applicable to an individual who operates and maintains a pipeline facility address the ability to recognize and react appropriately to abnormal operating conditions that may indicate a dangerous situation or a condition exceeding design limits."

Plains All American Pipeline, L.P. (PAA) are committed to ensuring that their associates and contractor personnel are qualified to operate and maintain their pipeline systems in compliance with the Federal pipeline safety regulations. PAA includes the pipeline systems and terminals owned and operated by All American Pipeline, L. P. and the pipeline and terminal systems operated by Plains Marketing, L. P. Plains All American Pipeline, L.P. (hereinafter referred to collectively as **The Partnership**) have operations in California, Texas, Oklahoma, Louisiana, Mississippi, Illinois and Indiana.

SCOPE AND PURPOSE

The purpose of this document is to establish an Operator Qualification Program (OQP) that outlines specific policies and procedures that the Partnership will utilize in achieving compliance with the regulatory requirements contained in 49 CFR Part 195, Subpart G. This OQP incorporates all of the regulatory requirements promulgated by the RSPA.

This OQP applies to **all individuals** who perform covered tasks on all federally regulated pipelines within the PAA systems. Individuals performing covered tasks includes those employed by:

- The Partnership
- A Contractor
- A Sub-contractor
- Any other individual(s) performing covered tasks on behalf of the Partnership.

Based on its safe operational record, procedures, and training program, the Partnership is confident that its associates and contractor personnel are technically qualified to perform work on its pipeline facilities. The purpose of the Partnership's OQP is to ensure that:

- All individuals performing specific covered tasks on the Partnership's DOT regulated pipeline facilities are qualified in accordance with the requirements of Subpart G of DOT regulation 49 CFR 195;
- A process is available to verify the qualification of individuals; and,
- The qualification of individuals is properly documented.

RESPONSIBILITY

The Manager of Operations and the OQ Administrator will be responsible for ensuring that this OQ Program is implemented and followed. The District Managers have primary responsibilities: to be knowledgeable of the requirements of the rule (Subpart G) and this OQ Program; to ensure that all Partnership and contractor personnel who perform covered tasks are qualified in accordance with requirements in this program; and, to ensure that adequate and proper documentation supports each qualification for a covered task.

DEFINITIONS

The following definitions are derived from the U. S. DOT's Regulations in 49 CFR Part 195. The Partnership's interpretation of a definition is noted in italics.

Abnormal Operating Condition means a condition identified by The Partnership that may indicate a malfunction of a component or a deviation from normal operations that may indicate an operating condition that could exceed design limits or result in hazard(s) to persons, property, or the environment.

Note: *A deviation from normal operation does not necessarily mean an abnormal operating condition exists as long as conditions are within the parameters identified by The Partnership.*

Accident means a failure in a pipeline system in which there is a release of the hazardous liquid or carbon dioxide transported resulting in any of the following:

- Explosion or fire not intentionally set by the operator.
- Loss of 50 or more barrels of hazardous liquid or carbon dioxide.
- Escape to the atmosphere of more than five barrels a day of highly volatile liquids.
- Death of any person.
- Bodily harm to any person resulting in one or more of the following:
  - Loss of consciousness.
  - Necessity to carry the person from the scene
  - Necessity for medical treatment.
  - Disability which prevents the discharge of normal duties or the pursuit of normal activities beyond the day of the accident

- Estimated property damage, including cost of clean-up and recovery, value of lost product, and damage to the property of the operator or others, or both, exceeding $50,000. (See 49 CFR Part 195.50)

Covered Task means an activity, identified by The Partnership, that:

- is performed on a pipeline facility, **and**
- is an operations or maintenance task, **and**
- is performed as a requirement of 49 CFR Part 195 for liquid pipelines or 49 CFR Part 192 for gas pipelines, **and**
- affects the operation or integrity of the pipeline.

Gathering Line means a pipeline 219.1 mm (8 5/8 in.) or less nominal outside diameter that transports petroleum from a production facility. (See 49 CFR 195.2).

Individual means a person, who on behalf of The Partnership, performs one or more Covered Tasks on a pipeline facility operated by The Partnership.

Operator means a person who owns or operates pipeline facilities.

OQ Administrator is a person assigned by the Partnership to oversee the implementation and functioning of the OQ Program to ensure its effectiveness and compliance with 49 CFR 195 Subpart G, and to make and communicate changes to the qualification process or OQ Program Plan as a result of rule changes, changes in Partnership operations, observation and feedback on the program's effectiveness, and any other changes with a significant impact on the OQ Program.

Pipeline Facility means pipelines, rights-of-way, and any equipment, facility, or building owned and operated by the Partnership and used in the transportation of hazardous liquids or carbon dioxide. (See 49 CFR Part 195.2)

Pipeline or Pipeline System, as defined in 195.2, means all parts of a pipeline facility through which a hazardous liquid or carbon dioxide moves (comes in contact with; touches) in transportation, including, but not limited to, line pipe, valves, and other appurtenances connected to the line pipe, pumping units, fabricated assemblies associated with pumping units, metering and delivery stations and fabricated assemblies therein, and breakout tanks. (See 49 CFR Part 195.2)

Qualified Individual means an individual who has been through the qualification process and can (a) perform assigned Covered Tasks and (b) recognize and react to Abnormal Operating Conditions.

Qualification means a documented process, established by The Partnership, to determine an individual's ability to perform a covered task by any of the following: written examination; oral examination; work performance history review; observation during performance on the job, on the job training, simulations; or other forms of assessment.

> **'Transitional' qualification** means qualification completed during the period between the effective date of the rule (August 27, 1999) and the three-year compliance date (October 28, 2002), of individuals who have been performing a covered task on a regular basis prior to the effective date of the rule.
>
> **'Initial' qualification** means qualification, at any time, of individuals who were not performing a covered task on a regular basis prior to the effective date of the rule.
>
> **'Subsequent' qualification** means evaluation of an individual's qualification, after 'transitional' or 'initial' qualification, at the interval established by the operator.

COVERED TASKS

Determination of Covered Tasks

Only certain activities or tasks performed by individuals are subject to the DOT rule on operator qualification. The Office of Pipeline Safety developed the following four-part test to determine if an activity or task should be identified as a Covered Task. A task or activity must meet **all four parts** of the test in order for the activity or task to be identified as a Covered Task.

Part 1 - Is the task performed on a pipeline facility?
Components, piping, or equipment that are physically connected to the pipeline or pipeline system (i.e. by wires, tubing, pipe, signals through the air, or ground surface above the pipeline right-of-way are considered to be part of the pipeline facility). Components, piping, or equipment physically disconnected and removed from the pipeline or pipeline system are not considered to be part of the pipeline facility.

and

Part 2--Is the task an operations or maintenance task?
Tasks physically performed on pipeline facilities are considered maintenance and operations tasks. Tie-ins to existing pipelines or pipeline systems are considered operations or maintenance tasks. Design and new construction are not considered operations and maintenance tasks and therefore are not a part of the OQP.

and

Part 3--Is the task performed as a requirement of 49 CFR Part 195 for liquid pipelines or 49 CFR Part 192 for gas pipelines?

If a task is not required in the above regulations it is not a covered task.

and

Part 4--Does the task affect the operation or integrity of the pipeline?
The term "operation" is used here in the safety context of normal versus abnormal operation, where the latter could result in an unsafe condition. The "integrity of the pipeline" refers to the pipeline's ability to operate safely, and to withstand the stresses imposed during operations.

Company Identification of Covered Tasks

Covered Tasks identified by the Partnership are provided in Appendix A. The covered tasks are listed in the form of a standard which includes the following information:

- Description of covered task
- The regulation reference for the task
- Abnormal operation conditions
- Terminology associated with the task
- Objectives and competencies covered by the qualification in the task
- Prerequisites of knowledge and skills to perform the task
- Steps for performing the task
- Re-evaluation or "subsequent" qualification frequency

The covered tasks identified by the Partnership were developed from a compilation of covered tasks that was developed by a consortium of over thirty liquid pipeline operators called the "Consortium On Operator Qualification"(COOQ). Plains All American Pipeline, L.P. was a member of this consortium.

The covered task standards in Appendix A are an identification of all covered tasks that the Partnership determined are or could be performed by either Partnership or Contractor personnel. The generic standards developed by the COOQ were reviewed by Partnership personnel knowledgeable and experienced in the covered tasks that are part of their job classification as determined from a job task analysis. The purpose of the review was to ensure that the list of tasks identified by the COOQ included all of the tasks typically performed during the Partnership's operations and maintenance activities, to eliminate from the COOQ list the tasks that the Partnership does not perform, and to revise the standards as necessary to make them specific to the Partnership.

Some covered tasks are further sub-divided into sub-tasks. These tasks are ones which comprise a broad range of sub-tasks requiring specific knowledge and skills. In the case where a task has been divided into sub-tasks, a covered task standard was developed for each sub-task.

The reason for dividing certain tasks into sub-tasks was to be able to more effectively manage personnel assignments in performing operations and maintenance covered tasks. If a covered task requires a broad range of knowledge and skills, an individual, either Partnership or Contractor, may not necessarily need to be, nor may it be practical or reasonable for him or her to be fully qualified in an entire covered task to perform their normal job responsibilities. To maximize flexibility and productivity, the Partnership will qualify personnel to perform complete covered tasks to the greatest extent practicable. However, when it is advantageous in personnel assignment and work scheduling, an individual may be qualified on a specific sub-task in order to allow him to begin performing the specific task in a much shorter time rather than waiting for the individual to become qualified on the entire task.

QUALIFICATION PROCESS AND EVALUATION METHODS TO DETERMINE QUALIFICATION

The Partnership's qualification process documents an individual's ability to perform an assigned covered task and to recognize and react to abnormal operating conditions. The qualification process is a multi-step process which consists of the following:

1. Knowledge and skill level criteria for qualification are established for each covered task. This criteria is specified in the covered task standards in Appendix A.
2. Job assignments of each individual are reviewed to determine which covered task(s) apply to each individual. Job assignments are reviewed according to individual job classification such as mechanical technician, electrical and instrumentation technician, gauger, etc.
3. A re-evaluation frequency is established by the Partnership for each covered task which determines the requirement for subsequent qualification.
4. Each individual performing a covered task is evaluated by one or more evaluation methods to determine his/her qualification. The evaluation utilizes the knowledge and skill criteria given in the covered task standards.
5. Individuals who are evaluated but do not meet the qualification criteria are given appropriate training to achieve the required knowledge and skill level for the task and are again evaluated to determine their qualification on a covered task.
6. A subsequent evaluation is made prior to the expiration of the re-evaluation interval established for a covered task.
7. An individual may be subject to an evaluation for qualification on a covered task at any time if it is determined that the performance of a covered task was a contributing factor in a pipeline accident or there is reasonable suspicion that an individual may no longer be qualified to perform a particular covered task.

Phases of Qualification

Transition Qualification: The qualification of individuals who:

1. Performed one or more specific covered tasks on a regular basis prior to August 27, 1999; and
2. Will be evaluated to qualify to perform those specific covered tasks according to this Operator Qualification Program prior to October 28, 2002.

Transitional qualification can be achieved on the sole basis of a satisfactory work performance history review evaluation.

Initial Qualification: The qualification of individuals who did not perform a covered task(s) on a regular basis prior to August 27, 1999 or who will perform a new covered task(s) beginning after August 27, 1999.

Subsequent Qualification: The evaluation of an individual's qualification to perform a covered task(s) after the individual's transitional and/or initial qualification. The Partnership will establish a subsequent qualification interval for each covered task. Initially, the Partnership has set a three (3) year interval for each covered task. The subsequent qualification interval for a covered task can be modified by the Partnership if after this program is implemented, a change is appropriate to improve the effectiveness of the program. An individual will be evaluated for subsequent qualification prior to the end of the re-qualification interval assigned to a covered task.

Note: (a) The subsequent qualification interval for each covered task will start on October 28, 2002; and, (b) A work performance history review cannot be the sole method of evaluation for subsequent qualification.

Evaluation Methods

Each individual performing a covered task will be evaluated to ascertain their ability and qualification to:

- Perform assigned covered tasks
- Recognize and react to abnormal operating conditions

Evaluation methods to determine qualification for a covered task will vary from task to task. Factors which will determine the most appropriate evaluation method for a task include the type of task, complexity of the task, criticality of the task, and the frequency which it is performed. The evaluation method chosen for any specific covered task will include one or more of the following:

Written Evaluation: An individual will be given a written examination, typically a multiple choice; however, other forms of evaluation questioning may also be appropriate. A passing cutoff score will be established for each

examination by the Operator Qualification Administrator or assessment agency, if the written evaluation is administered by an independent testing agency.

Oral Evaluation: An individual will respond orally to oral questioning by the evaluator. The evaluator or proctor will document the answers on an appropriate record that documents the questions and the respondent's answers.

Work Performance History Review: This method of evaluation consists of a thorough review of an individual's work history while employed by the Partnership. Qualification under this evaluation method requires that an individual performed a specific covered task(s) on a regular basis prior to August 27, 1999. Only for transitional qualification, i.e., qualification prior to October 28, 2002 may work performance history review be used as the sole evaluation method. Subsequent to October 28, 2002, work performance history review must be used with at least one other evaluation method. Whenever this method is used to evaluate an individual's qualification, the following historical data must be reviewed, confirmed and documented on each individual evaluated by this method:

- Verification that the individual has successfully and satisfactorily performed the covered task(s) on a regular basis prior to August 27, 1999. The basis of this verification might include records of DOT required inspection/calibration, record of employment and job assignment history, training records specific to a covered task, and a signed statement by the individual's supervisor confirming that the individual satisfactorily and without incident performed a task regularly before August 27, 1999.
- Verification that the individual's work performance history contains no indications of substandard work. This may be substantiated by a lack of substandard performance in annual personal appraisal records and a signed statement by the individual's supervisor confirming satisfactory performance.
- Verification of no involvement in any reportable accident as defined in 49 CFR 195 that may have been caused by an error in performing a covered task(s). This may be substantiated from a review of investigation reports of all reportable as well as non reportable accidents.
- Review of training records for training satisfactorily completed by an individual that would contribute to qualification on the covered task through enhanced knowledge and skill specific to the covered task.

Observation during:

Performance on the Job - Using this evaluation method, the evaluator witnesses an individual actually perform a covered task. The evaluator uses a checklist to confirm that all appropriate steps were taken to perform the task correctly and that the individual is knowledgeable in recognizing the abnormal operating conditions associated with the covered task. The evaluator can allow a demonstration and/or discussion of how a task is performed rather than having an individual actually perform the task if the task cannot be performed because equipment is not available, pipeline operations preclude performing the task, or operating conditions would make it unsafe to perform the task. A typical checklist for conducting an on the job performance evaluation is included as Attachment 1 to this OQ Program Plan. A performance evaluation checklist is developed from the covered task standards which list the knowledge and skill requirements to correctly and safely perform the task as well as the abnormal operating conditions associated with performing the covered task.

The evaluator will indicate on the performance evaluation checklist whether an individual is qualified to perform the covered task or requires further study and training and another performance evaluation.

On-the Job-Training - Using this evaluation method, a qualified individual observes an individual in a trainee status perform a covered task under the supervision and tutelage of the qualified individual. When, in the judgment of the qualified individual the trainee has the necessary knowledge and skills to correctly and safely perform the covered task, the trainee is given an on the job performance evaluation to confirm the individual's qualification.

Simulation - Using this evaluation method, an individual seeking qualification status on a covered task is observed performing the task on a simulator or the covered task is performed employing "simulation", i.e., the task is not performed on a pipeline or pipeline facility but similar equipment and conditions are simulated in a shop or other setting to reflect actual pipeline facilities and conditions while the covered task is being performed. With this evaluation, it is permissible for an individual to explain to the evaluator steps in the covered task procedure that cannot be performed during the simulation. Simulation performance will be documented using the performance evaluation checklist included in this Program Plan as Attachment 1. The evaluator will indicate on the checklist either that the individual is judged qualified to perform the covered task or requires further training and a later evaluation.

Other Assessments Such as Industry Standards and National Certification Programs: Various industry associations such as the American Petroleum Institute (API), the National Association of

Corrosion Engineers (NACE), and the National Center for Construction Education and Research (NCCER) have training and qualification programs that pertain to specific covered tasks. For example, the Partnership will consider a welder qualified if the welder passes a welder qualification examination in accordance with its Welder Qualification Specification or API 1104 or 1107 as applicable, **AND** the welder successfully completes a written or oral examination to verify that the welder is knowledgeable of and can recognize and properly react to abnormal operating conditions that might occur as a result of the welder's specific welding/hot work project or other conditions at the welder's work site. For Corrosion Technicians, some of the competency requirements specified for covered tasks performed by Corrosion Technicians will be considered met by certain training and certifications achieved by an individual through NACE. Industry certifications supplemented by performance evaluations will constitute qualification requirements for certain covered tasks.

As an option to achieve operation qualification through a third party qualification program, the Partnership may utilize the training and operator qualification program for pipeline covered tasks available through an alliance formed between API and NCCER. The NCCER will administer the training, qualification assessment, and records management for the alliance program. After the API/NCCER program for the pipeline industry is established, the Partnership may use NCCER to perform covered task qualification assessments and utilize NCCER resources for training operation and maintenance associates. It is anticipated that long term, most initial and subsequent qualification assessments will be performed through NCCER, and depending upon availability, some transitional qualifications may also be achieved through the API/NCCER program.

Guidelines for Re-evaluation After a Failed Qualification

An individual failing to qualify will review Partnership policies, procedures, the operations and maintenance manual, and receive self-study, classroom, or on-the-job training in those areas that the evaluation revealed a deficiency in knowledge and/or skill level exists. The time interval between a failed qualification and re-evaluation will be determined by the evaluator and individual. The interval will be based on the nature of the task, the degree to which the individual lacked the necessary knowledge and skills for qualification, and the time available to the individual to receive the appropriate training. A re-evaluation shall not occur until the individual and evaluator mutually agree that the individual is ready to be re-evaluated for qualification. A non-qualified individual may perform a covered task under the requirements listed under the Section entitled, "Use of Non-Qualified Individuals" of this Program.

Evaluator Criteria

Persons assigned as evaluators to assess and document an individual's qualification shall perform evaluations in an objective and consistent manner. An evaluator is not required to be "qualified" to physically perform the

covered task on which an individual is evaluated to determine qualification. However, persons assigned by the Partnership to perform evaluations will possess the knowledge necessary to: (1) ascertain an individual has the ability to perform covered tasks; and, (2) to substantiate an individual's ability to recognize and react to abnormal operating conditions that might occur as the covered task is being performed. The Partnership will use only competent evaluators to perform evaluations in accordance with the OQ Program. Evaluators will be selected based on the following criteria:

- Possession of technical knowledge and skill related to the covered task acquired through experience and training to know how the task is performed correctly and safely;
- Knowledgeable in recognizing and reacting to abnormal operating conditions that might occur while performing a covered task;
- Years of experience successfully performing the covered task;
- Experience in supervising and training individuals in the covered task;
- Ability to be objective and non-biased;
- Knowledge of evaluation techniques;
- Communication skills;
- Ability to document information and observations; and,
- Personal integrity.

Prior to performing any evaluation under this Program, each evaluator will receive instructions and training in conducting evaluations to help ensure evaluations will be conducted as objectively and consistently as possible.

USE OF NON-QUALIFIED INDIVIDUALS

Non-qualified individuals may be permitted to perform covered tasks under certain circumstances, including but not limited to new employees participating in on-the-job training, non-qualified Partnership employees assisting on special projects, Contractor personnel on a work crew, etc. The Partnership will permit individuals that are not qualified to perform a covered task for the Partnership provided the following conditions are met:

1. An individual qualified in the specific task being performed provides direct supervision and closely observes the non-qualified individual(s).
2. The qualified individual observing the covered task work must be knowledgeable in recognizing and reacting to abnormal operating conditions and must be able to take immediate corrective actions when necessary.
3. The ratio of non-qualified individuals to a qualified individual directing and observing covered task work shall be in proportion to the complexity of the task. For example, a qualified individual will be able to closely observe more non-qualified individuals removing coating from a pipeline than individuals welding on or cutting on the pipeline.

Note: The qualified individual directing and observing covered task work of non-qualified individuals is ultimately responsible for the correct and safe performance of the covered task(s).

PERFORMANCE CONTRIBUTING TO AN ACCIDENT

In accordance with Partnership policy, an investigation will be conducted whenever a DOT reportable pipeline accident occurs. If the investigation concludes that the performance of a covered task by a qualified individual cannot be conclusively eliminated as a contributing cause of an accident, that individual will be removed from performing that covered task or be put under direct supervision of a qualified person until that individual's qualification to perform that covered task can be re-evaluated or it is later determined that the individual's performance of a covered task did not contribute to the accident.

Note: The individual whose qualification is suspended for performance of a covered task associated with an accident may still perform other covered tasks not related to the accident.

REASONABLE CAUSE TO RE-EVALUATE A QUALIFICATION

The Partnership will re-evaluate an individual if there is reason to believe that the individual is no longer qualified to perform a covered task. Concerns about an individual's ability to perform a covered task may be reported to an individual's manager or supervisor as a result of direct observation or may be caused by various factors. Possible reasons to verify an individual's qualification(s) include but are not limited to:

- Extended period of unsatisfactory performance of a covered task;
- Prolonged period (greater than 3 months) of not performing a task;
- Repeated failure to perform covered task(s) in accordance with Partnership procedures and policies;
- Significant changes to equipment or operating and maintenance procedures;
- Performance of a covered task which contributed to an accident; or,
- Physical impairment that prevents the individual from performing a covered task(s) with reasonable accommodation in accordance with the Americans With Disabilities Act.

If information or circumstances provide reasonable concern about an individual's qualification, the following action will be taken to determine if the individual needs to be re-evaluated:

1. An investigation will be initiated by the OQ Administrator to determine if reasonable cause exists to re-evaluate an individual's qualification to perform a particular covered task(s).
2. If there is reason to believe that an individual is no longer qualified to perform a covered task(s) based on observation of the individual's performance, an extended period of substandard work performance, "near

miss", or other evidence, that individual will be removed from performing that covered task or be put under direct supervision of a qualified individual until that individual can be re-evaluated to perform that covered task.

Note: An individual who is in the process of being re-evaluated to perform a covered task(s) may continue to perform any and all other covered tasks that the individual is still qualified to perform.

RE-EVALUATION INTERALS FOR SUBSEQUENT QUALIFICATION

The following criteria will be applied to each covered task to determine the appropriate subsequent qualification interval applied to each task:

- Repetitive nature or frequency at which the task is performed
- Level of risk related to either health and safety of the public or pipeline integrity
- Complexity and availability of task checklists and procedures

The re-evaluation interval for each covered task is stated in the covered task standards. The re-evaluation interval for all covered tasks will initially be 3 years.

COMMUNICATING CHANGES AFFECTING QUALIFICATION AND/ OR THE OQ PLAN

The Partnership will communicate any substantive changes affecting a covered task to the individuals who perform the covered task. A significant change may require changes to the qualification process or additional evaluations.

Changes that could affect the qualification process include but are not limited to:

- Significant modifications to company policies or procedures;
- Significant changes in state or federal regulations;
- Modifications to piping or pipeline facilities;
- Use of new or modified equipment and/or application of new technology affecting covered tasks;
- New information from equipment manufacturers that significantly affects covered tasks; or,
- Addition or modification of covered tasks.

Changes that could affect the OQ Plan include but are not limited to:

- A significant change to the qualification process including evaluation methods and record keeping requirements;
- Experience acquired by the OQ Administrator on the OQ Program; or,
- Changes to employee job classifications and work responsibilities.

Determining a Need to Communicate Change

The need to communicate any change will depend upon the significance of the change and the impact that it may have on either covered tasks or the OQ Program. The impact a change may have can be categorized as follows:

- Limited impact on the covered task or OQ Program and requires no communication or further action;
- Moderate impact on the covered task or OQ Program and requires only communication of the change; or,
- Significant impact on the covered task or OQ Program which requires a modification of the qualification process and OQ Program Plan and the communication of the changes to the affected workforce.

Process for Communicating Change to the Workforce

Field Managers and Supervisors will be responsible for reporting any change in facility design, equipment, procedures, employee job assignments, or other changes that might impact the qualification of an individual to the District Manager on the Management of Change form included in this Program Plan as Attachment 2. The District Manager will be responsible for reviewing the information on the form for completeness and accuracy and forwarding the form to the OQ Administrator.

The OQ Administrator, in conjunction with the applicable District Manager and/or Field Supervisor will review the change(s) and decide whether the change(s) has a significant impact on a covered task and requires a change to the covered task standard(s), evaluation to verify qualification associated with the change, or a change to the qualification process. If a review of the change concludes that further evaluation for qualification because of the change is necessary or prudent, the OQ Administrator, District Manager, and Field Supervisor will determine the evaluation method.

Any moderate or significant impact to a covered task(s) or the QO Program will be communicated to the workforce by the OQ Administrator. This communication will be in the form of a written memo, advisory, or bulletin sent electronically and/or by hard copy to all District Managers. If the change requires a revision to a covered task standard, the OQ Administrator will revise the standard and make the required distribution. If the OQ Program Plan requires modification as a result of the change(s), the OQ Program will be revised by the Administrator and the revised Program Plan will be distributed to all Plan holders.

Note: If a change(s) could affect the health and safety of the workforce or the integrity of the pipeline and pipeline facilities, changes will be communicated as soon as possible but no later than 48 hours after the change is discovered or implemented.

CONTRACTORS

In accordance with 49 CFR 195 Subpart G, the Partnership is responsible for ensuring the qualifications of contractor/subcontractor personnel performing covered tasks for the Partnership. Contractor personnel may be qualified to perform covered tasks under the Partnership's OQ Program, under their own qualification program or under a third party qualification program, provided the applicable program has been reviewed and approved by the Partnership.

The Partnership will encourage all of its contractors to qualify their personnel to perform covered tasks under the pipeline operator qualification program established by the American Petroleum Institute (API) and the National Center for Construction Education and Research (NCCER). The API/NCCER program will provide contractors with training resources, a process of assessment and evaluation for covered task qualification, and a computerized records database accessible via the internet or telephone to permit pipeline operators to confirm qualifications of contractor personnel prior to their commencing work on pipeline facilities. The Partnership, both individually and in conjunction with other pipeline operators, will ensure its contractors are aware of the requirements of the OQ rule as it applies to them and will explain to the contractors how compliance with the rule requirements can be met through participation in the API/NCCER qualification program.

Non-qualified contractor personnel may perform covered tasks if directed and observed by a qualified person as specified in this OQ Program Plan. The qualified person must be a Contractor representative or Partnership representative.

Before contractor personnel are permitted to perform a covered task(s) on the Partnership's pipeline system, Partnership management/supervisory personnel responsible for the work will:

1. Meet with the contractor to review the project scope of work and inform the contractor of all covered tasks that may be included in the scope of work.
2. Receive from the contractor the names and applicable identification information of all individuals who will be assigned to perform covered tasks on the project work.
3. Review the qualification records of contractor personnel that will perform covered tasks to ensure the qualifications adequately meet the competency requirements of the Partnership's covered task standards and meet the Partnership's quality standards for documentation. The contractor may present qualification records from his own program or from a third party qualification program. If the contractor's qualification process or records are considered unsatisfactory and an individual therefore considered unqualified, the following will be required by the Partnership before work on its pipeline system can commence:

a. The contractor personnel assigned to perform the covered tasks on the project must be qualified under the Partnership's program, or,
b. An individual qualified on the covered tasks included in the project work must be assigned by the contractor or the Partnership to direct and observe the covered task work in accordance with the requirements of Section 6 of this Program Plan.

Partnership managers and supervisors will be responsible for ensuring that all contract work is performed by qualified contractor personnel. Periodic and random internal inspections and audits may be performed to verify that contract work for the Partnership involving covered tasks is being performed by qualified individuals. If there is ever any question or doubt about a contract person's qualification, the OQ Administrator shall be contacted for a final determination.

RECORDS MANAGEMENT

Records and Record Maintenance

The Partnership uses a database record keeping system to document and manage the qualification records of an individual performing covered tasks on the Partnership's pipeline system. Qualification records will include:

- Identification of a qualified individual
- List of covered tasks that an individual is qualified to perform
- Date of current qualification for each covered task
- Evaluation method(s) used to qualify an individual for each covered task

In addition, paper copies of written evaluation results, performance evaluation forms, and other paper records pertaining to qualification will be maintained in a file for each qualified individual.

A list of all individuals approved by the Partnership to conduct evaluations for qualification will be maintained in the OQ qualification record files. Each time this record is revised, the revision number and date will be noted on the file.

The OQ Administrator will be responsible for maintaining and managing the qualification records. Requests for information from the records must be made to the OQ Administrator. The central record location will generally be where the OQ Administrator has her or his office.

Records Retention

Records supporting an individual's current qualification will be maintained while the individual is performing a covered task.

Records of prior qualification or of individuals no longer performing covered tasks for the Partnership will be retained for a minimum of **five years** from the date the covered task was no longer performed.

Contractor Records

The Partnership shall verify by inspection that a contractor maintains qualification records on all contractor personnel performing covered tasks for the Partnership.

The Partnership shall obtain and maintain a copy of the record of qualification in its files of each contractor person who performed a covered task(s) for the Partnership. This record may consists of evaluation results under either the contractor's or Partnership's OQ Program or a record from a third part program such as NCCER indicating that an individual is qualified at the time covered tasks are performed on a Partnership project. A record shall be maintained documenting the name of the project or description of the project, date, covered tasks performed during project, identification of contractor individuals performing covered tasks on project, and a copy of records of qualification. These records shall be maintained a minimum of **five years**.

OQ PROGRAM ADMINISTRATION

The OQ Administrator has the responsibility to oversee the implementation and functioning of the OQ program. The OQ Administrator for purposes of this program includes the following individuals:

Plains All American Pipeline, L.P.

Bakersfield Division	Director of Regulatory Compliance,EHS
Houston, Kilgore and Midland Divisions	Safety Manager

The OQ Administrator will provide OQ Program oversight to ensure the program is implemented, meets all the requirements of 49 CFR 195 Subpart G including dates for compliance, is kept current, is effective and workable, and that program requirements and program changes are communicated to the workforce. Functions performed by the OQ Administrator include but are not limited to:

- An annual review of the OQ Program Plan;
- Timely dissemination of OQ Program information including communication of changes to covered task standards, evaluation methods, or other elements of the qualification process;
- Evaluating program effectiveness;
- Tracking and communication of transitional and subsequent qualification schedules;
- Assistance in evaluation of qualification associated with an accident or a reasonable cause for a qualification review; and
- Revisions to Program Plan and revision distribution to plan holders.

REVISION LOG

Revision Number	Revision Date	Description
No revisions to date		

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 (b) (7)(F), (b) (3) (b) (7)(F), (b) (3) 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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APPENDIX C

Last revised: February 3, 2014

HAZARD EVALUATION AND RISK ANALYSIS

APPENDIX C
HAZARD EVALUATION AND RISK ANALYSIS, CONTINUED

C.1 RISK AND HAZARD ANALYSIS

The Company has conducted risk and hazard analyses for all of the Company owned and operated hazardous liquid pipelines in accordance with the requirements of 49 CFR Part 195.452, known as the Integrity Management Rule. The Rule requires the development of an Integrity Management Plan (IMP) to evaluate the potential risks of a pipeline failure and the consequences of failure for all Company owned and operated pipelines. The IMP addresses the aspects for evaluating and maintaining pipeline integrity to minimize potential risks and consequences of having a pipeline failure that negatively impacts the surrounding environment and population areas.

The entire IMP is located at the Company headquarters. The Risk and Hazard Analysis for this response zone is described below.

C.1.1 Spill History

Date of Discharge(s):	1/31/95
List of Discharge Causes:	Operator Error at the Sisquoc Station. The three barrel spill at the Sisquoc Station resulted when the pig receiver barrel was prematurely opened before the barrel had completely drained.
Material(s) Discharged:	N/A
Amount of Discharges in Gallons:	3.00 bbls ()
Amount That Reached Navigable Waters (if applicable):	N/A
Effectiveness and Capacity of Secondary Containment:	The spill was fully contained within the bermed facility where each spill occurred. The spill was confined to station property.
Cleanup Actions Taken:	All recoverable spilled oil was recovered and the facility was cleaned up in an expedient manner. The spill did not impact the environment and posed no threat to the health and safety of the public.
Steps Taken to Reduce Possibility of Reoccurrence:	To prevent this type of incident from occurring again, a detailed review of the piping arrangement and operation of the seal leak collection system was conducted with all personnel. Additionally, the system piping was modified by relocating valves to make them more visible and assessable and painting the valves in a safety orange color to indicate that the valves are to be sealed in the open position.
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

C.1.1 Spill History, Continued

Date of Discharge(s):	8/14/96
List of Discharge Causes:	Equipment Failure at the Sisquoc Station. The 3.5 barrel spill at the Sisquoc Station was associated with the overflow of the pump seal leak collection and drain system caused incorrect valve positions.
Material(s) Discharged:	N/A
Amount of Discharges in Gallons:	3.50 bbls ()
Amount That Reached Navigable Waters (if applicable):	N/A
Effectiveness and Capacity of Secondary Containment:	The spill was fully contained within the bermed facility where each spill occurred. The spill was confined to station property.
Cleanup Actions Taken:	All recoverable spilled oil was recovered and the facility was cleaned up in an expedient manner. The spill did not impact the environment and posed no threat to the health and safety of the public.
Steps Taken to Reduce Possibility of Reoccurrence:	To prevent this type of incident from occurring again, a detailed review of the piping arrangement and operation of the seal leak collection system was conducted with all personnel. Additionally, the system piping was modified by relocating valves to make them more visible and assessable and painting the valves in a safety orange color to indicate that the valves are to be sealed in the open position.
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

C.1.1 Spill History, Continued

Date of Discharge(s):	8/26/97
List of Discharge Causes:	Operator Error at the Sisquoc Station
Material(s) Discharged:	N/A
Amount of Discharges in Gallons:	0.25 bbls ()
Amount That Reached Navigable Waters (if applicable):	N/A
Effectiveness and Capacity of Secondary Containment:	The spill was fully contained within the bermed facility where each spill occurred. The spill was confined to station property.
Cleanup Actions Taken:	All recoverable spilled oil was recovered and the facility was cleaned up in an expedient manner. The spill did not impact the environment and posed no threat to the health and safety of the public.
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

C.1.1 Spill History, Continued

Date of Discharge(s):	10/1/97
List of Discharge Causes:	Operator Error at the Las Flores Station. The Las Flores spill was caused by the station sump being overfilled while the level indication instrumentation for the sump was being calibrated. The overflow resulted from excessive flow into the sump and a failure by the sole person performing the calibration to adequately monitor the rising level in the sump.
Material(s) Discharged:	N/A
Amount of Discharges in Gallons:	7.50 bbls ()
Amount That Reached Navigable Waters (if applicable):	N/A
Effectiveness and Capacity of Secondary Containment:	The inflow exceeded the capacity of the sump pump. The spill was fully contained within the bermed facility where each spill occurred. The spill was confined to station property.
Cleanup Actions Taken:	All recoverable spilled oil was recovered and the facility was cleaned up in an expedient manner. The spill did not impact the environment and posed no threat to the health and safety of the public.
Steps Taken to Reduce Possibility of Reoccurrence:	To prevent a future occurrence of this type of incident, the sump level calibration procedures were modified by requiring two technicians to perform this calibration. The responsibility of one technician is to monitor the rising level in the sump during the calibration procedure to ensure the sump does not overfill. Additionally, an audible horn was installed at the sump to sound locally when the level in the sump rises to a pre-set level.
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

C.1.1 Spill History, Continued

Date of Discharge(s):	10/10/97
List of Discharge Causes:	Operator Error at the Las Flores Station
Material(s) Discharged:	N/A
Amount of Discharges in Gallons:	0.25 bbls ()
Amount That Reached Navigable Waters (if applicable):	N/A
Effectiveness and Capacity of Secondary Containment:	The spill was fully contained within the bermed facility where each spill occurred. The spill was confined to station property.
Cleanup Actions Taken:	All recoverable spilled oil was recovered and the facility was cleaned up in an expedient manner. The spills did not impact the environment and posed no threat to the health and safety of the public.
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

C.1.1 Spill History, Continued

Date of Discharge(s):	9/8/98
List of Discharge Causes:	Operator Error at the Sisquoc Station
Material(s) Discharged:	N/A
Amount of Discharges in Gallons:	0.25 bbls ()
Amount That Reached Navigable Waters (if applicable):	N/A
Effectiveness and Capacity of Secondary Containment:	The spill was fully contained within the bermed facility where each spill occurred. The spill was confined to station property.
Cleanup Actions Taken:	All recoverable spilled oil was recovered and the facility was cleaned up in an expedient manner. The spills did not impact the environment and posed no threat to the health and safety of the public.
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

C.1.1 Spill History, Continued

Date of Discharge(s):	01/01/00
List of Discharge Causes:	Equipment Failure at the Sisquoc Station
Material(s) Discharged:	N/A
Amount of Discharges in Gallons:	0.30 bbls ()
Amount That Reached Navigable Waters (if applicable):	N/A
Effectiveness and Capacity of Secondary Containment:	The spill was fully contained within the bermed facility where each spill occurred. The spill was confined to station property.
Cleanup Actions Taken:	All recoverable spilled oil was recovered and the facility was cleaned up in an expedient manner. The spills did not impact the environment and posed no threat to the health and safety of the public.
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

C.1.1 Spill History, Continued

Date of Discharge(s):	03/28/00
List of Discharge Causes:	Equipment Failure at the Sisquoc Station
Material(s) Discharged:	N/A
Amount of Discharges in Gallons:	29.00 bbls ()
Amount That Reached Navigable Waters (if applicable):	N/A
Effectiveness and Capacity of Secondary Containment:	The spill was fully contained within the bermed facility where each spill occurred. The spill was confined to station property.
Cleanup Actions Taken:	All recoverable spilled oil was recovered and the facility was cleaned up in an expedient manner. The spills did not impact the environment and posed no threat to the health and safety of the public.
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

C.1.1 Spill History, Continued

Date of Discharge(s):	-
List of Discharge Causes:	There have been only six crude oil releases form the Plains All American Pipeline System that is subject to the CCR Title 14, Subdivision 4 Office of Spill Prevention and Response regulations. Each spill was fully contained within the bermed facility where each spill occurred. Only two of the three spills are considered significant based on operation procedures being modified as a result of the spills. A summary history of the spills is tabulated above.
Material(s) Discharged:	N/A
Amount of Discharges in Gallons:	N/A
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:	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

C.1.2 Risk and Hazard Analysis Method Selected

This hazard and risk analysis has been prepared to comply with the State of California's [Office of Spill Prevention and Response (OSPR) – Department of Fish and Wildlife] Oil Spill Response Plan preparation regulations and has been accepted as conforming to those regulations. The "checklist" analysis technique as described in the American Institute of Chemical Engineers' *Guidelines for Hazard Evaluation Procedures* was utilized for the preparation of the following risk and hazard analysis. Facility equipment was divided into categories or nodes and a unique Hazard Analysis Checklist was developed for each category. A summary of the questions included in the checklists is provided in **FIGURE C.1-1**. The checklist form (worksheet) provided for three responses to each questions: yes, no or not applicable. The worksheet also contained boxes for each questions to record the following information: potential hazard, safeguards in place to prevent the potential hazard from occurring, any remaining hazards after considering the safeguards, recommendations to mitigate any remaining hazards and remarks. The nodes, as categorized for analysis purposes, are listed in **FIGURE C.1-2**.

FIGURE C.1-1 - RISK AND HAZARD ANALYSIS "CHECKLIST" QUESTIONS

FIGURE C.1-1 - RISK AND HAZARD ANALYSIS "CHECKLIST" QUESTIONS

A. General Questions

1. Can release from nodes enter marine waters?
2. Does node have adequate containment?

B. Design Questions

3. Is mechanical design (internal and thermal stresses) appropriate?
4. Is node adequately protected form corrosion?
5. Is node constructed of proper material?
6. Does node have a drain?
7. Where does drain discharge to?
8. Are drain discharge facilities adequate?
9. Is node properly protected against overpressure?
10. Can node be over pressurized by pumps?
11. Does node have a pressure safety valve (PSV)?
12. Where does PSV discharge to?
13. Are PSV discharge facilities adequate?
14. Is node protected from mechanical damage?
15. Are valves in node appropriately designed?
16. Does node have lead Detection?
17. Is node properly designed for earthquakes?
18. Is node adequately protected form vandalism?
19. Can node handle increase in temperature of product?
20. Can node handle decrease in temperature of product?
21. Can node handle increase in flow of product?

FIGURE C.1-1 - RISK AND HAZARD ANALYSIS "CHECKLIST" QUESTIONS

FIGURE C.1-1 - RISK AND HAZARD ANALYSIS "CHECKLIST" QUESTIONS, CONTINUED

C. Operations Questions

22. What happens if a valve is inadvertently left open?
23. What happens if a valve is inadvertently closed?
24. Is there adequate surveillance of the node?
25. Do personnel understand operation of the node?
26. Is there adequate protection from sending wrong product through the node?
27. Is there adequate protection from pumping reverse direction through the node?

D. External Impact Questions

28. Is node properly designed for weather conditions?
29. What happens if node leaks/ruptures?
30. What happens if there is a power failure?
31. What happens if there is a hydraulics failure?
32. Is fire protection adequate?
33. Is node adequately protected from loss of communication/instrumentation?
34. What if pump fails?

FIGURE C.1-2 - NODES

FIGURE C.1-2 - NODES

Pipeline Sections

1. Las Flores to Gaviota
2. Gaviota to Highway 101
3. Santa Ynez River Crossing
4. Sisquoc River Crossing

Pumps

5. Las Flores Main Line Pumps
6. Gaviota Pumps
7. Sisquoc Pumps

Containment/Sumps

8. Las Flores Containment
9. Las Flores Sump System
10. Gaviota Containment
11. Gaviota Sump System
12. Sisquoc Containment
13. Sisquoc Sump System

Pig Launchers/Receivers

14. Pig Launchers (Las Flores and Gaviota)
15. Pig Receiver (Gaviota)

C.1.3 Expertise of the Risk and Hazard Analysis Team

C.1.3 EXPERTISE OF THE RISK AND HAZARD ANALYSIS TEAM
Expertise of the Risk and Hazard Analysis Team
The risk and hazard analysis was conducted on two separate days; November 11, 1994 at the All American Pipeline Company office in Santa Barbara and January 23, 1995 at the Reese-Chambers System Consultants, Inc. (RCSC) office in Somis. Follow up discussions between Tim Chambers and Mike Madden (PAALP) were conducted prior to the finalization of this Section. All PAALP personnel participating in the risk and hazard analysis are intimately familiar with the pipeline, its routes and the pump stations. Tim Chambers, the team leader for the preparation of the risk and hazard analysis, visited each of the pump stations and toured the pipeline routes prior to conducting the risk and hazard analysis. P&ID's, plot plans, pipeline alignment drawings, and Operations and Maintenance Procedures were available and used throughout the risk and hazard analysis.
Expertise of Analysis
The following people participated in the conduct of the risk and hazard analysis.
The following team was the most appropriate to conduct the risk and hazard analysis for the pipeline system because of their qualification and experience. Mr. Chambers provided the risk and hazard analysis experience and expertise, while the PAALP personnel provided the knowledge and experience with the design, operation and maintenance of the pipeline system.
Mr. Tim Chambers:
Of Reese-Chambers System Consultants, Inc. served as the team leader for the risk and hazard analysis. At the time of this analysis, Mr. Chambers had over 15 years of experience conducting risk and hazard analyses and had served as team leader for the conduct of over 15 OSRP risk and hazard analyses, and eight hazard and operability studies (HAZOPs).
Mr. Mike Madden:
At the time the analysis was performed, Mr. Madden was PAALP's Permitting and Right-of-Way manager. He was responsible for all environmental permitting and permit compliance activities, the pipeline Rights-of-Way, and Fee/Lease properties for PAALP, including all areas covered by this Plan. Since 1980, Mr. Madden had been involved with pipeline design, route selection, environmental surveys and monitoring during and after pipeline construction. Mr. Madden began his employment with PAALP in 1986. He is currently deceased. Between 1986 and 1993, Mr. Madden participated in the in-depth system safety analysis conducted on PAALP's proposed pipeline project by the County of Santa Barbara's System Safety and Reliability Review Committee. Mr. Madden was also responsible for coordinating the completion of (and obtaining County approval of) the many compliance plans required by Santa Barbara County. These include but are not limited to: the Environmental quality Assurance Program/Plan; the Safety, Inspection, Maintenance and Quality Assurance Plan (Operations and Maintenance Manual); the Emergency Response Plan; the Oil Spill Contingency Plan; and the Fire Protection Plan. Mr. Madden participated in the Risk and Fault Tree Analysis conducted for the corrosion Inhibitor Storage and Injection Facilities at the Las Flores Pump Station. Mr. Madden was a Registered Environmental Assessor with Cal/EPA (Registration Number 03903).

C.1.3 Expertise of the Risk and Hazard Analysis Team

C.1.3 EXPERTISE OF THE RISK AND HAZARD ANALYSIS TEAM, CONTINUED
Mr. Dave Woodruff:
Currently, he is the PAALP Division Manager for the Southern/Southwestern Division. At the time this risk assessment was conducted, he was Santa Maria, CA District Manager. His responsibilities included daily operational and maintenance requirements, measurement and quality control and emergency response support o a 24-hour basis. He had over 30 years experience in all phases of pipeline construction and operation and had worked for PAALP since 1986.
Mr. Chris Carpenter:
At the time the analysis was performed, Mr. Carpenter was a Mechanical Engineer for PAALP. His responsibilities included project management and engineering support for upgrades and additions to the system, and maintenance and updating of drawings and documentation. Mr. Carpenter had 11 years experience as a mechanical engineer at the time of this analysis and he worked for PAALP since 1987. He had a B.S. in Mechanical Engineering from Purdue University. He previously participated in the risk analysis for the inhibitor tank installation at Las Flores Canyon. Mr. Carpenter is no longer employed by PAALP.
Mr. Mike Joynor:
At the time the analysis was performed, Mr. Joynor was PAALP's Manager of Oil Movements and Technical Services. At the time of this analysis, Mr. Joynor had 18 years experience in the design and implementation of process control systems and all aspects of pipeline operations and maintenance. Mr. Joynor had been employed by PAALP since 1985 and had significant involvement in the design and construction of PAALP's pipelines and related facilities. His responsibilities included daily pipeline system scheduling and utilization, crude oil quality control and the pipeline supervisory control and leak detection system. Mr. Joynor is no longer employed by PAALP.

C.1.4 Appropriateness of the Analysis Method

The "checklist" method is appropriate to address all aspects of the pipeline system and pump stations. The method was utilized to identify potential risks that could lead to a release of oil. The method is described in the American Institute of Chemical Engineer's *Guidelines for Hazard Evaluation Procedures* and is one of the methods listed in the OSPR regulations.

The risk and hazard analysis will be revisited when changes are made to the pipeline system that could increase the potential for a spill.

C.1.5 Method of Analysis

The "checklist" methodology was utilized. The first step in the conduct of the risk and hazard analysis was to review the P&ID's and divide the pipeline system into nodes for analysis purposes. The questions to ask during the analysis were then developed. These were based on the specifics of the pipeline system analyses. The risk and hazard analysis team leader was then taken on a tour of the pump stations and pipeline routes to become familiar with the pipeline system. The risk and hazard analysis was then conducted utilizing worksheets to address each questions for each node as described in **FIGURE C.1-1** and **FIGURE C.1-2**. The summary was based on the findings of the risk and hazard analysis.

C.1.6 Inventory of Hazards

The risk and hazard analysis concluded that the pipeline system is a new system of contemporary design which, during the permitting process, underwent an extensive engineering review system safety analysis. One minor potential hazard was identified; however, it is extremely unlikely that this potential hazard could result in oil leaving any of the Pump Station containment systems. The risk and hazard analysis concluded that it was possible for a worker to inadvertently open a main line pump casing valve which would result in oil being continuously drained to the sump. This could potentially over-fill the sump, however, the sump is equipped with instrumentation and controls to prevent overfilling and is remotely monitored by PAALP's Control Center. Further if the pump casing valve was left open and unattended in this position, local and remote alarms would be annunciated and the affected pump would automatically shutdown and pump suction and discharge valve would close, effectively blocking in the affected pump.

C.1.7 Analysis of Discharges

C.1.7 ANALYSIS OF DISCHARGES
Pipelines:
Potential Causes of Releases - There are numerous potential causes for pipeline releases that can result in a range of small to large releases. These causes are summarized below: • Corrosion (internal and external) • Third party damage • Seismic event • Landslide/ground movement • Material failure • Operation
The most likely spill sizes from the causes examined above were less than the maximum sizes presented in the worst case scenarios. It is noted here that it is impossible to completely eliminate the risk of a spill. The following section discusses the findings of the risk and hazard analysis for each of the potential hazards identified above.
Corrosion:
According to the California State Fire Marshal Hazardous Liquid Pipeline Risk Assessment (EDM, 1993), external corrosion accounts for approximately 59 percent of pipeline releases and internal corrosion for approximately 3 percent. The data base for this study included all regulated California hazardous liquid pipelines including some without cathodic protection. The study found that unprotected pipelines had an external corrosion leak incident rate over five times higher than protected lines.
The PAALP pipeline (within Santa Barbara County) is well protected from the environment with a corrosion barrier coating, thermal insulation and a protective outer wrap. The corrosion coating is a coal tar urethane coating applied directly to the pipeline to provide a corrosion barrier for the pipeline steel. The thermal insulation is a 1 ½-inch thick spray applied urethane foam applied directly over the corrosion coating. The urethane foam is also covered with a spirally wrapped layer of polyethylene tape to protect the foam from the environment. The coating and insulation coatings are designed to withstand temperatures above the maximum operating temperature of the crude oil in the pipelines.
In addition to the external coating system, the pipeline receives external corrosion protection through the use of an impressed current cathodic protection system. The level of cathodic protection is monitored by completion of pipe-to-soil potential surveys conducted at least once per calendar year. In addition, cathodic protection rectifiers are monitored bi-monthly to assure that the impressed current system provides protection without extensive interruptions.

C.1.7 Analysis of Discharges

C.1.7 ANALYSIS OF DISCHARGES, CONTINUED
Corrosion:, Continued
Above ground piping and appurtenances (located only within pump stations and at mainline block valves) are protected against atmospheric corrosion with a protective coating over the steel surfaces. The pump stations and valves are inspected on an annual basis in order to assure that any coating damage is repaired on a timely basis.
PAALP conducts batch injection of corrosion inhibitor into the pipeline at the Las Flores, Gaviota, Sisquoc, and Pentland Pump Stations to mitigate internal corrosion. In addition, periodic batches of biocide are injected at these facilities and the sump tanks are routinely treated with biocide. The biocide treatments are utilized to mitigate internal corrosion from any sulfate reducing bacteria in the water phase of the crude oil. The inhibitor treatment program is monitored through the evaluation of water samples obtained at various locations along the system. The samples are tested and evaluated at intervals not to exceed 7 ½ months, but at least twice each calendar year, to determine the effectiveness of the inhibitors and to provide adjustments of the program for optimum results.
In addition to the corrosion mitigation measures conducted on the pipeline, PAALP also conducts periodic inspections of the condition of the pipeline with internal inspection devices called “smart pigs”. The smart pigs detect any internal or external corrosion in the pipeline wall, allowing repair of any necessary pipeline defects, while maintaining system integrity and safety.
Initial smart pig surveys were conducted on November, 1994 for the 30-inch mainline between Sisquoc and Pentland Stations; in May, 1995 for the 30-inch mainline between Gaviota and Sisquoc Stations; and in September, 1996 for the 24-inch mainline between Las Flores and Gaviota Stations. The need for follow-up surveys and the time period between smart pig surveys is established based on an evaluation of the previous survey results and any subsequent anomaly investigations and the Integrity Management Regulations of the Department of Transportation (DOT), Pipeline and Hazardous Materials Safety Administration (PHMSA).
The risk and hazard analysis concluded that the potential for a leak to corrosion is adequately mitigated.
Third Party Damage:

C.1.7 Analysis of Discharges

C.1.7 ANALYSIS OF DISCHARGES, CONTINUED
Third Party Damage:, Continued
According to the Hazardous Liquid Pipeline Risk Assessment (EDM 1993) approximately 20 percent of pipeline incidents are caused by third party damage. PAALP mitigates these type accidents by patrolling the pipelines by air 26 times per year at intervals not exceeding 3 weeks as required by the DOT pipeline safety regulations. However, PAALP conducts aerial over flights weekly. PAALP also belongs to Underground Service Alert (USA) and has provided USA with the location of all their pipelines. Pipeline markers have also been placed along the pipeline route.
PAALP participates in contractor/excavator safety awareness meetings annually and completes an annual informational mailout to know contractors in California.
The risk and hazard analysis concluded that this potential risk is mitigated to the maximum extent feasible, but also recognizes that it is still possible for a third party to damage one of the pipelines. To rapidly detect leaks, PAALP has automated line integrity monitoring on all the pipeline segments included in this study.
Seismic Event:
The Hazardous Liquid Pipeline Risk Assessment (EDM 1993) states that only three of the roughly 500 leak incidents on California's regulated hazardous liquid pipelines were judged to be caused directly by earthquake effects. This is approximately 0.6 percent. The pipeline segments addressed in the risk and hazard analysis cross several known active faults. These entire potential active fault crossings were designed and installed based on seismic considerations. Therefore, the design of these crossings (e.g., V-shaped ditch versus vertical walls, use of select and less dense backfill such as gravel or spray foam and minimum cover) has, to the extent feasible, mitigated possible hazards. PAALP has a policy of shutting down various pipeline systems or components near a significant earthquake. Before re-starting the lines, the facilities and exposed pipelines are inspected for damage, and the inactive system is re-started sequentially.
The study concluded that seismic mitigation design implemented at all know fault crossings and the SCADA/PLDS system, together with PAALP's policy of shutting in affected systems in the event of a major earthquake, mitigate this event to the maximum extent feasible, however, it recognizes that a pipeline could be damaged with a resulting leak.

C.1.7 Analysis of Discharges

C.1.7 ANALYSIS OF DISCHARGES, CONTINUED
Seismic Event:, Continued
The Hazardous Liquid Pipeline Risk Assessment (EDM 1993) did not identify incidents caused by landslide or ground movement except those as a result of an earthquake. Thus, it is assumed that this potential cause is remote.
Landslide - Ground Movement:
The PAALP segments analyzed in the risk and hazard analysis cross several areas which are subject to landslide or ground movement. However, as with the seismic design discussed above, Geotechnical expertise was utilized in the routing and design phases to locate and identify such hazards. To the maximum extent practical, all pipeline crossings in these areas were designed to avoid and/or mitigate the affects from ground movement (e.g., rerouting pipeline, buried depth below slide plane).
Material Failure:
The Hazardous Liquid Pipeline Risk Assessment (EDM 1993) concluded that nine percent of the pipeline incidents are caused by weld failures or equipment malfunction. The PAALP pipeline system was tested when installed, and will continue to be monitored and inspected in accordance with applicable regulations. The risk and hazard analysis also reviewed PAALP's Operations and Maintenance Procedures, and determined that it, in conjunction with ongoing monitoring and inspection procedures, adequately addresses component inspection and testing. Mainline valves are inspected and tested at least twice per year, at an interval not to exceed 7.5 months, in accordance with PAALP's Operation and Maintenance Procedures.
Probability of a Pipeline Release:
The Hazardous Liquid Pipeline Risk Assessment (EDM 1993) concluded that 1.6 percent of pipeline incidents are caused by operator error. Releases due to operator error may be mitigated, or eliminated, with an accurate on-line monitoring system. The risk and hazard analysis reviewed PAALP's method of operation and monitoring of the pipelines including instrumentation and communication. The analysis concluded that the PAALP pipeline is adequately monitored using computer-aided techniques which monitor flow rates, volumes, and pressures which are sent to the Oil Movement Control Center located in Midland, Texas. This Oil Movement Control Center monitors the pipeline system at all times.

C.1.7 Analysis of Discharges

C.1.7 ANALYSIS OF DISCHARGES, CONTINUED

Probability of a Pipeline Release:, Continued

The Pacific Pipeline Project Final EIR (Aspen, 1993) estimated that the probabilities of a leak and rupture of a modern, large diameter crude oil pipeline are 5.4 x 10-4 spill per pipeline-mile per year, and 2.7 x 10-4 ruptures per pipeline-mile per year, respectively. That equates to the following annual probabilities for the five pipeline segments examined.

Pipeline Segment	Length (Miles)	Probability of a Release	
		Leak	Rupture
Las Flores to Gaviota	10.5	5.7×10^{-3}	2.8×10^{-4}
Gaviota to Highway 101	2.5	1.4×10^{-4}	6.8×10^{-4}
Santa Ynez River Crossing	1.0	5.4×10^{-4}	2.7×10^{-4}
Sisquoc River Crossing	1.0	5.4×10^{-4}	2.7×10^{-4}

Potential Size of Pipeline Releases:

The size of a release from the pipeline would be a function of many factors including: pumping rates; the size of the hole; location of release point relative to the elevation profile of the pipeline; and time to detect the release and shut down the line. The size of the release could vary from a few drops to the worst case discharge (b) (7) bbls. (See worst case discharge calculations below). Historical data shows that small releases are much more likely than large releases. The following summarizes spill size distribution data from the Hazardous Liquid Pipeline Risk Assessment (EDM 1993).

- 27% of the incidents resulted in spill volumes or one barrel or less.
- The medium spill volume was five barrels.
- 61% of the incidents resulted in spill volumes of 10 barrels or less.
- 67% of the incidents resulted in spill volumes of 25 barrels or less.
- 82% of the incidents resulted in spill volumes of 100 barrels or less.
- 90% of the incidents resulted in spill volumes of 650 barrels or less.
- 95% of the incidents resulted in spill volumes of 1750 barrels or less.
- The largest spill volume was 31,000 barrels.

C.1.7 Analysis of Discharges

C.1.7 ANALYSIS OF DISCHARGES, CONTINUED
Potential Size of Pipeline Releases:, Continued
The worst case release analysis below is for the purpose of determining financial responsibility requirements under the OSPR regulations of the California Department of Fish and Wildlife. The huge difference between the 5 barrel median spill and the 408 barrel mean spill size was caused by a relatively small number of incidents which resulted in large volumes. This increased the mean value considerably.
Reasonable Worst Case Pipeline Release:

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

[redacted]

C.1.7 Analysis of Discharges

C.1.7 ANALYSIS OF DISCHARGES, CONTINUED

Reasonable Worst Case Pipeline Release:, Continued

The reasonable worst case discharge for each segment has been calculated by adding the draindown and the pumping losses, as required.

Pipeline Segment	Maximum Draindown Loss (BBLS)	Pump Loss (BBLS)	Total Loss Draindown & Pumping (BBLS)
Las Flores to Gaviota*	(b) (7)(F), (b) (3)		
Gaviota to Highway 101*			
Santa Ynez River Crossing			
Sisquoc River Crossing			

*** Subject to OSRP Cert**

Thus, based on the unlikely event of a complete pipeline rupture at the chosen location, the loss of primary communications capabilities and the implementation of the redundant communication (b) (7)(F), (b) (6)

Reasonable Planning Volumes:

The response planning volumes for on-water containment and recovery and shoreline protection and clean-up are based on the reasonable worst case discharge and the application of persistence and emulsification factors for the type of crude oil transported through the pipeline. The crude transported through the pipeline typically has an API gravity range of 20 – 21 degrees; therefore the oil is classified as a Group 3 oil for purposes of applying persistence and emulsification factors. Persistence and emulsification factors for a Group 3 oil are 0.50 and 2, respectively. These factors are the same for determining both on-water containment and recovery and shoreline protection and clean-up response planning volumes. The response planning volumes are:

C.1.7 Analysis of Discharges

C.1.7 ANALYSIS OF DISCHARGES, CONTINUED
Reasonable Planning Volumes:, Continued
On-Water Containment and Recover(b) (7)(F), (b) (3) **Shoreline Protection and Clean-up:**
These volumes were calculated by the following formula: (b) (7)(F), (b) (3) V - Planning Volume, BBLS RWCD – Reasonable Worst Case Discharge PF – Persistent Factor EF – Emulsification Factor
Pumps:
All of the mainline pumps are located at pump stations inside secondary containment systems. In addition, all the pumps are equipped with seal failure drain systems that drain to the station sump. The pumps are also equipped with seal leak switches that would shutdown the pump in the event of a seal leak, vibration and temperature sensors that would shutdown the pumps in the event of a malfunction, and high pressure shutdown switches and pressure relief valves that discharge to the station sump. Based on the safety features of the pumps, it would be extremely unlikely for a release to occur. The most frequent type of release from a pump is a seal failure which, if occurred on these pumps, would be discharged to the station sump and the pumps would automatically shut down. Even if there were some unforeseen failure of a pump, the release would be contained by the secondary containment system at each station.
Containment/Sumps:
All pump station relief valves and drains discharge through piping to a closed sump system. The sump tanks are of double wall construction with leak detection between the walls. They are located below grade. The contents of the sump tank are automatically pumped into the pipeline based on level sensors in the tanks. All four pump stations are surrounded by secondary containment systems that should contain any spill. PAALP has a formal program in place for draining the containment area. The program requires that the drain valves be chained closed except when opened to drain the containment area. In addition, supervisor approval is required before the drain valve can be opened and someone must be present at the pump station whenever a drain valve is open. Thus, it is virtually impossible for a release from one of the pump stations to leave the secondary containment system.

C.1.7 Analysis of Discharges

C.1.7 ANALYSIS OF DISCHARGES, CONTINUED
Pig Launchers/Receivers:
All pig launchers and receivers are located inside station secondary containment. In addition, each launcher/receiver has a catch basis under the door which drains to the sump system. PAALP has written procedures for launching and receiving pigs. Hence, it would be virtually impossible for a pig launcher/receiver release to leave the pump station containment systems.
The most common type of release from a pig launcher/receiver is drainage when the door is opened. Such a release is directed to the catch basin which drains to the sump system.

C.1.8 Recommended Mitigation Measures

The risk and hazard analysis concluded that it was possible for oil to be pumped to the sump through one of the main line pump casing valves if the valve were left open. To mitigate this potential hazard, it was recommended that the drain valves be car sealed closed. The pump casing valves have been car sealed since 1994.

C.1.9 Remaining Risk

As stated previously, the risk for spills cannot be reduced to zero. Because of the safety features and sump and containment systems in place at the pump stations, it is felt that it is virtually impossible for a release to leave the station.

The risk and hazard analysis concluded that the pipeline and its operation are state-of-the-art; however, spills are still possible, though extremely unlikely. The greatest remaining risk to the pipeline is damage to the line by third party activity although the remote nature of the pipeline, PAALP's surveillance activities, pipeline markers along the route, membership I the one-call system and participation in damage prevention programs such as contractor/ excavator safety awareness meetings minimize this potential to the maximum extend possible.

C.1.10 Documentation

The documentation and materials (P&ID's, diagrams, etc.) used in the risk and hazard analysis are maintained at the PPLP office in Bakersfield, California. The address and point of contact are:

Darren Palmer
Plains All American Pipeline, L.P.
3600 Bowman Court
Bakersfield, CA 93308
Phone: (661) 336-7908

C.1.11 Spill Potential and Prevention

This section provides an overview of general historical data relating to pipeline oil spills and describes the potential for oil spills associated with the Plains Pipeline. The major assumptions that underlie the oil spill risk analysis included in the project EIR/EIS include the following:

- Past accident frequencies can be used to predict future accident frequencies.
- Accidents are statistically independent and random and are sufficiently uncommon (especially major spills). Accident probabilities may be described through a statistical relationship called a Poison distribution.
- Although it is not feasible to assess the risks of all foreseeable types and circumstances of oil spill incidents, the ranges of possible impacts can be estimated from analysis of selected individual oil spill scenarios.
- A risk analysis has been conducted and all recommended mitigation measures have been successfully implemented.

General Historical Data on Pipeline Oil Spills

The available historical data for pipeline oil spills have been analyzed by various investigators in terms of different exposure variables. The exposure variables most commonly used to describe the risk of an oil spill from pipeline operations are:

- Volume of oil handled (e.g., the probability of a spill is described in terms of number of spills per billion barrels provided or handled).
- Miles of pipeline operational per year (e.g., the probability of a pipeline spill is described in terms of the number of spills per mile of pipeline operating per year).

Different investigators have emphasized one or another of these exposure variables according to the information they now have or expect to have available for risk prediction. In the discussion below, historical accident statistics are presented using several exposure variables. Based on the conclusions of the Oceanographic Institute of Washington (OIW 1978), pipeline mileage was selected as the best exposure variable. This variable allows an evaluation of all the available data for risk estimation.

The various causes of U.S. pipeline accidents over the five-year period from 1971 to 1975 (U.S. EPA 1982) are shown in **FIGURE C.1-3**. As shown, pipeline faults, including defective pipe and corrosion, accounted for 56 percent of the spills and 53 percent of the volume spilled. Loss of pipeline integrity due to internal corrosion is the largest cause of a spill and is more characteristic of older pipelines which were constructed of different materials. Spill size associated with corrosion is substantially smaller than a spill resulting form seam failure, the second largest source of pipeline fault spills. In the category of impact damage, equipment impact is the largest cause of spills. The largest volume of oil spilled is also attributed to equipment impacts.

FIGURE C.1-3 - CAUSES OF PIPELINE OIL SPILLS BASED ON HISTORICAL U.S. STATISTICS (1971 - 1975)

Cause	Percentage of Spills	Percent Volume Spilled
SYSTEM FAULT:		
Defective Pipe		
Seam Failure	12	25
Weld Failure	4	6
Other	1	4
Corrosion		
Internal	31	12
External	3	6
IMPACT DAMAGE:		
Equipment Impact	31[1]	26[1]
Excavation Equipment	3	7
NON-IMPACT DAMAGE:		
Natural Causes[2]	4	7
Flow Control Error	2	3
Other Error	1	3
OTHER:	3	1
TOTAL:	10	100

SOURCE: U.S. EPA 1982

[1] This includes data for all pipelines. Equipment impact data includes anchor draggings.

[2] "Natural causes" classification includes damage from earthquakes. It also includes spills from landslides, floods, etc. which may have been triggered by an earthquake. Data summaries do not specifically break out earthquake related spills in a separate category. The historical rate of oil spills from onshore pipelines have been estimated in numerous studies using pipeline mile-years as an exposure variable. The Oceanographic Institute of Washington (OIW 1978) calculated spill rates based on U.S. Coast Guard Pollution Incident Reporting System (USCG PIRS) data for the period 1973-1977. During this period, 1,580 spills, 2.4 barrels (100 gallons) or larger in size, were recorded for a cumulative total of 728,000 mile-years of pipeline. The inferred rate of spillage for spills larger than 2.4 barrels is 2.2×10^{-3} spills per pipeline mile-year. The size distribution of oil spills stemming from accidents to onshore pipelines has been evaluated by OIW and is shown in **FIGURE C.1-4**. It must be noted that these figures are based on a U.S. pipeline nationwide average diameter of 10 inches.

U.S. EPA (1982) reports the historical oil spill rate for pipelines as 1.3×10^{-3} spills per mile-year. This spill rate refers to a "reference pipeline" that is 10 inches in diameter and 25 years old. The reference line is buried three feet deep and has corrosion protection.

FIGURE C.1-4 - LAND PIPELINE SPILL SIZE DISTRIBUTIONS (1973 - 1977)

Spill Magnitude (barrels)	Number	Percent of Total Number	Volume* (barrels)	Percent of Total Volume
2.4 - 10	582	36.8	3,682	1.0
11 - 100	754	47.7	30,298	8.2
101 - 1,000	198	12.5	63,562	17.3
1,001 - 10,000	41	2.6	147,541	40.1
10,001 - 100,000	5	0.3	123,091	33.4
TOTAL	1,580	100.0	368,174	100.0

Source: U.S. Coast Guard Pollution Incident Reporting System (OIW 1978)

Note: 1 Barrel = 42 Gallons

Data based on a U.S. pipeline nationwide average diameter of 10 inches.

Pipeline spill rates are known to vary as a function of age and size. The mean spill size and line diameter for pipeline accidents is reported to the Office of Pipeline Safety and Operations (OPSO) for the 5-year period of 1971 to 1975. For 30 to 34-inch pipelines the mean spill size is approximately 6,000 barrels. Specifications in the non-destructive evaluation model (i.e., x-ray and hydrostatic testing) including diameter, length, throughput, age, elevation, pressure, pump shutdown time, valve spacing and closure times, and spill prevention and countermeasures.

Since the Plains Pipeline is a new line, it is expected, according to Mastandrea (1982), that the incidence of spills exceeding 50 barrels would be 0.00176 spills per year (1.76×10^{-3}), or considerable below the national average.

It has been hypothesized that spill frequency may be expected to reach nationwide average in approximately 30 years with an annual incident of spills of 0.0016 per year (1.6×10^{-3} spills per year mile-year) [Mastandrea 1982]. Mastandrea's analysis is very conservative when the new pipeline design systems and materials are considered. The Plains Pipeline System should not experience the corrosion problem which accounts for 39 percent of current spills. The quality assurance procedures which were implemented for weld inspection and hydrostatic pressure testing will reduce defective pipe incidents. Defective pipe incidents account for 17 percent of current spills reported (see **FIGURE C.1-3**).

Most recently, EDM Services Inc. (1993) prepared the Hazardous Liquid Pipeline Risk Assessment in response to Assembly Bill 385 and Senate Bill 268. A summary of this Assessment (EDM 1993 - Executive Summary) is provided in **FIGURE C.1-5**.

FIGURE C.1-5 - CALIFORNIA REGULATED HAZARDOUS LIQUID PIPELINES (JANUARY 1981 - DECEMBER 1990 DATA)

Event	Incident Rate
Any size leak	7.1 incidents per 1,000 mile years
Damage greater than $5,000	1.3 to 6.2 incidents per 1,000 mile years
Damage greater than $50,000	Up to 4.4 incidents per 1,000 mile years
Any injury, regardless of severity	0.70 injuries per 1,000 mile years
Fatality	0.01 to 0.04 injuries per 1,000 mile years

The primary findings of this Assessment are summarized below:

- Pipelines with 500 feet of a rail line do not pose a higher risk than those located farther from a railroad.
- External corrosion caused 59 percent of the leak incidents, followed by third party damage, which caused 20 percent.
- Older pipe and pipelines operated at elevated operating temperatures had significantly higher leak incident rates, primarily affected by increased external corrosion incident rates.
- Little benefit was found to be associated with the cost of adding additional block valve's to California's regulated hazardous liquid pipeline network.

C.1.12 Off-Site Consequence Analysis

Refer to **SECTION 6.14** for the trajectory analysis.

C.1.12 OFF-SITE CONSEQUENCES ANALYSIS
This section discusses the off-site consequences analysis which was conducted concurrent with the Facility Risk and Hazard Analysis covered in **APPENDIX C.1.2**. It also describes the biological (terrestrial and aquatic) and cultural (prehistoric and historic) resources, including those considered sensitive, along or near the Plains All American Pipeline System that could be affected by an oil spill. Chapter 800 has been developed to assist oil spill response personnel in minimizing impacts to these resources during their response, containment and clean-up efforts. This section also discusses the relative sensitivity of different habitats, provides references to sensitive resources and describes spill response considerations associated therewith.
As discussed in **APPENDIX C.1.2**, PAALP has calculated reasonable worst case spill volumes for four major areas along the Santa Barbara County pipeline routes: a section of pipeline approximately 10.5 miles in length that crosses Cañada del Refugio; a section of pipeline approximately 13.4 miles in length that crosses Cañada de la Gaviota; a section of pipeline approximately 19.2 miles in length that crosses the Santa Ynez River; and a section of pipeline approximately 10.3 miles in length that crosses the Sisquoc River. Calculated spill volumes included detection and shutdown losses as well as draindown from equivalent elevations on either side of the hypothetical pipeline break. All four pipeline segments cross perennial watercourses that could be expected to have sufficient flow during any season to carry spilled oil to marine waters of the State. During worst case conditions, the flows in each of these watercourses would be expected to carry the majority of the spilled oil into the ocean. For the purposes of this analysis, it is assumed that 100 percent of the spill volume would be transported to the shoreline. Depending on the exact location of the pipeline rupture, a percentage of the oil would be expected to soak into the ground, cover the surface of the ground, and coat portions of the stream bank downstream from the spill site. However, an assumed pipeline rupture adjacent to the watercourse crossing check valve would allow all but a small percentage of the oil to enter the stream, and under high flow conditions, only a small percentage of the oil would be expected to coat the stream bank.

C.1.12 Off-Site Consequence Analysis

Refer to **SECTION 6.14** for the trajectory analysis.

C.1.12 OFF-SITE CONSEQUENCES ANALYSIS, CONTINUED
Refer to **FIGURE 6.3-3** for a description of site-specific environmental protection and **FIGURE 6.3-4** for a description of major stream crossings. Trajectory analyses can be found in **SECTION 6.14**.

C.2 SPILL DETECTION AND PREVENTION

Detection

Detection of a discharge from the Company system may occur in a number of ways including:

- Automated detection by the Supervisory Control and Data Acquisition (SCADA) system.
- A report received from the pipeline aerial patrol.
- Report from tendering or delivery facility.
- Visual detection by Company personnel.
- Visual detection by the public.
- A call from a saboteur or prankster.

AVAILABILITY - ALL TANKS

Automated detection

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

C.2 SPILL DETECTION AND PREVENTION, CONTINUED

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

[redacted]

- **Training**

  All operators are compliant with DOT 195 Operator Qualification Requirements.

C.2 SPILL DETECTION AND PREVENTION, CONTINUED

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. 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. Should a leak be 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 2.2-1 provides a checklist for initial response actions.

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. 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 generally will implement the following actions:

- Notify the Pipeline Control and region/designated office.
- Dispatch Company field personnel to the site to confirm discharge and conduct preliminary assessment.
- Notify their immediate area supervisor and provide assessment results.

Pipeline shutdown

If any of these situations are outside the expected values, abnormal conditions are considered to exist. If abnormal conditions exist, Pipeline Control will take the appropriate actions to ensure that a release does not occur. If a discharge has occurred, Pipeline Control will take actions to limit the magnitude. In either case, appropriate actions taken by Company personnel could include, but are not limited to:

- Shut down effected line segment if there is an indication of a leak.
- Isolate line segment.
- Depressurize line.
- Start internal and external notifications.
- Mobilize additional personnel as required.

C.2 SPILL DETECTION AND PREVENTION, CONTINUED

Receiving Report Information

Under certain circumstances any person employed by the Company may be required to receive information concerning an emergency event. For this reason each employee shall be trained to take pertinent information from the person reporting the incident. Pertinent information, which shall be requested of the reporting party, is listed on Emergency Notification Report, PPLP Form No. 601. This report should be used when possible. If the form is not available, as much of the information as can be remembered should be taken. Always ask for the caller's name, phone number, or where the caller can be reached and the location of the emergency. The emergency instructions on the back of the form should be relayed to the caller or if the form is not available advise the caller to move to a safe location and do what he can to lessen the severity of the emergency without endangering himself, and wait for further instructions.

The phone number listed on the pipeline markers (1-800-322-PIPE) is to the Oil Movement Control Center (OMC). It should be called to report an emergency. The Oil Movement Control Center (OMC) is manned 24 hours a day. During working hours, all emergencies reported to the Operations office (Bakersfield) shall be transferred to the Oil Movement Control Dispatcher on duty. If an emergency report should be received by the Bakersfield Division or Santa Maria District office or by an employee at home, the employee receiving the call shall take the information as completely as possible and relay that information to the Oil Movement Control Dispatcher on duty.

Additional Spill Detection and Prevention Measures

Additional spill detection and prevention measures are described below.

C.2 SPILL DETECTION AND PREVENTION

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

[redacted]

C.2 SPILL DETECTION AND PREVENTION, CONTINUED

C.2 SPILL DETECTION AND PREVENTION, CONTINUED

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

[redacted]

C.2 SPILL DETECTION AND PREVENTION, CONTINUED

C.2 SPILL DETECTION AND PREVENTION, CONTINUED

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

[redacted]

C.2 SPILL DETECTION AND PREVENTION, CONTINUED

C.2 SPILL DETECTION AND PREVENTION, CONTINUED
Preventive Measures:, Continued
A significant measure taken with respect to the prevention of crude oil spills in the transportation of OCS crude oil is the designation of pipelines as the primary means for such transportation. Pipelines have long been recognized as the safest and most reliable means to transport crude oil and other liquid hydrocarbons, as well as natural gas. Pipelines have been proven through many years of operation to have a much lower spill potential and actual spill frequency than all other useable forms of oil transportation, including marine vessels, rail cars, and trucks. Therefore, use of the PAALP is a major factor in limiting spills that could otherwise occur in the transportation of OCS crude oil.
Design - Careful attention and review has been given to the design and construction of the PAALP to produce a pipeline fully in accordance with the safety standards set forth by all applicable U.S. Department of Transportation (DOT) regulations. Particular attention was given to design criteria and equipment specifications during the design phase of the project. Specification of the line pipe, its purchase, and its factory inspection and testing were each priority considerations. The logistics of shipping, receiving, handling, storage, and hauling line pipe and materials to the ROW were equally important factors in assuring that high quality pipe (in good condition) would be used to construct the pipeline. Equal care was given to the specification and selection of other equipment including valves and fittings, pumps and drivers, instrumentation, safety monitors, and control equipment.
Route Selection - Such care was similarly given to pipeline route selection to avoid developed areas to the maximum degree possible. Fault lines, water courses, steep slopes, and other terrain features were recognized and either avoided wherever possible or mitigated by effective design to minimize potential spills.
Construction - Similar care was also exercised during construction to ensure that all specified requirements, methods and procedures were properly observed, applied or performed, thus assuring the structural integrity of the completed pipeline. Inspection was performed by appropriately trained personnel to 1) ensure the use of proper materials and components and 2) ensure that they were properly installed. Each welder was tested and certified as to his qualifications to work on the project. In addition, the welding was inspected to ensure its quality. Welds were X-rayed in excess of the number required by DOT, and as a follow-up, the completed pipeline was hydrostatically tested to verify the quality control expended during construction together with the resultant structural integrity.

C.2 SPILL DETECTION AND PREVENTION, CONTINUED

C.2 SPILL DETECTION AND PREVENTION, CONTINUED
Preventive Measures:, Continued
Cathodic Protection - A cathodic protection system for the pipeline has been installed. It consists of distributed impressed current sources (both rectifiers and bonds to existing systems), along with supplemental galvanic anodes as required to protect the pipeline from external corrosion. A high-quality external coating was applied to the pipeline, which effectively lowers the total amount of pipe exposed to the soil (electrolyte), thereby reducing the current levels required to achieve adequate protection.
Cathodic protection test stations are installed at approximately one-mile intervals along the pipelines. Additional test stations are installed at closer intervals (e.g., roads, railroads, valves, rectifiers, and other pipeline crossings) as deemed appropriate, based on actual field conditions.
Impressed current cathodic protection rectifiers and/or groundbeds are installed at approximately 80-mile intervals. Rectifiers are normally installed at pump stations where possible. Deep well anode beds and rectifier locations have been installed at Las Flores, Gaviota and Sisquoc Pump Stations to ensure adequate cathodic protection for all pipeline and pump station equipment. Groundbeds contain approximately 20 impressed current anodes surrounded by a column of coke breeze backfill. They are typically designed for an output of 30 amperes. Individual anode lead wires are run above ground to a junction box for measurement purposes. The cathodic protection system is inspected as required by DOT regulations.

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

C.2 SPILL DETECTION AND PREVENTION, CONTINUED

C.2 SPILL DETECTION AND PREVENTION, CONTINUED
Preventive Measures:, Continued
Oil Spill Emergency Response Procedures - The following procedures will be followed to prevent or limit the discharge from a leak that is either detected by the leak detection system or reported to the control room.

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

[redacted]

C.2 SPILL DETECTION AND PREVENTION, CONTINUED

C.2 SPILL DETECTION AND PREVENTION, CONTINUED
Preventive Measures:, Continued

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

[redacted]

C.2 SPILL DETECTION AND PREVENTION, CONTINUED

C.2 SPILL DETECTION AND PREVENTION, CONTINUED
Preventive Measures:, Continued
In the event of communication loss to multiple RTU locations or the loss of multiple telemetry devices, the OMC dispatcher will immediately notify his/her supervisor. Field personnel will be dispatched to each affected site to assist with monitoring and shutdown of the pipeline segment. After all necessary repairs are completed, the pipeline system will be returned to service. Field personnel will temporarily man the stations to ensure that all systems are functioning in a normal fashion.
Pipeline Identification Markers
Permanent markers are erected along the length of the pipeline. These include mile markers for aerial reconnaissance, road and stream crossing markers, and other markers indicating the presence of the pipeline. The line markers are checked periodically to assure their presence and good condition.
Maintenance, Monitoring and Repairs or Replacement
Routine maintenance and continuous monitoring (through the SCADA system) help to ensure that the integrity of the pipeline and its components remains intact. Routine aerial inspections are conducted pursuant to DOT requirements.
Note: The Company conducts bi-monthly aerial reconnaissance of the pipeline ROW and river crossings (26 times per year, not exceeding three week intervals). The aerial patrol pilot is highly qualified and very familiar with PAALP's pipelines and related facilities. The pilot, during aerial overflights, observes the condition of PAALP's facilities and pipeline rights-of-way and reports any abnormalities to Santa Maria District operations and maintenance personnel. These personnel are then responsible for follow-up on-site inspections and corrective actions as may be appropriate. As appropriate, all components are routinely checked along the ROW and serviced if necessary to maximize longevity and minimize wear.
As required by 40 CFR 195, PAALP conducts routine and periodic maintenance inspections to ensure all pipeline components are in an operable and safe condition. If an equipment item or pipeline component malfunction has been discovered by remote monitoring, maintenance personnel may, depending upon the nature and extent of the problem, be immediately dispatched to complete the requisite inspection. If during remote monitoring detection and the subsequent dispatch of personnel or during a scheduled maintenance inspection, the equipment or component is found to be inoperable or defective, in whole or in part, it will be immediately repaired or replaced unless critical operations are underway at the time of discovery. If critical operations are underway at the time of discovery, the item in questions will be scheduled for maintenance, repair or replacement during the next scheduled pipeline operations downtime. If the initial inspection reveals an unsafe condition, the affected equipment or component will be immediately removed from service and is promptly repaired or replaced.

C.2 SPILL DETECTION AND PREVENTION, CONTINUED

C.2 SPILL DETECTION AND PREVENTION, CONTINUED
Preventive Measures:, Continued
If the pipelines or related pumping equipment and components become damaged for whatever reason (e.g., third party impact, equipment malfunction causing direct or indirect damages), said equipment or component will be immediately inspected. If such inspection reveals that the damaged item creates an unsafe condition, it will be immediately removed from service and repaired or replaced, as appropriate. If it is determined that the damaged item will not create an unsafe condition, necessary and required repair or replacement will be scheduled accordingly.
Preventative Measures Required by Federal, State and Local Agencies
There are several other preventive measures, direct and indirect, that PAALP employ's in compliance with various federal, state and/or local agency requirements. These include:
• Liaison programs with emergency response agency personnel and PAALP's public education program which includes an annual mailout advisory package to all local area contractors and emergency response agency personnel in the subject area. It also includes a bi-annual mailout to all known landowners and tenants. Annual contacts with response agency personnel, in person or over the phone, are also included in this program. As necessary and appropriate, door to door visits to nearby residents and advertisements in local broadcast media and newspapers may be included in the Company Public Education Program.
• PAALP is a member and strong supporter of the Underground Service Alert (USA) system of notification to underground facility operators. PAALP belongs to both USA—North (Kern and San Luis Obispo Counties) and USA—South (Santa Barbara County) and on average PAALP receives and responds to hundreds of notifications annually. In response to an advisory by USA — North or South, PAALP promptly contacts the requesting party and makes arrangements to accurately locate its facilities relative to the proposed ground disturbing activities or promptly advises the requesting party that there is no conflict between PAALP's facilities and the proposed activity.
• Damage prevention programs inducting periodic co-sponsorship of excavator safety awareness seminars (ESA's) which are often coordinated by USA — North or South and/or other third party's.

C.2 SPILL DETECTION AND PREVENTION, CONTINUED

C.2 SPILL DETECTION AND PREVENTION, CONTINUED
Preventive Measures:, Continued
• In the Santa Barbara County, the three (3) major river crossings (Santa Ynez, Sisquoc and Cuyama) are visually inspected annually to ensure that existing cover over the pipeline is substantially the same as it was when the pipeline crossings were installed in 1986. At five (5) year intervals, or sooner as determined by certain events, an actual survey is completed at each of these crossings and a profile is prepared to depict current river bed grade and the as-built location of the pipeline.
• At the new Gaviota Creek crossing installed in November 2000, surveys will be conducted every year for the first two years and no less than every three years thereafter.
Operations, Maintenance and Emergency Response Procedures
Department of Transportation regulations require that written procedures be followed for conducting normal operations and maintenance activities and handling abnormal operations and emergencies. Normal operations and maintenance procedures , as well as procedures that are followed during abnormal conditions and during emergencies other than an oil spill are contained in this manual. The procedures in this plan are followed in the event of an oil spill incident in Santa Barbara County. This manual is reviewed at intervals not exceeding 15 months, but at least once each calendar year. Changes to the manual are made as necessary to ensure that the manual is effective. The DOT regulations specify as a minimum the procedures that must be developed and contained in the manual to safely conduct normal operations and maintenance, recognize and respond to abnormal conditions, and effectively and safely handle emergencies. Operations personnel are trained and tested on the procedures in this manual.
Refer to **FIGURE A.2-1** for operator qualifications and **APPENDIX A.3** for a description of the Alcohol and Drum Program and Safety Incentive Program.

C.3 WORST CASE DISCHARGE (WCD) SCENARIO

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** and **APPENDIX B**. The following sections are discussions of these scenarios.

APPENDIX C.5 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 2.2-1**.

2. The Area Supervisor/Manager of Operations 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 2.2-1** and evacuate personnel as needed in accordance with **SECTION 2**.
    - Direct facility responders to shut down ignition sources.
    - Direct facility personnel to position resources in accordance with **SECTION 6**.
    - 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 2.2.3**.

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**)
    - Incident Action (**SECTION 5.3.2**)
    - Disposal (**SECTION 5.6**)
    - Site Security (**SECTION 5.7**)
    - Decontamination (**SECTION 5.5**)
    - Demobilization (**SECTION 5.8**)

7. The response would continue until an appropriate level of cleanup is obtained.

C.4 PLANNING VOLUME CALCULATIONS

Once the worst case discharge volume has been calculated, response resources must be identified to meet the requirements of 49 CFR 194.105(b). 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.

C.5 SPILL VOLUME CALCULATIONS

C.5.1 DOT/PHMSA Portion of the Pipeline/Facilities

The worst case discharge (WCD) for the DOT portion of the pipeline and facilities, 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 30% of the volume of the largest tank in each zone.

The line sections with the highest throughput and largest drainage volume between block valves on pump stations were chosen to calculate the pipeline worst case discharge. Although the entire discharge volume of each line was used for the worst case discharge, in an actual spill event, it would take days to drain the line completely. The line would be sealed early in the response effort.

All of the breakout tanks in the pipeline system are within adequate secondary containment, therefore, the discharge volumes for the largest tank was determined by adjusting the total tank volume downward by 70% per the company guidelines.

Considering the volume of release from a line break compared to that of historic discharge in each zone and to the volumes released from a tank failure, the tank failure was found to represent the worst case scenario.

The maximum historic discharge is not applicable for WCD covered by this plan. Given below are the tank and pipeline WCD calculations for this plan.

The worst case tank volume is calculated as follows:

Largest tank x Credit for containment tank standards = Tank standards credit

LOCATION	VOLUME (BBLS)
(b) (7)(F), (b) (3)	(b) (7)(F), (b) (3)

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 70% and the worst case discharge volume is 30% of the total volume.

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

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

Where:

WCD = worst case discharge (bbl)

DT + ST = maximum detection time + maximum shut down time in adverse weather (generally 15 minutes except where noted)

MF = maximum flow rate (bph) (using 3200 bph)

DD = drain down volume (bbl) (internal diameter)

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

The DOT/PHMSA WCD volume for this plan is: (b) (7)(F), (b) (3)

C.5.2 OSPR Pipeline Portion of the Facilities

LINE NAME	MAXIMUM TIME TO DISCOVER RELEASE + MAXIMUM TIME TO SHUT DOWN FLOW (hr)	MAXIMUM FLOW RATE (bbl/hr)	TOTAL LINEFILL DRAINAGE VOLUME (bbl)	REASONABLE WORST CASE DISCHARGE VOLUME (bbl)
(b) (7)(F), (b) (3)				

C.5.3 OSPR Response Planning Volume Calculations

The following calculations and their applications to response zone planning are designed for open water marine spills and coastal shoreline cleanup and may have limited applicability to inland spill situations.

GIVEN (On-Water Containment and Recovery)	
Reasonable Worst Case Discharge Volume of Oil:	(b) (7)(F), (b) (3)
Type of Petroleum Handled:	Group 3
Facility's Risk Zone:	Santa Maria Response Zone
Persistence Factor:	0.5
Emulsification Factor:	2
GIVEN (Shoreline Cleanup)	
Reasonable Worst Case Discharge Volume of Oil:	(b) (7)(F), (b) (3)
Type of Petroleum Handled:	Group 3
Facility's Risk Zone:	Santa Maria Response Zone
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), (b) (3)	
Response Planning Volume for Shoreline Cleanup	
(Worst Case Discharge) (Persistence Factor) (Emulsification Factor)	
(b) (7)(F), (b) (3)	
CONCLUSIONS	
The risk and hazard analysis concluded that the pipeline and its operation are state-of-the-art; however, spills are still possible, though extremely unlikely. The greatest remaining risk to the pipeline is damage to the line by third party activity although the remote nature of the pipeline, PAALP's surveillance activities, pipeline markers along the route, membership I the one-call system and participation in damage prevention programs such as contractor/ excavator safety awareness meetings minimize this potential to the maximum extend possible.	

C.5.4 OSPR On-Water Daily Recovery Rate

The total amount of recovery equipment and services required by OSPR (on-water) is the amount necessary to address the response planning volume (refer to **APPENDIX C.5.3**) or the OSPR established daily recovery rate, whichever is less. The amount of equipment available can be found below.

	ESTIMATED DAILY RECOVERY (bbl/day)			
	6 Hours	**24 Hours**	**36 Hours**	**60 Hours**
Worley Catastrophe Response 303 Timber Creek Hammond LA 70403				
Amergent Tech 4101 N. Long Beach Blvd Long Beach CA 90807				
M.P. Environmental Services, Inc. 3400 Manor Bakersfield CA 93310				
Clean Seas, LLC 990 Cindy Lane Unit B Carpinteria CA 93013				74,033
Witt O'Brien's 2929 E. Imperial Hwy, Suite 290 Brea CA 92821				
NRC Environmental Service Pier D, Berth – D47 Long Beach CA 90802	21,455	52,889	52,889	52,881
Center for Toxicology and Environmental Health, LLC (CTEH) 5120 North Shore Drive North Little Rock AR 72118				

Daily Recovery Rate required by OSPR regulations:

- Tier 1 - 6 hours, 23,437 bbl/day
- Tier 2 - 24 hours, 31,250 bbl/day
- Tier 3 - 36 hours, 46,875 bbl/day

- Tier 4 - 60 hours, 78,125 bbl/day

In addition, the State of California OSPR regulations require identification of sufficient temporary storage for all recovered oil or all oily waste for recycling or other means of waste management. Sufficient temporary storage is considered to be no less than two times the calculated response planning volume up to the Daily Recovery Rate. OSRO capabilities exceed this capacity requirement.

C.5.5 OSPR On-Water Recovery Capability

The total amount on-water recovery capability required by OSPR is 10 percent of the reasonable worst case discharge volume (refer to **APPENDIX C.5.2**) or 3,125 bbls/day, whichever is less, that can be mobilized and on-scene within two hours of notification. If this requirement can be met, initial on-water recovery capability can be on-scene within three hours rather than two. The facility's recovery capability can be found below.

	ON-WATER RECOVERY CAPABILITY (bbl)
Worley Catastrophe Response 303 Timber Creek Hammond, LA 70403	
Amergent Tech 4101 N. Long Beach Blvd Long Beach, CA 90807	
M.P. Environmental Services, Inc. 3400 Manor Bakersfield, CA 93310	
Clean Seas, LLC 990 Cindy Lane Unit B Carpinteria, CA 93013	22,055
Witt O'Brien's 2929 E. Imperial Hwy, Suite 290 Brea, CA 92821	
NRC Environmental Service Pier D, Berth – D47 Long Beach, CA 90802	2,500
Center for Toxicology and Environmental Health, LLC (CTEH) 5120 North Shore Drive North Little Rock, AR 72118	

C.6 PIPELINE - ABNORMAL CONDITIONS

Because PHMSA considers the "substantial threat" term in 49 CFR Part 194.115(a) equivalent to the "abnormal conditions" term under 49 CFR Part 195.402(d), procedures to identify events and conditions that can pose a threat of worst case discharge, and actions to take for preventing and mitigating such events and conditions are described in the System Integrity Plan.

C.7 PRODUCT CHARACTERISTICS AND HAZARDS

Pipeline systems described in this plan may transport various types of commodities including but not limited to:

- Butane
- Crude Oil
- NGL's
- Propane

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.

The Company has conducted extensive monitoring of its employees for exposure to organic vapors, included in this program is analysis for Benzene. During 1992, the Company conducted a company-wide monitoring program through the use of passive, organic vapor, personal monitors worn by those employees with exposure or potential exposure to organic vapors naturally occurring in crude oil during their normal work activities. The results of this monitoring program indicated an average exposure of 0.038 ppm (parts per million) to the Company's California associates. This is well below the permissible exposure limit of 1 ppm. The data collected in this study is periodically updated to assure the safety and health of the Company's employees.

FIGURE C.7-1 describes primary oils handled.

FIGURE C.7-1 - SUMMARY OF COMMODITY CHARACTERISTICS

COMMON NAME	MSDS NAME	HEALTH HAZARD	FLASH POINT	SPECIAL HAZARD	REACTIVITY	HEALTH HAZARD WARNING STATEMENT
Butane	Butane	1	4	Flash Fire	0	Liquefied gas may cause eye and skin burns and frostbite. Gas may reduce oxygen available for breathing.
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.
NGL's	Appropriate Product Name	1	4	P,A,C,Y	0	Extremely cold material; can cause burns similar to frostbite. Simple asphyxiant that may displace oxygen at very high concentrations. May contain Carcinogens and Natural Occurring Radioactive Materials (NORM).
Propane	Appropriate Product Name	1	4	P, A	0	Extremely cold material; can cause burns similar to frostbite. Simple asphyxiant that may displace oxygen at very high concentrations.

Health Hazard	**4 = Extremely Hazardous** **3 = Hazardous** **2 = Warning** **1 = Slightly Hazardous** **0 = No Unusual Hazard**	**Fire Hazard (Flash Point)**	**4 = Below 73° F, 22° C** **3 = Below 100° F, 37° C** **2 = Below 200° F, 93° C** **1 = Above 200° F, 93° 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 D
CROSS-REFERENCES

Last revised: May 2008

FIGURE D-1 - 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	Section 1
• QI names and telephone numbers, available on 24-hr basis	Figure 1-2
• 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	Figure 1-2, Appendix C.4
• 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	Figure 3.1-5, Figure 3.1-6
• Checklist of notifications the operator or Qualified Individual is required to make under the response plan, listed in the order of priority	Figure 3.1-5, Figure 3.1-6
• 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 3.1-5, Figure 3.1-6
• Procedures for notifying Qualified Individuals	Figure 3.1-1, Section 4.5, Figure 4.5-1
• Primary and secondary communication methods by which notifications can be made	Section 7.1.6

FIGURE D-1 - DOT / PHMSA CROSS-REFERENCE, CONTINUED

OPA 90 REQUIREMENTS (49 CFR 194)	LOCATION
Notification Procedures, Continued	

• 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 C.1
• 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 7.1-1, 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 3.1-5, Section 7.1.1, 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 notification of the response resources identified in the response plan	Section 4.5
• 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 4.4, Figure 4.5-1
• 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 D-1 - 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
• Qualified individuals for the operator's areas of operation	Figure 1-2, Figure 3.1-5
• Applicable insurance representatives or surveyors for the operator's areas of operation	Figure 3.1-1
• Persons or organizations to notify for activation of response resources	Figure 3.1-1
Training Procedures	
• Description of training procedures and programs of the operations	Appendix A.2
Drill Procedures	
• Announced and unannounced drills	Figure A.1-2

• Types of drills and their frequencies; for example:
  • Manned pipeline emergency procedures and qualified individual notification drills conducted quarterly
  • 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
	Figure A.1-2

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
Response zone appendices	
Each response zone appendix would provide the following information:	
• Name and telephone number of the qualified individual	Figure 1-2
• Notification procedures	Figure 3.1-1
• Spill detection and mitigation procedures	Section 2.2.1, Appendix C.1

FIGURE D-1 - DOT / PHMSA CROSS-REFERENCE, CONTINUED

OPA 90 REQUIREMENTS (49 CFR 194)	LOCATION
Response zone appendices, Continued	
• Name, address, and telephone number of oil spill response organization	Figure 3.1-5, Figure 3.1-6, 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
	Figure 3.1-5, Appendix A, Appendix B

• Names and telephone numbers of federal, state, and local agencies which the operator expects to assume pollution response responsibilities	Figure 3.1-6
• Worst case discharge volume	Appendix C.4
• Method used to determine the worst case discharge volume, with calculations	Appendix C.4

• 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 1-4, Section 6.12

• 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

• 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 C.6-1

FIGURE D-2 - PHMSA FACILITY RESPONSE PLAN REVIEW CROSS-REFERENCE

Office of Pipeline Safety (OPS)	LOCATION
National Contingency Plan and Area Contingency Plan Certifications (49 CFR 194.107(b))	
1.A. Has the operator reviewed the National Contingency Plan (NCP) and each applicable Area Contingency Plan (ACP)?	Section 1.1
1.B. Does the Facility Response Plan follow the Area Contingency Plans?	Section 1.1
1.C. Please list the names of the Area Contingency Plans and the pages in the Facility Response Plan that relate to the Area Contingency Plans.	Section 1.1, Entire Plan
Plan Information Summary (49 CFR 194.107(c)(1), (c)(1)(i) and (c)(2) and 49 CFR 194.113)	
2. Does the Plan Information Summary contain the following?	
• The Operator Name, Street Address, City, State, and Zip Code.	Figure 1-2
• A list of response zones that meet the criteria for significant and substantial harm (49 CFR 194.113(a)(2)) and a list of response zones in which a worst-case discharge could cause substantial harm.	Figure 1-2
• The basis for the operator's determination that the response zone meets the criteria for significant and substantial harm and a statement that a worse case discharge in the response zone can be expected to cause significant and substantial harm for each response zone.	Figure 1-2
• Description of each response zone, including the county(s) and State (s).	Figure 1-2
• Explanation for each response zone designation.	Figure 1-2
• Name(s), title(s), and office and cellular telephone number(s) for the Qualified Individual(s) twenty-four hours a day in each response zone.	Figure 1-2, Figure 3.1-5
• Name(s), title(s), and office and cellular telephone number(s) for the Alternate Qualified Individual(s) twenty-four hours a day in each response zone.	Figure 1-2, Figure 3.1-5
• List of line sections in each response zone by milepost, survey station number, or other operator designation.	Figure 1-2
• If any response zone contains multiple pipeline systems, all pipeline systems are described and the oils they transport are listed.	Figure 1-2
• The type of oil and the volume of the worst-case discharge in each response zone.	Figure 1-2
Notifications	
3.1. What person, position, or facility is responsible for starting immediate notification? (49 CFR 194.107(c)(1)(ii)) Please list the person's, position's, or facility's mailing and electronic mail addresses and office, fax, and cellular telephone information.	Figure 1-2
3.2. Is the person, position, or facility capable of starting immediate notification twenty-four hours a day, three hundred sixty-five days a year? (49 CFR 194.107(c)(1)(ii)) Please describe your immediate notification plan.	Section 3

FIGURE D-2 - PHMSA FACILITY RESPONSE PLAN REVIEW CROSS-REFERENCE, CONTINUED

Office of Pipeline Safety (OPS)	LOCATION
Notifications, Continued	
3.3. Do the Facility Response Plan notification procedures include telephone numbers so that the qualified individual(s) and oil spill removal organization (s) can be reached twenty-four hours a day, three hundred sixty-five days a year? (49 CFR 194.107(b)(1) and (2), 194.107(c)(1)(ii) and 194.113(b)(2))	Section 3
• Qualified Individual(s)?	Figure 3.1-5
• Oil Spill Removal Organization(s)?	Figure 3.1-5, Figure 3.1-6
• Are the National Response Center numbers correctly listed as 1-800-424-8802 and 202-267-2675 in the plan?	Figure 3.1-6
• Company personnel?	Figure 3.1-5
3.4. Does the notification section include the following information? (49 CFR 194.107(b)(1) and (2), and 194.107(c)(1)(ii))	
• Name of pipeline operator?	Figure 3.1-2, Figure 3.1-3, Figure 3.1-4
• Time of discharge?	Figure 3.1-2, Figure 3.1-3, Figure 3.1-4
• Location of discharge?	Figure 3.1-2, Figure 3.1-3, Figure 3.1-4
• Name of oil involved?	Figure 3.1-2, Figure 3.1-3, Figure 3.1-4
• Reason for discharge?	Figure 3.1-2, Figure 3.1-3, Figure 3.1-4
• Estimated volume of oil discharged?	Figure 3.1-2, Figure 3.1-3, Figure 3.1-4
• Weather conditions on scene?	Figure 3.1-2, Figure 3.1-3, Figure 3.1-4
3.5. Does the Facility Response Plan name and give the address(es) and telephone number(s) for the operator's oil spill removal organization(s)? (49 CFR 194.107(c)(1)(iv) and 194.115)	
• Name(s)?	Appendix B.1.1
• Address(es)?	Appendix B.1.1
• Telephone Number(s)?	Figure 3.1-5, Figure 3.1-6
Spill Detection and Mitigation Procedures	
4.1. Does the Facility Response Plan contain procedures to name and mitigate or prevent a substantial threat of a worst-case discharge? (49 CFR 194.107(a) and (b)(2)(i))	Appendix C.2
4.2. Does the Facility Response Plan name personnel, equipment, and procedures for detecting leaks and spills and locating spills throughout the response zone? (49 CFR 194.107(c)(1)(iii))	Figure 3.1-5, Section 7.1.1, Figure 7.1-1, Appendix B
4.3. Does the Facility Response Plan name the maximum time to detect the spill and shut down flow in affected pipeline(s) in bad weather? (49 CFR 194.105(b)(1))	Appendix C.4

FIGURE D-2 - PHMSA FACILITY RESPONSE PLAN REVIEW CROSS-REFERENCE, CONTINUED

Office of Pipeline Safety (OPS)	LOCATION
Spill Detection and Mitigation Procedures, Continued	
4.4. Does the Facility Response Plan have procedures to mitigate spills appropriate for the response zone(s) and consistent with applicable Area Contingency Plan(s)? (49 CFR 194.107(b)(2)(i), and (c)(1)(iii) and (v))	Section 2.2
Spill Containment	
5.1. Does the Facility Response Plan name spill containment strategies appropriate for the response zone(s) and consistent with applicable Area Contingency Plans? (49 CFR 194.107(b)(1)(iii), (b)(2)(i), and (c)(1)(v))	Section 7.4
5.2. Can planned spill containment activities be accomplished within the appropriate tier times? (49 CFR 194.107(b)(2)(i) and (c)(1)(v), and 194.115)	Appendix C.4
5.3. Are containment equipment capacities described in sufficient detail and does the Facility Response Plan identify enough spill containment equipment to respond to a worst-case discharge to the maximum extent practicable? (49 CFR 194.107(b)(2)(i) and (c)(1)(v), and 194.115)	Section 7.1.1, Figure 7.1-1, Appendix B
Spill Recovery	
6.1. Does the Facility Response Plan identify the spill recovery strategies appropriate for the response zone(s) and consistent with applicable Area Contingency Plan(s)? (49 CFR 194.107(b)(1)(iii), (b)(2)(i) and (iv), and (c)(1)(v))	Section 2.2, Appendix C.2
6.2. Can planned spill recovery activities be accomplished within the appropriate tier times?(49 CFR 194.107(b)(2)(i) and(c)(1)(v), and 194.115)	Appendix C
6.3. Are recovery equipment capacities described in sufficient detail and does the Facility Response Plan identify sufficient spill recovery equipment to respond to a worst-case discharge to the maximum extent practicable? (49 CFR 194.107(b)(2)(i) and (c)(1)(v), and 194.115)	Section 7.1.1, Figure 7.1-1, Appendix B
Disposal	
7.1. Does the Facility Response Plan identify disposal procedures, including temporary storage equipment for recovered oil appropriate for the response zone and consistent with applicable Area Contingency Plans? (49 CFR 194.107(b)(1)(iii), (b)(2)(i), and (c)(1)(v))	Section 7.4, Section 7.1.1, Figure 7.1-1, Appendix B
7.2. Can planned temporary storage and waste disposal activities be accomplished within the appropriate tier times? (49 CFR 194.107(b)(2)(i) and (c)(1)(v), and 194.115)	Section 7.4, Appendix C.4
7.3. Does the Facility Response Plan identify sufficient temporary storage capabilities to respond to a worst-case discharge to the maximum extent practicable? (49 CFR 194.107(b)(2)(i) and (c)(1)(v), and 194.115)	Section 7.4, Section 7.1.1, Figure 7.1-1, Appendix B
Sensitive Area Protection	
8.1. Does the Facility Response Plan identify the protection strategies appropriate for the response zone and consistent with applicable Area Contingency Plans? (49 CFR 194.107(b)(1)(iii), (b)(2)(i) and (ii), and (c)(1)(v))	Section 6
8.2. Can planned protection activities be accomplished within the appropriate tier times?(49 CFR 194.107(b)(2)(i) and (c)(1)(v), and 194.115)	Section 6, Appendix C.4

FIGURE D-2 - PHMSA FACILITY RESPONSE PLAN REVIEW CROSS-REFERENCE, CONTINUED

Office of Pipeline Safety (OPS)	LOCATION
Response Management	
9.1. Is the response management system described in the Facility Response Plan based on an Incident Command System? (49 CFR 194.107(b)(1)(i), (b)(2)(iii), and (c)(3))	Section 4
9.2. Does the operator's response organization describe roles and responsibilities for (49 CFR 194.107(b)(1)(i), (b)(2)(iii), and (c)(3))	
• Qualified Individual?	Section 4.5
• Other operator response personnel including the spill management team?	Section 4.5, Section 4.6
• Contracted Oil Spill Removal Organization(s)?	Section 7.1.3, Figure A.1-2
9.3. Does the operator's response organization describe how the operator works with the Unified Command and with responders including (49 CFR 194.107(b)(1)(i), (b)(2)(iii), and (c)(3))	Section 4.4
• Oil Spill Removal Organization(s)?	Figure 4.5-1, Section 4.6
• State and Local Responders?	Section 4.4
• Federal On-Scene Coordinator?	Section 4.4
Communications, Response Equipment and Transportation	
10.1. Does the Facility Response Plan describe appropriate communications procedures and system(s) adequate for notifications and response operations? (49 CFR 194.107(c)(1)(ii) and (v))	Section 7.1.6
10.2. Does the Facility Response Plan identify response equipment that the operator owns and maintains? (49 CFR 194.107(c)(1)(v) and 194.115(a))	Section 7.1.1
10.3. Does the Facility Response Plan describe procedures for maintaining response equipment the operator owns? (49 CFR 194.107(c)(1)(viii))	Section 7.1.2
10.4. Does the Facility Response Plan identify Oil Spill Removal Organization(s)' response equipment that the U.S. Coast Guard has not classified? (49 CFR 194.107(c)(1)(v) and 194.115(a))	Section 7.1.3, Appendix B
10.5. Does the Facility Response Plan describe procedures for maintaining Oil Spill Removal Organization(s)' response equipment that the U.S. Coast Guard has not classified? (49 CFR 194.107(c)(1)(viii))	Section 7.1.3, Appendix A.1
10.6. Does the Facility Response Plan identify location(s) for operator-owned and Oil Spill Removal Organization-owned response equipment? (49 CFR 194.115(b))	Section 7.1.1, Figure 7.1-1, Appendix B
10.7. Does the Facility Response Plan describe mobilizing and deploying response equipment within the appropriate tier times consistent with the plan's response activities? (49 CFR 194.107(c)(1)(v) and 194.115(b))	Appendix C.2
10.8. Does the size of the response zone permit planned response activities, including equipment mobilization and deployment, within the appropriate tier times? (49 CFR 194.115(b))	Appendix C.4

FIGURE D-2 - PHMSA FACILITY RESPONSE PLAN REVIEW CROSS-REFERENCE, CONTINUED

Office of Pipeline Safety (OPS)	LOCATION
Response Personnel and Mobilization	
11.1. Does the Facility Response Plan identify enough trained personnel to respond to the worse case discharge consistent with the Plan's response activities? (49 CFR 194.107(a), (c)(1)(v), and (c)(3), 194.115, and 194.117)	Figure 3.1-5
11.2. Does the Facility Response Plan describe procedures for mobilizing and deploying response personnel throughout the response zone(s) consistent with the Plan's response activities? (49 CFR 194.107(b)(2)(i) and (c)(1)(v), and 194.115)	Section 2, Section 3, Section 4.2
Response Documentation and Worst Case Discharge	
12.1. Does the operator describe procedures the response management organization must use to document response decisions, activities, and costs? (49 CFR 194.107(c)(3))	Section 3, Section 5,Appendix C.2
12.2. Does the Facility Response Plan provide the calculations and methodology used for determining the worst-case discharge for the response zone(s)? (49 CFR 194.105)	Appendix C.4
12.3. Is the worst-case discharge volume calculated using the three specified methods in the Department of Transportation regulation? Are the calculations accurate and as prescribed?(49 CFR 194.105(b))	Appendix C.4
Training: Program and Procedures	
13.1. Does the Facility Response Plan describe a training program that teaches response personnel about the Plan and their responsibilities under the Plan? (49 CFR 194.107(b)(1)(ii), (c)(1)(vii) and (c)(3), and 194.117)	Appendix A.2
13.2. Does the Facility Response Plan describe a training program that teaches response personnel about matters including (49 CFR 194.117(a)(3))	Appendix A.2
• Oil characteristics and hazards?	Appendix A.2
• Conditions that are likely to worsen emergencies, including the consequences of facility malfunctions or failures and appropriate corrective actions?	Appendix A.2
• Steps necessary to control an accidental discharge of oil?	Appendix A.2
• Steps necessary to minimize the potential for fire, explosion, or environmental damage?	Appendix A.2
• Proper fire-fighting procedures and use of personal protective equipment?	Appendix A.2
13.3. Does the Facility Response Plan describe a response-training program that addresses the appropriate levels of training and the requirements in OSHA 29 CFR 1910.120? (49 CFR 194.107(b)(1)(ii) and 194.117(c))	Appendix A.2
13.4. Does the Facility Response Plan describe the operator's procedures for maintaining records for response personnel? (49 CFR 194.117(b))	Appendix A.2

FIGURE D-2 - PHMSA FACILITY RESPONSE PLAN REVIEW CROSS-REFERENCE, CONTINUED

Office of Pipeline Safety (OPS)	LOCATION
Response Personnel and Mobilization	
14.1. Does the Facility Response Plan describe procedures for conducting internal and external drills that include (49 CFR 194.107(c)(1)(ix))	Appendix A.1
• Responsibility for planning, carrying out, and monitoring drills?	Appendix A.1
• Announced drills?	Appendix A.1
• At least one unannounced internal drill?	Appendix A.1
• Quarterly Qualified Individual notifications drills?	Appendix A.1
• Annual spill management team tabletop drills?	Appendix A.1
• Annual Oil Spill Removal Organization(s) equipment deployment drills of representative types and amounts of key equipment in the Facility Response Plan?	Appendix A.1
• At least one drill that tests the entire response plan for each response zone at least once every three years?	Appendix A.1
14.2. Does the Facility Response Plan describe a three-year drill and exercise cycle and the frequencies for each type of drill in that cycle? (49 CFR 194.107(c)(1)(ix))	Appendix A.1
14.3. Does the Facility Response Plan describe procedures for maintaining drill documentation for three years? (49 CFR 194.107(c)(1)(ix))	Appendix A.1
Response Plan Maintenance	
15.1. Does the Facility Response Plan describe the requirements and procedures for the operator to: (49 CFR 194.107(c)(1)(x) and 194.121(a))	
a. Review the Facility Response Plans at least once every five years from the date the Office of Pipeline Safety approves the plan,	Section 1.2
b. Modify the Facility Response Plan to address new or different operating conditions or information in the Facility Response Plan, and	Section 1.2
c. Submit the plan for the Office of Pipeline Safety to review, require changes, and approve?	Section 1.2
15.2. Does the Facility Response Plan identify key factors that may cause revisions to the response plan and require the operator to submit revisions to the Office of Pipeline Safety within 30 days of making the revisions for factors including: (49 CFR 194.121(b))	
• New pipeline construction or purchase?	Section 1.2
• Different worst-case discharge volume?	Section 1.2
• Change in commodities transported?	Section 1.2
• Change in Oil Spill Removal Organization(s)?	Section 1.2
• Change in Qualified Individual(s)?	Section 1.2
• Change in a National Contingency Plan or Area Contingency Plan that has a significant impact on the appropriateness of response equipment or response strategies?	Section 1.2
• Change in response procedures?	Section 1.2

FIGURE D-2 - PHMSA FACILITY RESPONSE PLAN REVIEW CROSS-REFERENCE, CONTINUED

Office of Pipeline Safety (OPS)	LOCATION
Response Plan Maintenance, Continued	
15.3. Does the Facility Response Plan describe procedures for incorporating improvements in the following? (49 CFR 194.121(b)(8))	
• Post-drill evaluation results?	Section 8.3
• Post-incident evaluation results?	Section 8.3
National Contingency Plan and Area Contingency Plan Consistency and Concept of Operations	
16.1. Is the Plan consistent with the National Contingency Plan in effect at the time of submission? (49 CFR 194.107(b)(1)) Please answer yes or no.	Section 1.1
16.2. Is the Plan consistent with the Area Contingency Plans in effect for each response zone at the time of submission? (49 CFR 194.107(b)(2)) Please answer yes or no.	Section 1.1
16.3. Is the Plan's concept of operations adequate to carry out a response to the worse case discharge under 49 CFR 194? (49 CFR 194.107) Please answer yes or no.	Section 7.1, Appendix B, Appendix C.2, Entire Plan

FIGURE D-3 - 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;	Cover Page; 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 1.4
(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 D-3 - 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 3.1-5
(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:	Figure 1-2; 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 1-2; Figure 1-3; Figure 1-4
(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; Appendix C.7

FIGURE D-3 - 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 tank, and the amount, frequency and duration of oil transfers;	Figure 1-2
(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;	N/A
(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; Section 6.12
(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 3.1-6
(F) shoreline access area, including piers, docks, boat launches, and equipment and personnel staging areas.	Figure 1-3; Figure 1-4; Section 7.1.5

FIGURE D-3 - 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 C
(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 C.1
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 C.1
1. What-if analysis;	Appendix C.1
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 C.1
1. The plan must include information regarding the expertise of the working group that develops the analysis.	Appendix C.1
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 C.1
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 C.1.3

FIGURE D-3 - 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 C.1
2. an inventory of the hazards identified, including the hazards that resulted in the historical spills:	Appendix C.1
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 C.1
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 C.1.2
5. a prediction of the potential oil spills that might still be expected to occur, after any mitigating controls have been implemented.	Figure 6.3-3; Section 6.12; Section 6.14; Appendix C.1
(D) All supporting documentation used to develop the Risk and Hazard Analysis summary shall be made available to the Administrator upon request.	Appendix C.1
(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 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:	Appendix C.1.3

FIGURE D-3 - 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;	Section 6.14
(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.	Section 6.14
(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 season;	Section 6
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 6.13
1. public beaches, parks, marinas, boat ramps and diving areas;	Section 6.13
2. industrial and drinking water intakes, power plants, salt pond intakes, and other similarly situated underwater structures;	Section 6.13
3. off-shore oil and gas leases and associated drilling/production platforms;	Section 6.13

FIGURE D-3 - 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 6.13
5. areas of cultural or economic significance to Native Americans; and	Section 6.13
6. the major waterways and vessel traffic patterns that are likely to be impacted.	Section 6.13
(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 the potential impact those hazards pose to the resources at risk. Each plan shall include the following:	Section 2; Appendix C.1.2; Appendix C.2
(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.	Appendix C.2
(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 2.2; 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 C.2;
(D) protection measures for areas within the marine facility that are subject to flooding	Section 2.5; Appendix C
(E) the plan holder shall provide additional relevant information to the Administrator upon request.	Only if requested

FIGURE D-3 - 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 C.5.2
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 C.5.2

FIGURE E-5 - 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 C.5.2
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 C.5.2
(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 C.5.2
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 C.5.2

FIGURE D-3 - 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 C.5.2
(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 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	N/A
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 D-3 - 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 C.5.2
(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 C.5.3
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 C.5.3
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 C.5.3
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 C.5.3
2. All calculations used to determine the Response Planning Volume shall be included in the plan.	Appendix C.5.3
(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 3.1-5; Section 7.1.1; Appendix B; Appendix C.5.4; Appendix C.5.5

FIGURE D-3 - 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 C.5.4; Appendix C.5.5
(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 C.5.4; Appendix C.5.5
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 C.5.4; Appendix C.5.5
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 C.5.4; Appendix C.5.5
(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;	Appendix C.5.4; Appendix C.5.5

FIGURE D-3 - 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.	Appendix C.5.4; Appendix C.5.5
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 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;	N/A
(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).	Appendix C.5.4; Appendix C.5.5
(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 D-3 - 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

FIGURE D-3 - 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 D-3 - 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 (including equipment appropriate for shallow-water environments), including the plan for mobilization of such personnel;	Section 4
iii. Sufficient personnel to maintain a response effort of at least 14 days.	Figure 3.1-5
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 3.1-5; 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; Section 7.1.2; Section 7.1.3

FIGURE D-3 - 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
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. A plan shall remain valid during the time that equipment has been removed from service for maintenance or repair.	Section 7.1
(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 D-3 - 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 environmental effects for the first three days after initial application, and periodic monitoring thereafter until the agent is inert or no longer operative;	Section 6
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 2.2.4
(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 3.1-6
(e) Shoreline Protection	Section 6.3
Each plan must provide for shoreline protection of all potential spills from the marine facility.	Section 6.3; Section 7.1; Appendix B; Appendix C.5
(1) Shoreline Response Planning Volume	Appendix C.5.3
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 C.5.3
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 C.5.3

FIGURE E-5 - 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 C.5.3
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 C.5.3
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 C.5.3; Appendix C.5.4; Appendix C.5.5
2. All calculations used to determine the Response Planning Volume shall be included in the plan.	Appendix C.5
(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 C.5.5
(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:	Section 7.1Appendix 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 D-3 - 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 3.1-5; Section 4; 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 3.1-5; Section 7.1; 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; 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; 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; Appendix B
4. The equipment owner shall notify the Administrator when the major equipment is back in service.	Section 7.1; Appendix B
(3) (Reserved)	
(4) Shoreline Clean Up	Section 6.3
(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. 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.	Section 6

FIGURE D-3 - 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
(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; Figure 6.3-3; Appendix C.1
(C) Each plan must utilize all the strategies appropriate to the potential impact sites.	Section 6
(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 Unified Command.	Figure 3.1-5; Section 8.1; Appendix B
(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
(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 2.2-1
(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 2.8

FIGURE D-3 - 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 2.2-2
(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 2.2-2
1. Failure of manifold and mechanical loading arm, other transfer equipment, or hoses, as appropriate;	Figure 2.2-2
2. Tank overfill;	Figure 2.2-2
3. Tank failure;	Figure 2.2-2
4. Pipe rupture;	Figure 2.2-2
5. Pipe leak, both under pressure and not under pressure, if applicable;	Figure 2.2-2
6. Explosion and/or fire; and	Figure 2.2-2
7. Other equipment failure (e.g. pumping system failure, relief valve failure, etc.).	Figure 2.2-2
(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;	Section 7.1.6
(C) The maximum broadcast range for each channel or frequency used; and	Section 7.1.6
(D) Redundant and back-up systems.	Section 7.1.6
(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 D-3 - 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 2.2-1
(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 Office of Emergency Services 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 D-3 - 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 3.1-2
(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 Office of Emergency Services 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.	Figure 3.1-5
(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; Appendix C.5.4

FIGURE D-3 - 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 C.5.4
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 C.5.4
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 C.5.4
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 C.5.4
(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.	Section 7.4
(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 D-3 - 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 3.1-6; Section 6.5
(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 6.5; Figure 6.5-1
(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 D-3 - 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 three years.	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 D-3 - 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 D-3 - 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 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.	Figure A.1-2
(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 D-3 - 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, 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 A.1-2

FIGURE D-3 - CALIFORNIA OSPR CROSS-REFERENCE, CONTINUED

REQUIREMENTS	LOCATION
Drills and Exercises Coordinator Executive Branch Department of Fish & Wildlife/ 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 30 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 Command;	Figure A.1-1
(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 D-3 - 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 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.	Figure A.1-1
(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 D-3 - 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 D-3 - 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 D-3 - 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;	Figure A.1-1
(14.2) Response Equipment: Demonstrate the ability to procure sufficient response equipment to mount and sustain an organized response;	Figure A.1-1

FIGURE D-3 - 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;	Figure A.1-1
(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.	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 contact, phone number and e-mail address;	Figure A.1-2
(2) a list of all other participants and their roles, including contingency plan numbers if applicable;	Figure A.1-2
(3) a list of all components of the contingency plan tested;	Figure A.1-2
(4) a list of all ACP-listed sensitive site protection response strategies tested and documentation of actual deployment;	Figure A.1-2
(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
(6) a list of other regulatory agencies attending the drill or exercise, if any; and,	Figure A.1-2
(7) an exercise evaluation.	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 D-3 - 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
(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 Plan Holder for 3 years and made available to the Administrator upon request.	Figure A.1-2
(11) a list or check sheet showing what documentation has been submitted as part of the credit request.	Figure A.1-2

FIGURE D-3 - 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, and,	Figure A.1-2
(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 D-3 - 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 D-3 - 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 Responsible Party as to cause of the spill, and procedures or other measures adopted to prevent a similar reoccurrence.	Figure A.1-2
(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

APPENDIX E
ACRONYMS AND DEFINITIONS

Last revised: May 2008

E.1 Acronyms

E.2 Definitions

E.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
IC	Incident Commander
ICS	Incident Command System
JIC	Joint Information Center

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)
SMT	Spill Management Team
SOSC	State On-Scene Coordinator
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)

E.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.

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.

Combustible Gas
A gas that burns, including the fuel gases, hydrogen, hydrocarbon, carbon monoxide, or a mixture of these. Combustible gases include, but are not limited to, those gases listed in the facility's Emergency Response Plan.

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

Contract or Other Approved Means, Continued

- 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.

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.

Emergency Rescue Personnel
Any public employee, including, but not limited to, any fireman, firefighter, or emergency rescue personnel, or personnel of a local EMS agency, or a poison control center, who responds to any condition caused, in whole or in part, by a hazardous material that jeopardizes, or could jeopardize, public health or safety or the environment.

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.

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 material that, because of its quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety or to the environment if released into the workplace or the environment. Hazardous materials include, but are not limited to, hazardous substances, hazardous waste, and any material which a handler or the administering agency has a reasonable basis for believing that it would be injurious to the health and safety of persons or harmful to the environment if release into the workplace or the environment. Hazardous materials include, but are not limited to, those hazardous materials listed in the facility's Emergency Response Plan.

Hazardous Material Emergency Response
Includes, but not limited to, assessment, isolation, stabilization, containment, removal, evacuation, neutralization, transportation, rescue procedures, or other activities necessary to ensure the public safety during a hazardous materials emergency.

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.

Hypothermia
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 Waters
Those waters subject to tidal influence.

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 clean-up 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.

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
Any kind of petroleum, liquid hydrocarbons, or petroleum products or any fraction or residues there from, including but not limited to, crude oil, bunker fuel, gasoline, diesel fuel, aviation fuel, oil sludge, oil refuse, oil mixed with waste, and liquid distillates from unprocessed natural gas.

Oil Spill
Any release of oil or produced water.

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.

Owner or Operator
Any person, individual, partnership, corporation, association, governmental unit, or public or private organization of any character.

Persistent Oil
A petroleum-based oil that does not meet the distillation criteria for a non-persistent oil. For the purposes of this Appendix, persistent oils are further classified based on specific gravity as follows:

- 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

Potential Release
See "Threatened release."

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.

Produced Water
The water remaining after being separated through oil and gas processing.

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.

Release
Any spilling, leaking, pumping, pouring, emitting, emptying, discharging, injecting, escaping, leaching, dumping, or disposing into the environment.

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.

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.

Sour Gas
Natural gas that contains corrosive, sulfur bearing compounds, such as hydrogen sulfide (H_2S) and mercaptans.

Spill 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.

Threatened Release
A condition creating a probability of harm, when the probability and potential extent of harm make it reasonably necessary to take immediate action to prevent, reduce, or mitigate damages to persons, property, or the environment.

Tornado Warning
A tornado has been sighted.

Tornado Watch
Conditions are favorable for tornados to form.

Toxic Gas
Gases which are extremely hazardous and may be fatal if inhaled or absorbed through skin. Toxic gases include, but are not limited to, those gases in the facility's Emergency Response Plan.

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.

Waters of the State
Any surface water or groundwater, including saline waters, within the boundaries of the state.

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 F

Last revised: January 24, 2012

ADDITIONAL INFORMATION (All items are links)

- Exxon Las Flores Canyon Facility Integrated Plan 01/24/2012
- Information Center of the California Archeological Inventory
- References 05/24/2011

ACTIVATION FLOW CHART

The purpose of the LFC Integration Plan is to provide a guide to facilitate a coordinated response to an emergency in the Las Flores Canyon. This plan is not meant to supplant the use of common sense and good judgment.

This page is for fast reference when an emergency response occurs.

Emergency: a situation that requires immediate action so that persons are not injured and/or property damage is minimized to the extent possible.

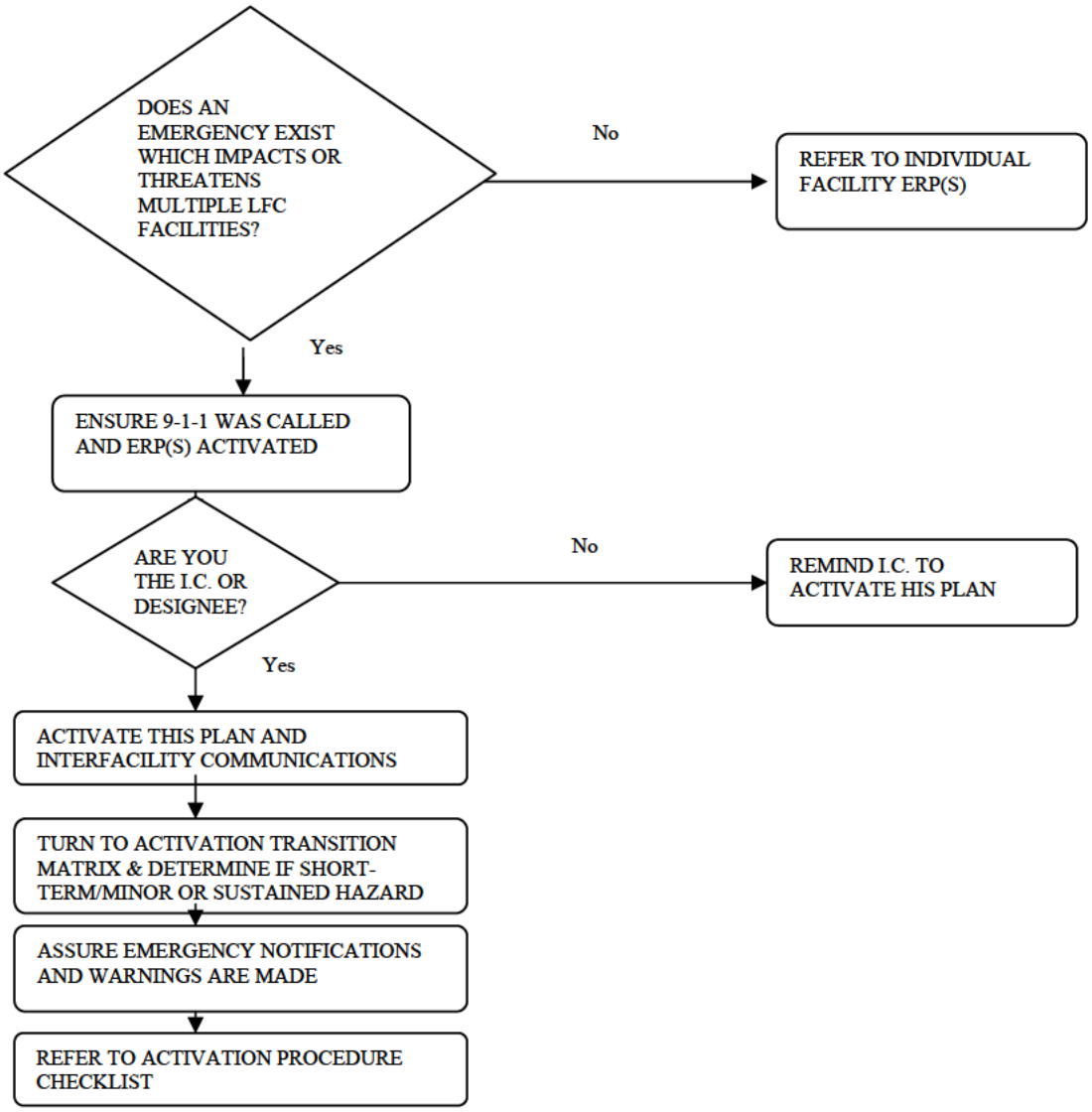


TABLE OF CONTENTS

LAS FLORES CANYON INTEGRATION PLAN

INTRODUCTION

The purpose of the Las Flores Canyon Integration Plan (LFC IP) is to provide a means by which companies within the Las Flores Canyon (LFC) will coordinate emergency response actions to incidents that may impact and/or expose multiple facilities.

The objectives of the LFC Integration Plan are:

- To assure that the SYU/POPCO, and PAALP Emergency Response Plans interface with each other in a consistent manner;
- To provide an incident management system which complies with 29 CFR 1910.120, is modular in fashion and will interface with local government emergency response agencies;
- To provide coordinated canyon-wide emergency notification and protective action guidelines;
- To provide for mutual aid amongst the LFC companies;
- To ensure timely and effective inter-facility communications;
- To provide for a unified command and the implementation of a single command team structure and common incident action plan during emergencies involving multiple LFC facilities.

The LFC IP shall be considered a component of the SYU/POPCO, and PAALP Emergency Response Plans for LFC.

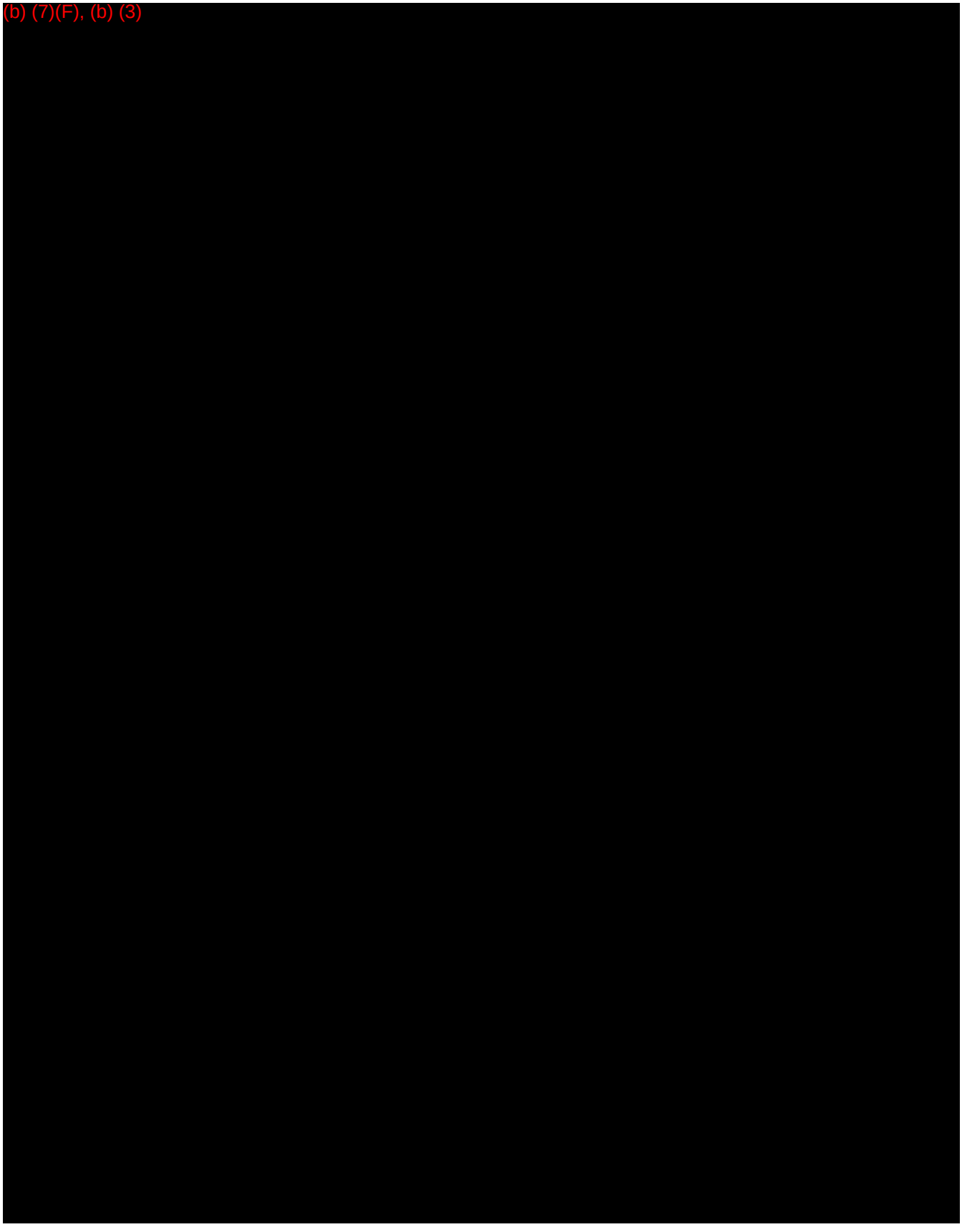
BOUNDARIES/SCOPE

The boundaries and scope of the LFC IP is within the physical boundaries of the Exxon property where SYU, POPCO and PAALP have their facilities. The boundaries and scope of the LFC IP also includes events where there is an incident involving offsite pipelines, trucks or other offsite events near LFC, that impacts and/or exposes occupants of LFC. See the vicinity map in Figure 1.

RELATIONSHIP WITH OTHER PLANS

Figure 2 shows the hierarch of emergency response plans in relationship to the LFC IP. The SYU/POPCO, and PAALP Emergency Response Plans (ERPs) formulate the initial response to emergency incidents within individual facilities. The LFC IP is activated for emergency incidents that impact and/or expose multiple facilities within LFC.

VICINITY MAP



RELATIONSHIP OF EMERGENCY RESPONSE PLANS

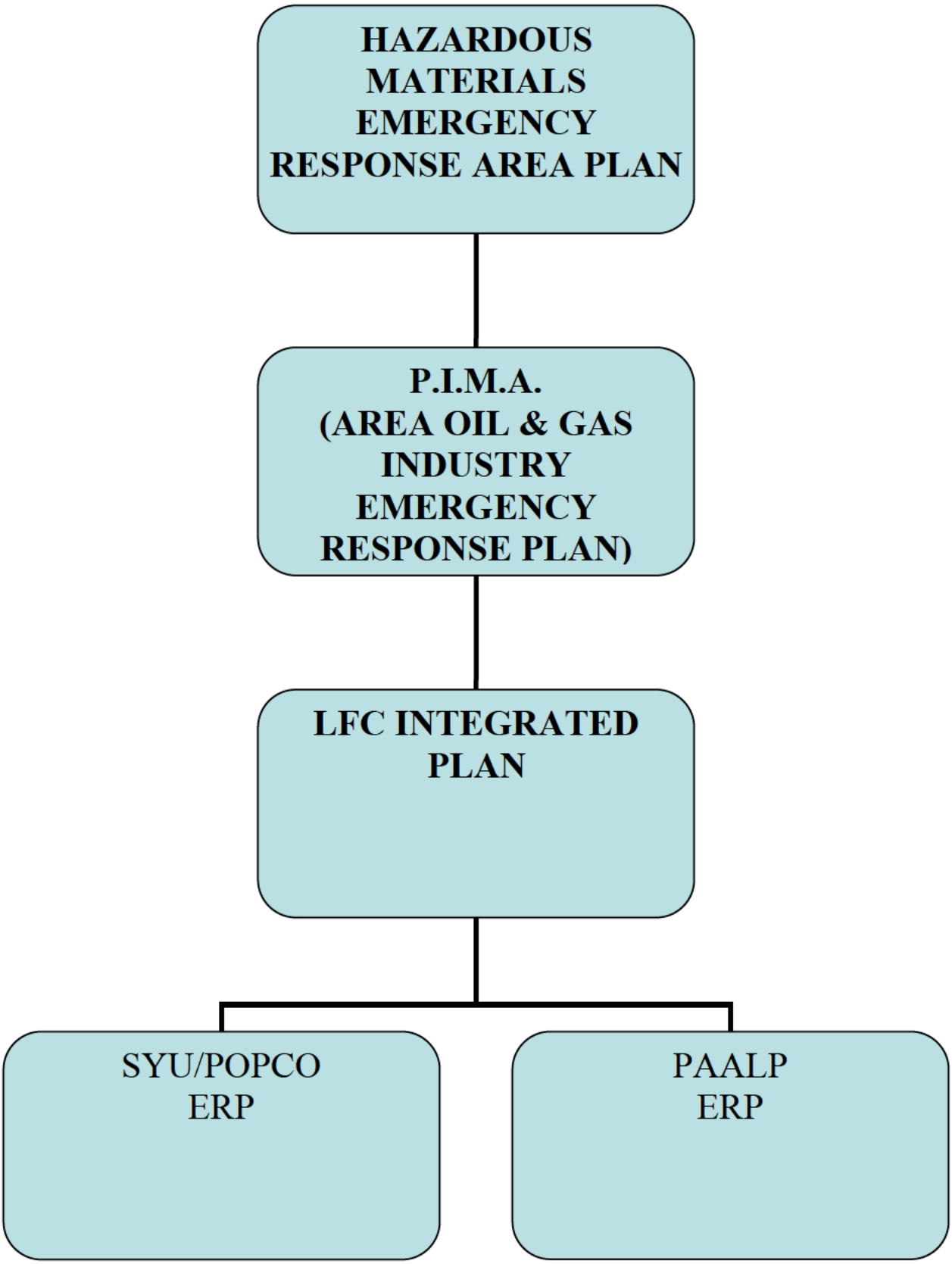


FIGURE 2

The Santa Barbara County (SBC) Area Oil & Gas Industry Emergency Response Plan (ERP) will be activated during an emergency incident which involves more than one onshore facility (within SBC) or has or threatens to have offsite impacts upon humans, livestock, property or the environment beyond the ability or resources of the event facility to cope with the emergency incident. It may also be activated by a facility at anytime industry mutual aid is required. This plan covers all of Santa Barbara County, not just LFC. Therefore, the LFC IP is a localized (LFC) version of the Area Oil and Gas Industry ERP. Mutual aid under the authority of the Area Oil and Gas Industry ERP is implemented among signatory companies of the Petroleum Industry Mutual Aid (PIMA) Agreement.

The Santa Barbara County (SBC) Hazardous Materials Emergency Response Area Plan, which is requirement of the California Health and Safety Code (Title 20 Chapter 6.95 Sections 25500 – 25520; Regulation: Title 19, California Code of Regulations, Division 2, Chapter 4, Article 3; **Related Federal Statute:** United States Code, Title 42, Section 11003) will be activated in response to a release or threatened release of hazardous materials within SBC upon request by the governmental Incident Commander.

LFC INTEGRATED EMERGENCY MANAGEMENT SYSTEM (IEMS)

Figure 3, the LFC Integrated Emergency Management System (IEMS) is an incident command system (ICS) which complies with 29 CFR 1910.120, is modular in fashion, and illustrates how local government emergency response agencies interfaces and works with SYU/POPCO and PAALP emergency response organizations in an integrated and consistent manner within one response organization. During an emergency each entity re: SYU/Exxon, PAALP, Government Emergency Response Agency and Utilities shall implement its own ICS per their own Emergency Response Plan. When the LFC IEMS is activated the incident Unified Command (UC) and the Multiple-Facility Coordination Group (MFCG) form an umbrella over the individual LFC ICS organizations.

The MFCG is a high level group consisting of representatives of each affected facility and one appointed governmental agency representative whose responsibility is to set incident policies, set incident priorities, and to resolve conflicts relative to resource allocation. The function of the MFCG is not to manage the direct field response to the incident.

There is, however, only one Incident Commander (IC) within the UC. The IC is a representative from the facility in which the initial incident occurred. In the absence of the Fire Department, OSPR, etc., the IC may be officially transferred to another party if the situation deems it necessary and it is agreeable to all affected parties. The other representatives in the UC will advise and help develop a consensus among each other. They will carry out individual company assignments that have been agreed upon. The representatives will also relay information to and from the Deputy ICs.

The UC is a method for all agencies and/or companies, who have jurisdictional or functional responsibility to contribute in determining overall incident objectives, determining strategies, formulating the action plan and managing the response to the incident.

LFC INTEGRATED EMERGENCY MANAGEMENT SYSTEM

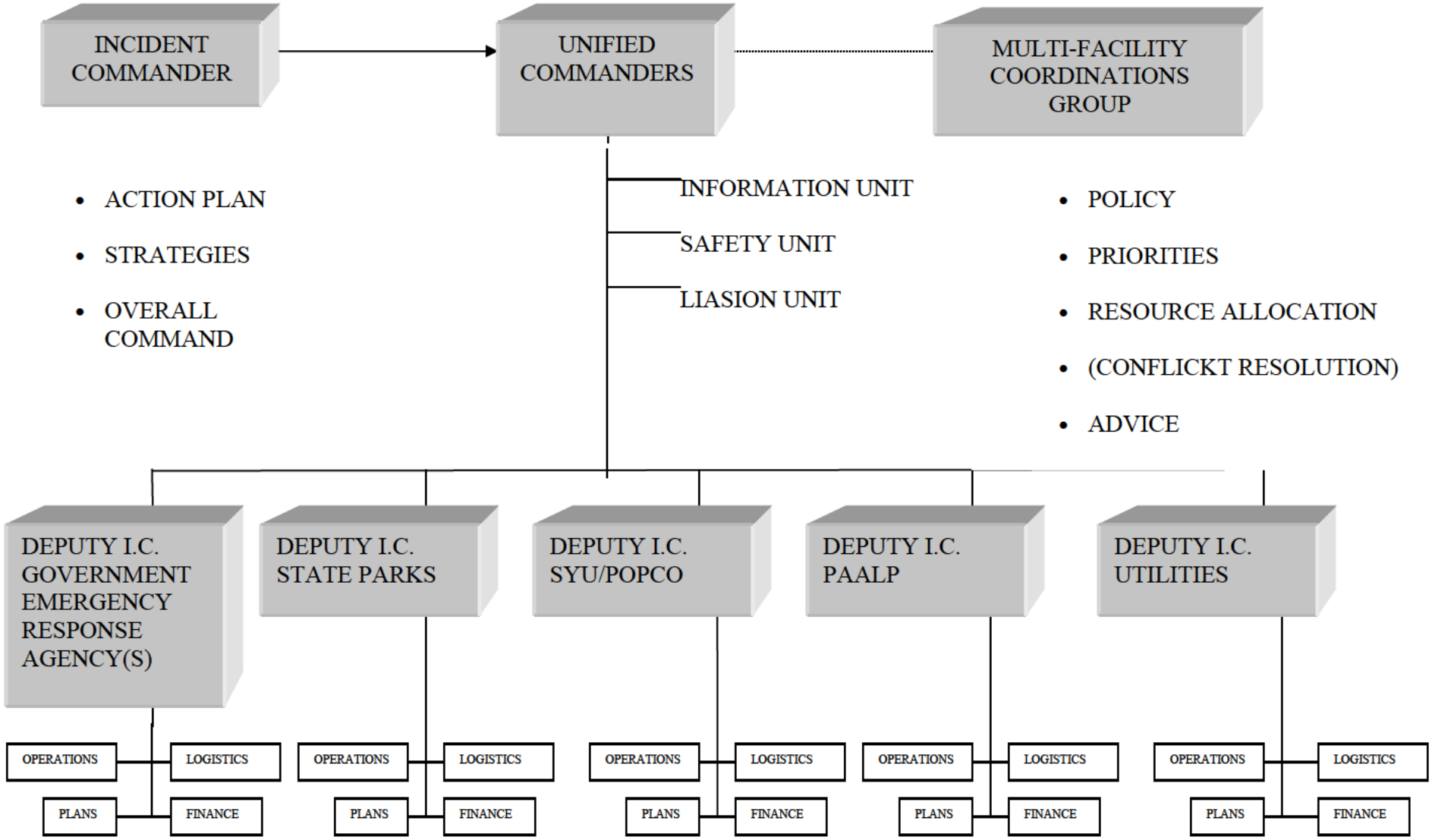
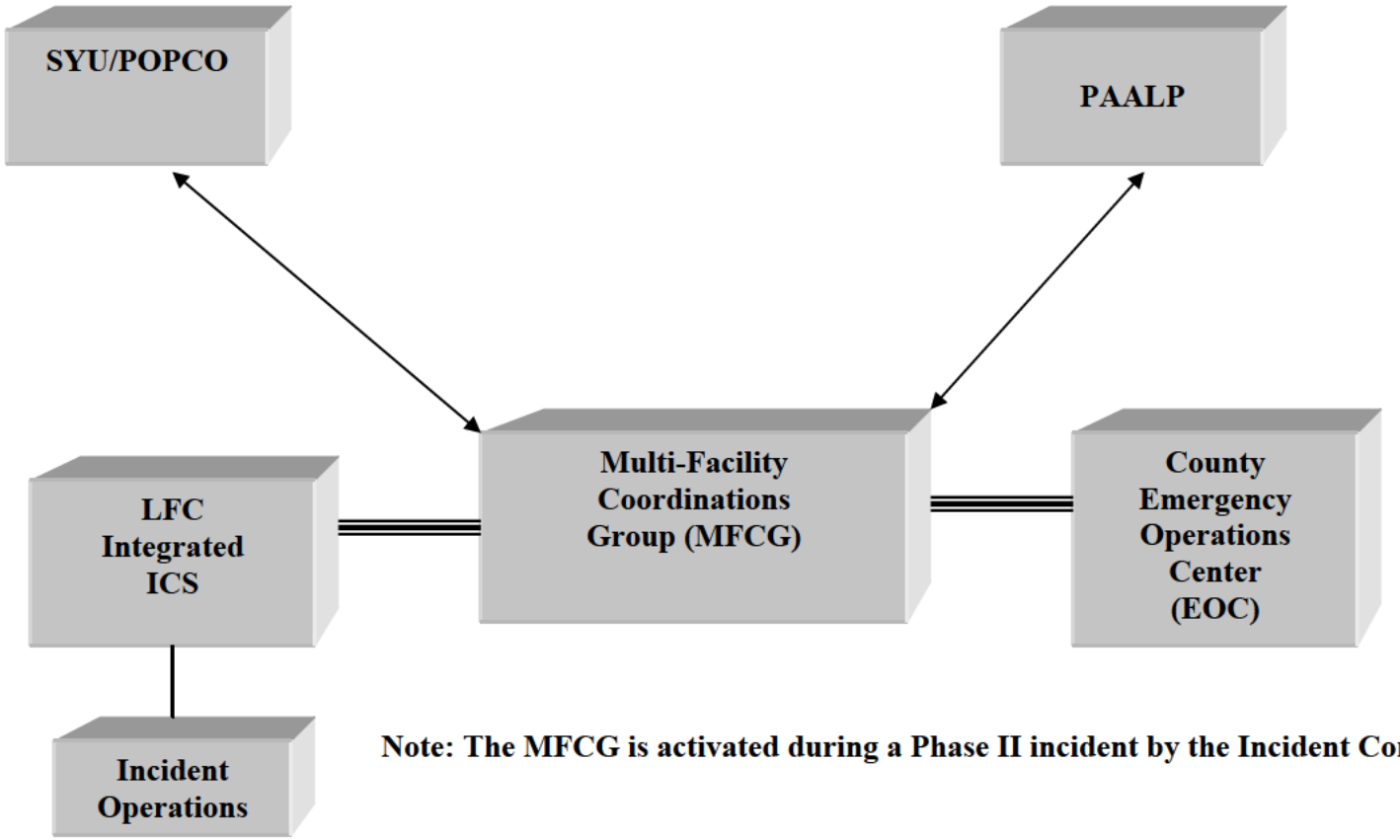


FIGURE 3

MULTI-FACILITY COORDINATION GROUP



Note: The MFCG is activated during a Phase II incident by the Incident Commander

FIGURE 4

It will be comprised of a representation of each affected facility and lead governmental emergency response agencies.

The UC, as stated previously, is responsible for managing the response to the incident consistent with the policies, priorities and allocated resources as defined by the MFCG.

The Command Staff, which includes the information, safety and liaison officers, is made up of representatives from each affected entity and the government will be responsible for coordinating common Command Staff functions. Such positions will be expanded into units.

The Deputy ICs will be responsible for managing the response of their individual response organizations. They carry out the duties assigned to them in accordance with the action plans and strategies developed by the UC. As shown in Figure 3, the Deputy ICs only supervise personnel within their company's emergency response organization.

Action checklists and duty sheets for the MFG members, UC, IC and Deputy ICs are contained in Appendix G of this document.

ACTIVATION GUIDELINES

The LFC IEMS will be activated in two phases. The first activation phase will consist of multiple company ERPs being activated in response to an event that impacts more than one facility in LFC. After ERP activations, the inter-facility communication links are established between incident command posts (ICPs). This communication link will be via phone or radio and is in addition to any alarms and signals being received. Additionally, an initial assessment of the incident is communicated along with the protective action recommendations (PARs) taken or suggested and initial operational tactics being employed by the individual response organizations.

The second phase of the IEMS activation comprises establishing the UC, with its IC, plus establishment of the MFCG. The responsibilities of these two groups have been described previously. Refer to the LFC Integration Plan – Activation Checklist section on the following pages for additional information.

If additional resources are required then the P.I.M.A./Area Oil & Gas Industry ERP may be activated. Tables 1, 2 & 3 are Activation Transition Matrixes which show various scenarios with the corresponding guidelines for IEMS activation phases.

LFC INTEGRATION PLAN – ACTIVATION CHECKLIST:

This checklist is to be used by the person who activates this plan. That person is the Incident Commander (or Designee) of the facility where the incident occurred.

PHASE I

_____ Follow Activation Flowchart in front of this plan.

_____ If you have a short term/minor hazard then you are in Phase I of the LFC Integrated Emergency Management System.

_____ You are the Incident Commander for this incident (your facility is where the incident occurred).

_____ Take Command and communicate to all Facilities and Responders.

_____ Via the activated inter-facility communication system, provide briefing of the incident and protective action recommendations. Determine where other facility incident command posts are located and their facility ERP is activated.

_____ Keep Inter-Facility communications systems activated, communicate updates and notify other facilities when hazard has been mitigated.

_____ If hazard becomes sustained or if assistance is needed elevate to Phase II of IEMS.

PHASE II

_____ If you have an offsite or Multi-Facility sustained hazard, then you are in Phase II of the LFC Integrated Emergency Management System.

_____ Appoint a Deputy Incident Commander for your facility ICS and form a Unified Command. Activate and announce to all Facilities and Responders the location of the Unified Incident Command Post.

_____ Request that each Facility send a representative to work within the Unified Command.

_____ Assure that Phase I checklist items have been implemented.

_____ Perform the functions of the Unified Command. Refer to the Multi-Facility Coordination Group/Unified Incident Command Guideline Section of the plan.

_____ If policy, priorities and/or resource issues arise, form and perform the functions of the Multi-Facility Coordinations Group (MFCG). Once issues are resolved, the Unified Command shall implement an action plan consistent with MFCG guidance. Refer to Appendix F – Multi-Facility/Unified Incident Command Guideline for guidance.

_____ Activate Command Staff (i.e., Information, Safety and Liaison Officers) and expand as necessary. Assure participation and/or coordination with Governmental Emergency Responding Agency Information Officer.

_____ If additional industry mutual aid is needed, activate Area Oil and Gas Industry Emergency Response Plan.

ACTIVATION TRANSITION MATRIX

PHASE	EXAMPLE SCENARIO	POTENTIAL CONSEQUENCE	INCIDENT COMMANDER	ACTIVATED COMMAND POST	MFCG & UNIFIED COMMAND	IEMS ACTIVATED
"Pre-Alert" (FYI Notifications)	1. Small, non-continuous vapor release at a facility without potential of impact past plant/pad boundary.	1. No offsite impacts past plant/pad boundary.	1. Source Facility	1. Source Facility	No	No
	2. Small fire with no toxic fumes past plant/pad boundary.	2. No offsite impacts past plant/pad boundary.	2. Source Facility	2. Source Facility	No	No
	3. Ignitable liquid release confined to plant/pad.	3. No offsite impacts past plant/pad boundary.	3. Source Facility	3. Source Facility	No	No
	4. HAZMAT release; liquid and/or vapor release confined to plant/pad boundary.	4. No offsite impacts past plant/pad boundary.	4. Source Facility	4. Source Facility	No	No
	5. Medical emergency at individual plant.	5. No offsite impacts.	5. Source Facility	5. Source Facility	No	No
	6. Explosion – Minor; no releases offsite; no fire.	6. No offsite impacts past plant/pad boundary.	6. Source Facility	6. Source Facility	No	No

Note:	Offsite in this context means "outside of a plant/facility boundary".
Example:	Offsite OTP means outside Oil Treatment Plant boundary; offsite POPCO means outside POPCO facility boundary, etc.

TABLE 1

ACTIVATION TRANSITION MATRIX

PHASE	EXAMPLE SCENARIO	POTENTIAL CONSEQUENCE	INCIDENT COMMANDER	ACTIVATED COMMAND POST	MFCG & UNIFIED COMMAND	IEMS ACTIVATED
PHASE I -OFFSITE EMERGENCY -MINOR/SHORT-TERM HAZARD	1. Tank truck accident on LFC roads with no release or fire.	1. Main road traffic stopped and need to route plant personnel alternate route. Also, possible medical aid.	1. Source Facility i.e., host facility of truck	1. Multi-Facility	No	Yes
	2. Non-continuous vapor (toxic and/or flammable) with cloud leaving facility.	2. Offsite hazardous condition, i.e., toxicity/explosion possible offsite.	2. Source Facility	2. Multi-Facility	No	Yes
	3. Ignitable liquid release going offsite; non-continuous or small amount.	3. Onsite & offsite fire or human toxicity hazard; Multi-facility personnel hazard.	3. Source Facility	3. Multi-Facility	No	Yes
	4. Fire at one facility; potential for spreading to other facility. Potential toxic fumes. Source shutoff. Control of fire expected in short time.	4. Potential smoke, spread to other facility. Partial access blockage for short-term.	4. Source Facility	4. Multi-Facility	No	Yes
	5. HAZMAT release going offsite; non-continuous or small amount.	5. Onsite & offsite toxic hazard; Multi-facility personnel hazard.	5. Source Facility	5. Multi-Facility	No	Yes
	6. Explosion – Minor; short-term impacts. No sustained releases and/or fires.	6. Structural, medical, search and rescue, potential multi-facility panic/hysteria potential, multi-facility evacuation.	6. Source Facility	6. Multi-Facility	No	Yes

Note:	Offsite in this context means “outside of a plant/facility boundary”.
Example:	Offsite OTP means outside Oil Treatment Plant boundary; offsite POPCO means outside POPCO facility boundary, etc.

ACTIVATION TRANSITION MATRIX

PHASE	EXAMPLE SCENARIO	POTENTIAL CONSEQUENCE	INCIDENT COMMANDER	ACTIVATED COMMAND POST	MFCG & UNIFIED COMMAND	IEMS ACTIVATED
PHASE II -OFFSITE -MULTI-FACILITY -SUSTAINED HAZARD	1. Tank truck accident on LFC roads with vapor cloud (toxic &/or flammable).	1. Main road traffic stopped. Offsite vapor cloud &/or offsite fire. Also, possible medical aid. Sustained release.	1. Source Facility i.e., host facility of truck	1. Unified Command	Yes	Yes
	2. Continuous vapor (toxic and/or flammable) with cloud leaving facility.	2. Expanding offsite hazard footprint.	2. Source Facility I.C. w/Unified Command	2. Unified Command	Yes	Yes
	3. Ignitable liquid release going offsite; continuous release or large amount with sustained hazard to multiple facilities.	3. Onsite & offsite fire or toxic hazard; Multi-facility personnel hazard. Expanding offsite hazard footprint.	3. Source Facility I.C. w/Unified Command	3. Unified Command	Yes	Yes
	4. Fire at one or more facilities. Source not shut-off &/or control of fire to take an extended period of time.	4. Potential long-term smoke/fire hazard.	4. Source Facility I.C. w/Unified Command	4. Unified Command	Yes	Yes
	5. HAZMAT release going offsite; continuous release or large amount with sustained hazard to multi-facilities.	5. Onsite & offsite toxic hazard. Expanding offsite footprint; hazard to multi-facility personnel with potential outside canyon impacts.	5. Source Facility I.C. w/Unified Command	5. Unified Command	Yes	Yes
	6. Explosion – Major at one or more facilities with sustained release and/or fire.	6. Multi-facility. Structural, search & rescue, panic/hysteria, evacuation.	6. Source Facility I.C. w/Unified Command	6. Unified Command	Yes	Yes

Note:	Offsite in this context means “outside of a plant/facility boundary”.
Example:	Offsite OTP means outside Oil Treatment Plant boundary; offsite POPCO means outside POPCO facility boundary, etc.

NOTIFICATIONS

Figure 4 depicts the Exxon, SYU/POPCO, and PAALP inter-facility communication systems.

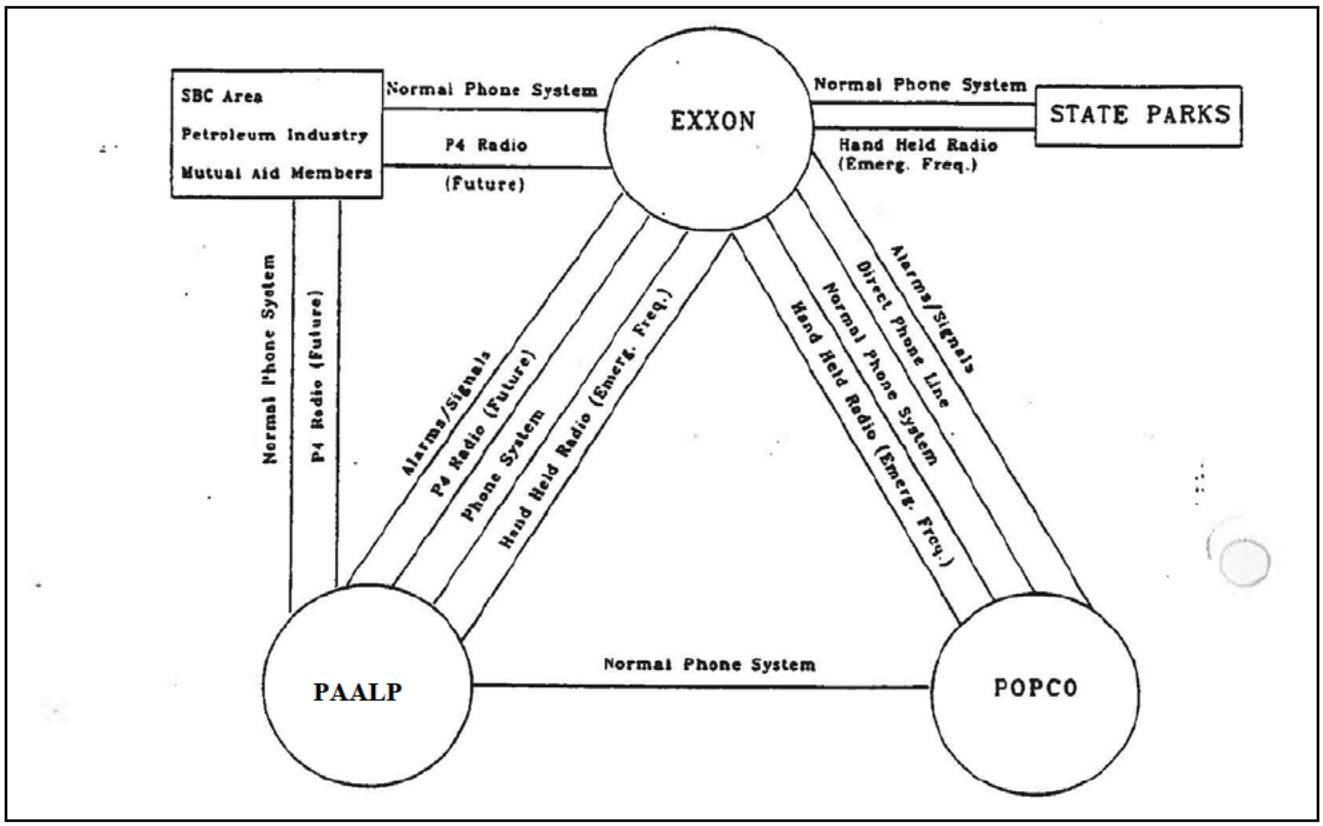


FIGURE 4

INTER-FACILITY COMMUNICATION SYSTEMS

A listing of offsite notifications that appear in SYU/POPCO's and PAALP's Emergency Response Plans for facilities in LFC are shown in Table 4. These notifications are other than the inter-facility notifications that are shown in Figure 6 and are generally property owners that are near Las Flores/Corral Canyons.

OFFSITE NOTIFICATIONS

TABLE 4

Person/Agency	Phone # (805)	Location Relative to LFC
El Capitan Ranch Park	968-2943* Emergency: (951) 443-2964 24 hr (951) 657-8496 Fax	Calle Real and El Capitan Canyon Entrance
El Capitan State Beach Park	968-1711* Business Emergency: (951) 443-2964 24 hr (951) 657-8496 Fax	Oceanside of Hwy 101 Near El Capitan Canyon Entrance
Refugio State Beach Park	968-1711* Business Emergency: (951) 443-2964 24 hr (951) 657-8496 Fax	Oceanside of Hwy 101 at End of Refugio Canyon Road

MFCG/UNIFIED COMMAND GUIDELINES

Worksheets designed to assist the emergency responders, both companies and governmental agencies, to carry out their function within the LFC Integrated Canyon ICS are found in Appendix F of this document.

MUTUAL AID AGREEMENTS

At this time, Exxon and PAALP are signatory companies to the Santa Barbara County Petroleum Industry Mutual Aid (PIMA) Agreement. Member companies of PIMA have agreed to support member companies, if possible, in an event of an emergency per the terms of PIMA. No other specific mutual aid agreements exist for LFC companies, although Exxon/POPCO and PAALP will consider any request for mutual aid and determine if it can be provided depending on circumstances at the time; such as condition of own facility, availability of requested resource, company policies, hazards, etc.

LFC LOGISTICS/RESOURCES

A listing of resources that are staged in LFC are contained within each company's emergency response plan. Others may be available but are staged offsite or are provided by a contractor and/or an emergency response cooperative.

PROTECTIVE ACTIONS/SAFE HAVENS

Evacuation points and sheltering in place locations are all protective actions that can be employed during the initial phases of an emergency. Getting people to safe areas (havens) is extremely important. Inter-facility communication systems will be employed to help coordinate the movement of people to safe areas. Appendix B of this document depicts the evacuation points and shelter in place locations for SYU, POPCO and PAALP, respectively.

HAZARD FOOTPRINTS

Hazard footprints may be a useful resource during an incident. These footprints are located in each company's ERP, Risk Management Prevention Plan (RMPP) or other related documents.

APPENDIX A

ALARMS

Listed below are the audible Emergency Alarms that are broadcast at the respective facility:

EXXON:

YELP	=	H_2S/TOXIC GAS
WARBLE	=	COMBUSTIBLE GAS
SIREN	=	FIRE
STEADY	=	EVACUATION (PADS)*

POPCO:

YELP	=	H_2S
WARBLE	=	COMBUSTIBLE GAS
SIREN	=	ULTRA VIOLET/FIRE
PULSE	=	ESD TRIP
STEADY	=	EVACUATE

PAALP:

SIREN	=	FIRE
FLASHING BEACON	=	FIRE

*Exxon has installed two omni-directional evacuation and warning sirens within LFC. These sirens are in addition to the pad evacuation alarms and provide warnings to persons within LFC that may not be on the facility pads. One is located in the lower canyon near the truck scales and the other is located on the Transportation Terminal pad.

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APPENDIX B

EVACUATION ROUTES/SHELTER IN PLACE LOCATIONS

SHELTER-IN PLACE LOCATIONS

EXXON: Administration Building
Lab/Change Building (including lunch room)
Warehouse Offices
Control Building

POPCO: Control Room

PAALP: None

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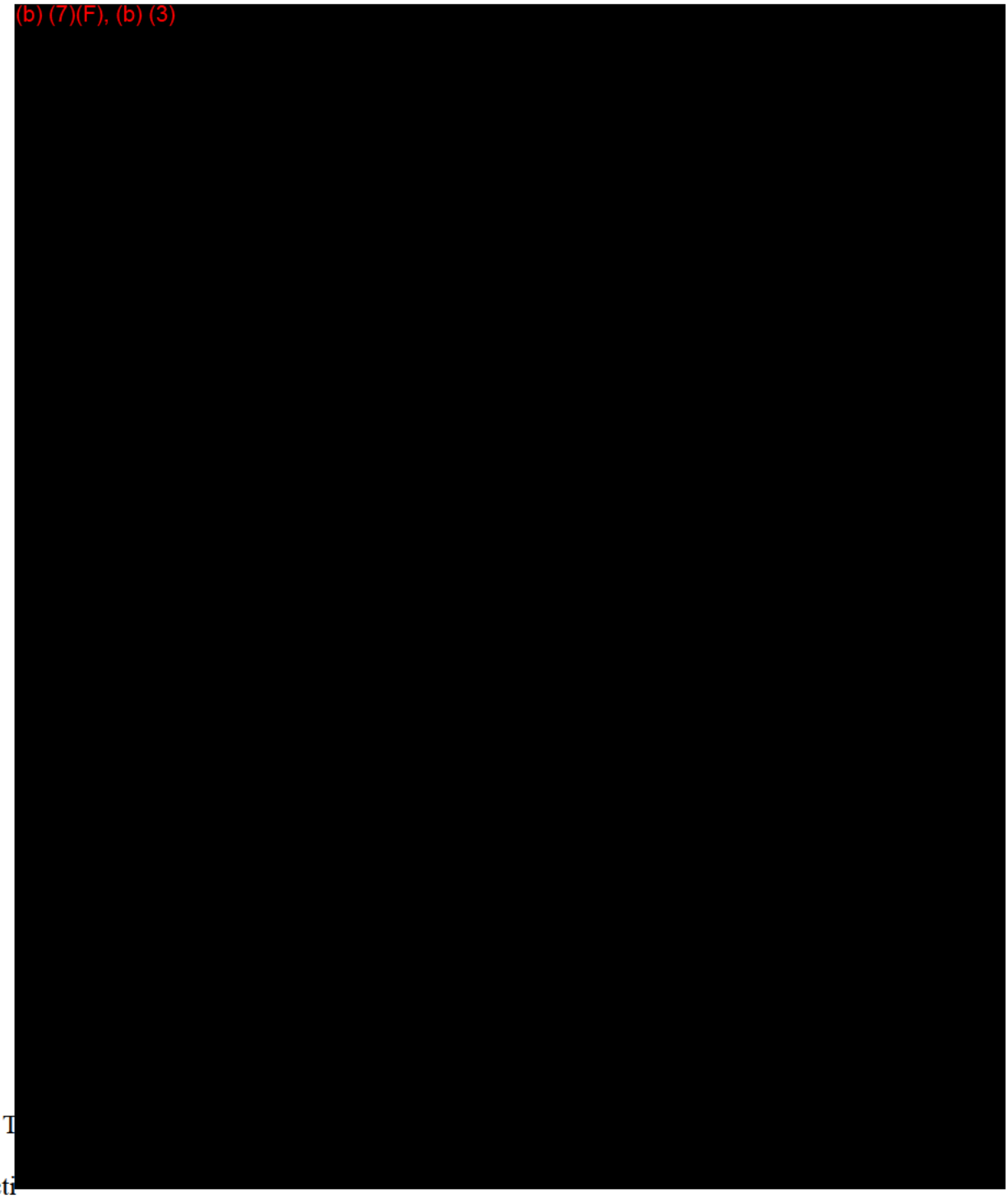
APPENDIX C

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



2007 T

Directi

From South (Northbound) exit El Capitan State Beach then right on Calle Real.

Emergency staging areas and incident command posts in the Las Flores Canyon.

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APPENDIX D

PHONE LISTS

EXXON:

Receptionist	(805) 961-4000
Control Room	(805) 961-4011 or 4055

POPCO:

Emergency	(805) 961-4055	(Receptionist answers during normal business hours. Control Room answers all other times.)

PLAINS ALL AMERICAN:

Santa Maria Office	(805) 922-9897
Control Room	1-800-322-7473

OTHER:

S. Cal Gas Co.	1-800-427-2200
S. Cal Edison	1-800-611-1911 (Ask for Capitan Substation)

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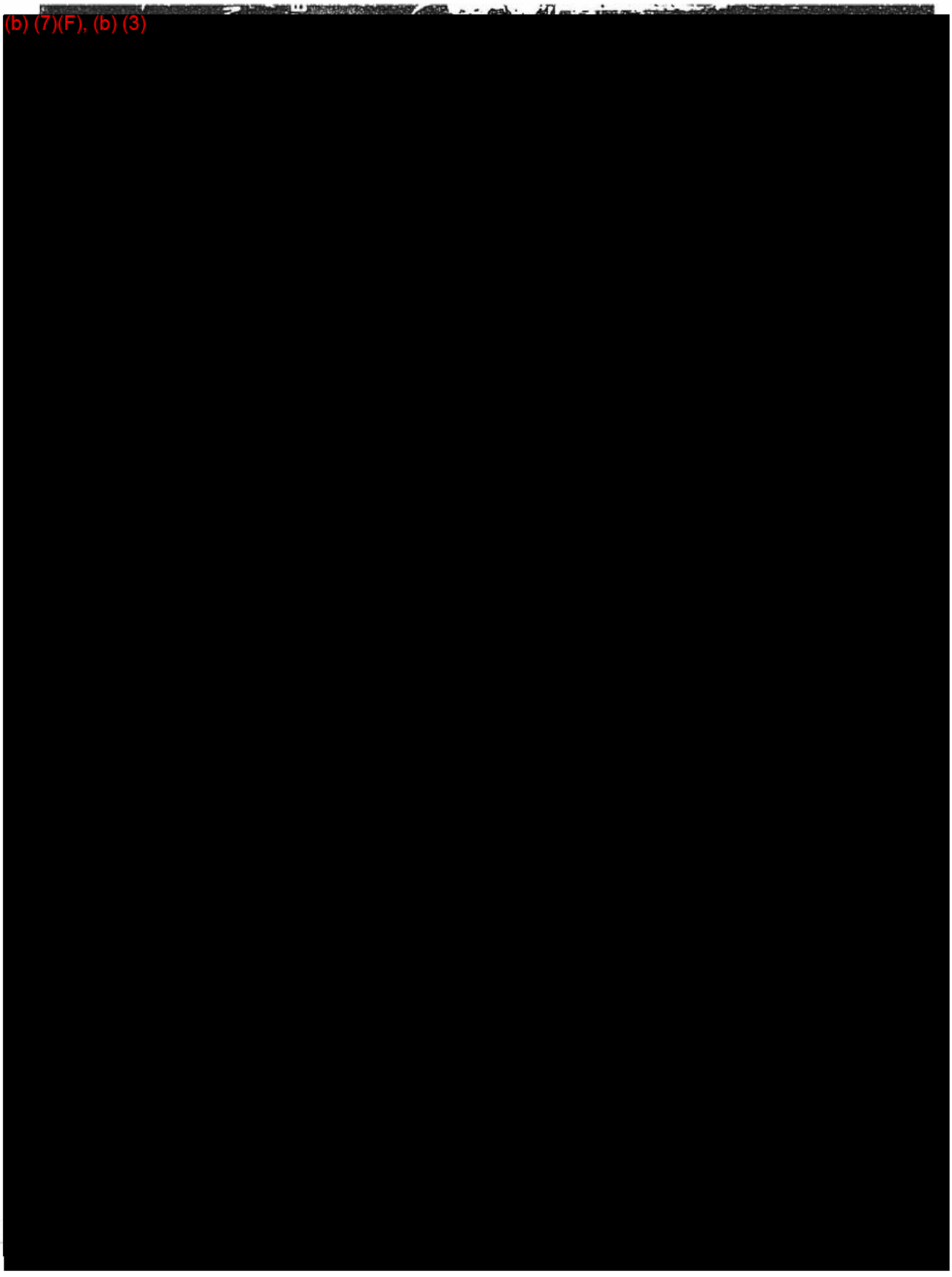
APPENDIX E

MAPS/PHOTOS

COPYRIGHT 1992 Thomas Bros. Maps
SEE 982 MAP
SANTA BARBARA COUNTY
OCEAN
PACIFIC
CAMINO
101
SEE 365 MAP

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



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APPENDIX F

MFCG/UNIFIED COMMAND WORKSHEETS

MULTI FACILITY COORDINATION GROUP
PRIORITY FORM

Incident Name:	Date:	Time:
Operational Period (date/time):		
Incident Priorities: (for resource allocation)		
1.		
2.		
3.		
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29.		
30.		

Sign Off/Approval:			
Name:	Organization:	Name:	Organization:
Name:	Organization:	Name:	Organization:

MULTI FACILITY COORDINATION GROUP
RESOURCE FORM

Incident Name:				Date:	Time:
Operational Period (date/time):					
Resource Type	Requested By	Allocated			ETA
		Yes	No	By	

Sign Off/Approval:			
Name:	Organization:	Name:	Organization:
Name:	Organization:	Name:	Organization:

MULTI FACILITY COORDINATION GROUP
POLICY FORM

Incident Name:	Date:	Time:
Operational Period (date/time):		
Policy Issue #		
Resolution:		
Policy Issue #:		
Resolution:		
Policy Issue #:		
Resolution:		
Policy Issue #:		
Resolution:		

Sign Off/Approval:			
Name:	Organization:	Name:	Organization:
Name:	Organization:	Name:	Organization:

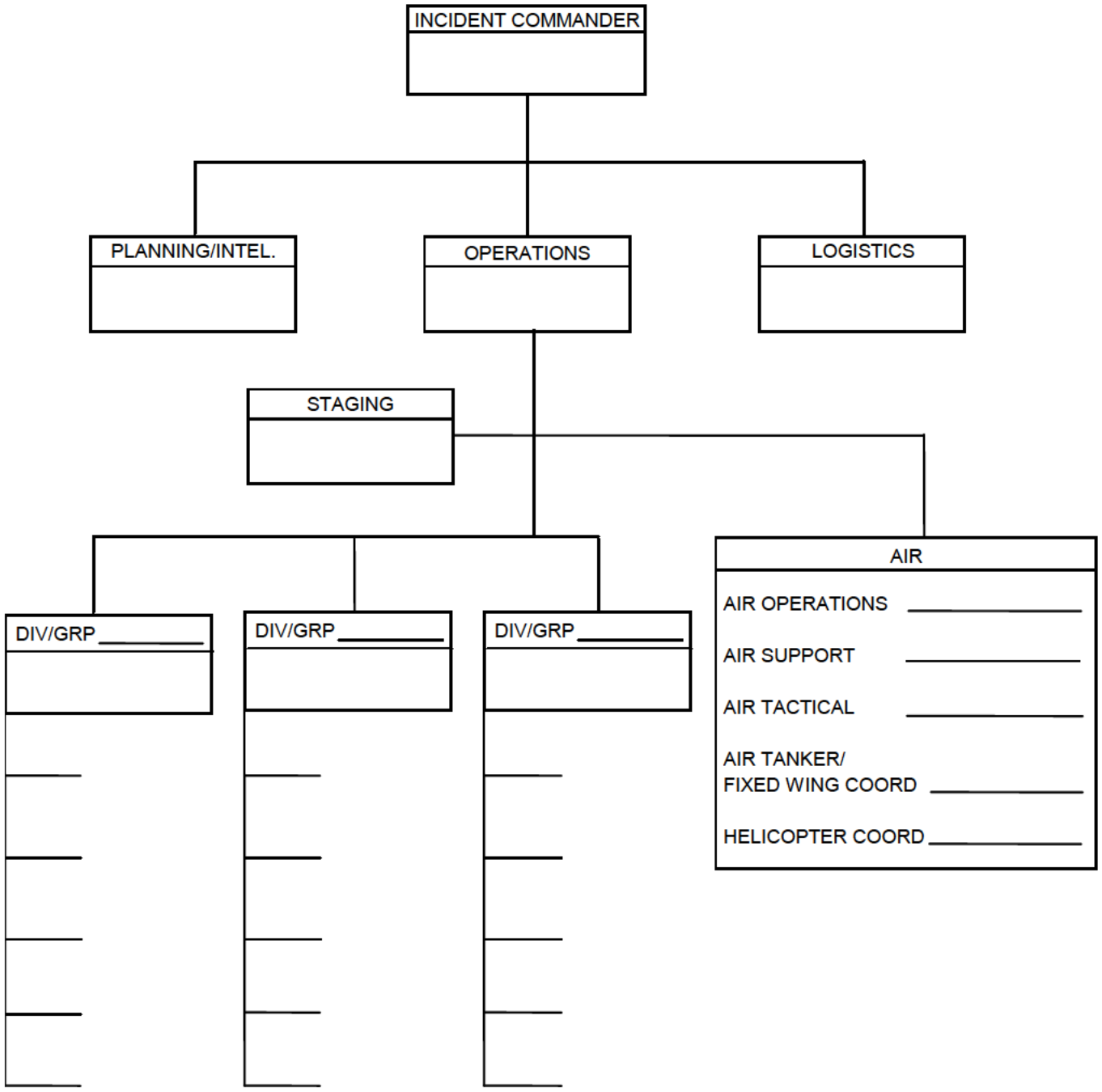
INCIDENT BRIEFING	1. INCIDENT NAME	2. DATE PREPARED	3. TIME PREPARED

4. MAP SKETCH

ICS 201 (SEMS 2001)	PAGE 1	8. PREPARED BY (NAME AND POSITION)

7. SUMMARY OF CURRENT OBJECTIVES AND ACTIONS		
CURRENT OBJECTIVES:		
CURRENT ACTIONS:		
ICS 201 (SEMS 2001)	**PAGE 2**	

6. CURRENT ORGANIZATION



ICS 201 (SEMS 2001)	PAGE 3	

5. RESOURCES SUMMARY

RESOURCES ORDERED	RESOURCE IDENTIFICATION	ETA	ON-SCENE ✓	LOCATION / ASSIGNMENT

ICS 201 (SEMS 2001)	PAGE 4	

APPENDIX G
ACTION CHECKLISTS/DUTY SHEETS

LFC INTEGRATION PLAN
ACTION CHECKLIST
INCIDENT COMMANDER

Duty Statement: You are in overall command of the emergency. You approve the incident action plan, and determine unified incident strategies. You will consult with other representatives within the unified command regarding these actions.

The response actions and procedures that are outlined in this plan are provided to assist in an emergency; however, they may not always be the most appropriate action taken during a particular emergency incident. Common sense, good training and good judgment will dictate the most prudent course of action to be taken in the event of an emergency.

____ Take command.
____ Read this entire checklist.
____ Assure 911 was called and government agencies notified.
____ Assure activation of LFC Integration Plan and LFC facility ERPs as necessary.
____ Activate Multi Facility Coordinations Group (MFCG).
____ Activate communications links between all facilities.
____ Determine materials involved and type and extent of emergency.
____ Assure that command team knows who is in charge and location of the command post.
____ Establish unified command, with all LFC companies and agency responders.
____ Send industry representative to County EOC, if requested.
____ Obtain incident assessment.
____ Obtain input and concurrence of unified commanders regarding the overall priorities, strategies and incident action plan. Priorities should be:

- Protect life:
- Prevent injury of workers and citizens; consider need for sheltering or evacuation;
- Protect exposures and environment;
- Prevent extension of the situation;
- Mitigate the situation; such as:
  - Stop product flow:
  - Containment;
  - Extinguishment/Suppression;
  - Prevent ignition;
  - Product recovery;
  - Clean up.

____ Assure the daily incident action plan is formulated with common objectives and obtain buy-in from entire command team (all agencies, industry, etc.).
____ Coordinate functions with other companies, entities, agencies and jurisdictions such as County, EPA, Coast Guard, Fish & Game, industry, shipper, etc. (Be sure they have been contacted by liaison).
____ Ascertain need for evacuations or other protective actions.
____ Request industry helicopter to be provided for overflights, if needed.
____ Activate Area Oil and Gas Industry Emergency Response Plan, if needed.
____ Request logistics to ascertain availability of resources.

____ Make sure all facilities follow the Incident Action Plan.
____ Assure that all emergency workers and agencies are working within the ICS emergency organization (one incident command system).
____ Assure that plume modeling data, toxicological data, weather data, maps, photos, etc., are being obtained.
____ Authorize media releases.
____ Authorize expenditures.
____ Evaluate status of the incident.
____ Monitor safety and effectiveness of clean up/recovery operations.
____ Initiate demobilization planning.
____ Participate in decision as to when clean up is finished.
____ Conduct regular planning and briefing meets with ICS staff.

INCIDENT COMMANDER

General Strategies for Incidents:

1. Protection of responders, and workers.
2. Protection of exposed public.
3. Prevent ignition.
4. Protect the environment and living things.
5. Protect exposed property.
6. Stop the source of the release.
7. Clean up spill and exposed animals, birds, etc.
8. Restoration of the environment to pre-spill condition.

The main issues will be:

- Command: Who is in charge?
- Communications;
- Coordination;
- Cooperation;
- Creating one ICS for the emergency;
- Getting people to come to EOC rather than scene;
- Mass influx of media and dignitaries;
- How clean is clean?
- When is it over?
- Who is the responsible party?
- Security;
- Use/safety of volunteers;
- Hazwoper training for responders.

LFC INTEGRATION PLAN
INCIDENT UNIFIED COMMANDERS
ACTION CHECKLIST

Assignees: (as necessary) Representatives of each LFC facility, Responsible PartyCounty, and USCG, Department of Fish & Game - Office of Oil Spill Prevention and Response if incident is an oil spill and impacts waterways

The response actions and procedures that are outlined in this plan are provided to assist in an emergency; however, they may not always be the most appropriate action taken during a particular emergency incident. Common sense, good training and good judgment will dictate the most prudent course of action to be taken in the event of an emergency.

Position Duty Statement:

- Overall management of the incident;
- Establish strategic objectives for management of the incident;
- Organize a unified, standardized, emergency management system, that will maximize the use of available resources;
- Oversee development and execution of a common incident action plan.

Action Checklist:

____ When notified of a Phase II emergency, respond to the unified command post (if safe to do so).
____ Obtain briefing.
____ Assure all inter-facility communications links are activated.
____ Assure that your facility's ERP and ICS is activate.
____ Read entire checklist.
____ Activate ICS positions as needed: activate Deputy I.C. from each facility and from responding agencies, Operations, Staging, Planning and Safety before activating other positions.
____ Activate Multi Facility Coordinations Group (MFCG) if needed and implement their policies as appropriate.
____ Designate a "qualified individual" as required by law.
____ Brief responders.
____ Assure all governmental and industry notifications are made.
____ Activate liaison and communications with all facilities and assisting agencies.
____ Activate a Unified Command with other Unified Incident commanders; jointly assess situation and identify strategic priorities; such as:
    - Protect life;
    - Prevent injury/exposure of workers and citizens; consider need for evacuation or sheltering-in-place;
    - Protect exposures and environment;
    - Prevent extension of the situation;
    - Mitigate the situation:

        ■ Stop product flow;

- Contain spill;
- Extinguish fire;
- Vapor suppression;
- Prevent ignition;
- Protect vital resources, birds, mammals;
- Clean up.

____ Request Planning Section to formulate unified incident action plan with common objectives and obtain buy-in from entire command team. Ascertain if the following emergency plans have been activated (as needed):

____ Individual facility ERPs;
____ LFC Integration Plan;
____ Area Oil & Gas Industry Emergency Response Plan;
____ County Area Hazardous Materials Plan;
____ Oil Spill Plan for responsible party;
____ Clean Seas Emergency Response Plan;
____ National and Regional Contingency Plans;
____ State Oil Spill Contingency Plans.

____ Identify the responsible party and include them in the Unified Command.
____ Monitor, coordinate and manage all incident objectives.
____ Request or give periodic progress reports/briefings.
____ Approve requests for additional personnel, equipment and resources.
____ Authorize informational releases to media and public.
____ Assure coordination with County, U.S.C.G., State Office of Oil Spill Prevention and Response, Bureau of Safety and Environmental Enforcement;
____ Request industry helicopter for overflight, if needed.
____ Advise logistics of availability of industry resources.
____ Assure from Operations that safety of workers, including volunteers, is a top priority.
____ Assure that Planning section is obtaining plume modeling data, toxicological data, weather data, maps, photos, etc.
____ Monitor effectiveness of clean up operations.
____ Participate in decision as to when clean up is finished.

LFC INTEGRATION PLAN
ACTION CHECKLIST
MULTI FACILITY COORDINATIONS GROUP (MFCG)

Position Duty Statement:

The MFCG is a high level group consisting of representatives of each affected facility and one appointed governmental agency representative. The MFCG sets high level response policies, incident response priorities, and resolves conflicts relative to resource allocation, legal issues, inter-corporate issues between LFC companies, etc. The MFCG is not the Incident Commander or "qualified individual".

The response actions and procedures that are outlined in this plan are provided to assist in an emergency; however, they may not always be the most appropriate action taken during a particular emergency incident. Common sense, good training and good judgment will dictate the most prudent course of action to be taken in the event of an emergency.

____ When activated, respond to designated location at LFC.
____ Obtain briefing from Incident Commander.
____ Discuss and formulate policies for the unified response (in concert with the Incident Commander). Examples are:

- ____ Allocation of resources;
- ____ "fight or flight" (total shutdown and site evacuation);
- ____ Total or partial shutdowns;
- ____ Criteria for major evacuations of wide spread areas;
- ____ Major expenditures;
- ____ Identification of the responsible party;
- ____ Legal issues;
- ____ Inter-company disputes/conflicts;
- ____ Types of media releases/briefings; approval mechanisms;
- ____ Activation of regional and national industry response teams;
- ____ Relationships/conflicts with governmental agencies;
- ____ Use of volunteers;
- ____ Payment of costs for relocation of evacuees.

____ Provide, or obtain advice as requested by the unified command.
____ Assure that a common action plan for all facilities and the agency responders is utilized and that the overall LFC incident objectives, action plans, and policies are properly implemented.
____ Request briefings from I.C. as needed.
____ Request representatives from unified command to attend meetings as needed.
____ Send representatives to the County EOC if requested.
____ Ascertain if all required reporting to government agencies has been accomplished by involved companies.

LFC INTEGRATION PLAN
ACTION CHECKLIST
DEPUTY INCIDENT COMMANDER

Position Duty Statement:

- Overall management of the incident response at your facility or agency response (if agency) during the Phase II response (inter-facility incident).

OR

- Take direction from the Incident Commander/Unified Command.

The response actions and procedures that are outlined in this plan are provided to assist in an emergency; however, they may not always be the most appropriate action taken during a particular emergency incident. Common sense, good training and good judgment will dictate the most prudent course of action to be taken in the event of an emergency.

____ When assigned by the Incident Commander of a Phase II multi facility incident in LFC, take charge of the response at your own facility (or if a governmental responder, take charge of your agency response organization). See chart; Figure 3.

____ Assure that your facility ERP and ICS is activated as may be appropriate.

____ Attend planning meetings and briefings.

____ Communicate and coordinate with the other Deputy I.C.s.

____ Implement the strategic priorities and action plan as established by the Incident Commander/Unified Command.

____ Refer to the Incident Commander and Unified Incident Commander checklists for other "mind joggers".

INFORMATION CENTER OF THE CALIFORNIA ARCHEOLOGICAL INVENTORY

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The following institutions are under agreement with the Office of Historic Preservation to:

1. Integrate newly discovered sites and information on known sites into the California Archeological Inventory;
2. Supply information on known sites and archeological surveys to government, institutions, and individuals who have a justifiable need to know; and
3. Supply a list of consultants who are qualified to do archeological field work within their area.

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APPENDIX G

Last revised: October 14, 2011

SANTA BARBARA COUNTY AREA OIL & GAS INDUSTRY ERP (All items are links)

- PIMA ACTIVATION
- Santa Barbra County Area Oil & Gas Industry ERP 11/6/2011

PIMA ACTIVATION

- Requesting Company will make "Standby Alert" notifications to each facility. Facility information is located in the "Communications Plan" starting on Page 37.

- Requesting Company may request the PIMA Task Force Chairman or their designee to assist with "Standby Alert" notifications.

- Requesting Company or designee will provide incident information and the current or potential need for assistance.

- Requesting Company or designee will obtain the following from each facility:

  Name of person you are speaking with
  Office & Mobile Phone Number
  Fax Number
  Estimate Time of Arrival for resources requested

- Requesting Company or designee will provide the following to each facility:

  Your Name
  Office & Mobile Phone Number
  Fax Number

SANTA BARBARA COUNTY

AREA OIL & GAS INDUSTRY EMERGENCY RESPONSE PLAN (Industry Mutual Aid Plan)

MARCH 2007

Revised: September 2011

Prepared by: Santa Barbara County Office of Emergency Management; and Industry

AREA OIL & GAS INDUSTRY EMERGENCY RESPONSE PLAN

RECORD OF REVISIONS: March 2008; June 2009; September 2009 #1 & #2; October 2009; November 2009, July 2011

Revision Number	Revision Date	Revision Page and Description
1	3/2008	Pg 35 - Add PIMA Task Force Chairman Rotation
1	3/2008	Pg 36-42 - Update Facility Communications Plan Information
1	3/2008	Pg 9 - Change that Hazardous Materials Emergency Response Area Plan was developed by OEM and is being revised by SBC Fire-HMU.
2	6/2009	Updated Title Page, Record of Revisions, and Distribution of Plan
2	6/2009	Page 12 – Deleted date of FOG and added Current FOG. Added new web location for IMH.
2	6/2009	Page 23 – Clarified portion pertaining to Industry EOC. Added "protective measures for the protection of life, property and the environment.
2	6/2009	Page 35 – Changed AAPL from Dave Woodruff to Kathy Thomas.
2	6/2009	Page 36, 39, 40 – Updated contact information.
2	6/2009	Page 43 – Added line for date completing forms.
2	6/2009	Page 38 – Change Control Center Telephone Number.
3	10/29/09	Page 18 – Change Level III to Level 3 in the Criteria column.
3	10/29/09	Page 36, 37, 38, 40, and 41 – Changed Satellite Phone information.
4	11/9/09	Page 42 – Added Satellite information to SMAR.
5	7/2011	Distribution of Plan – Name Changes: Kathy Randall, Ed Fetterman, Tim Plaisance & EPI Representative. Deleted all references that this Plan is an annex to County HazMat Plan. Communications Plan – Name Change for Kathy Randall & EPI Rep. Added Satellite Information. Updated information for: SBC, Kathy Randall, E&B, ExxonMobil & EPI Information. Added Year to Self Inspection Forms.
6	9/2011	Added EPI representative and information. New satellite phone numbers for PXP, E&B information.

Rev. 9/2011

DISTRIBUTION OF PLAN

Name	Agency	Revision Date
Byron Everist	PXP – Arguello (GOHF) and LOGP	9/2011
Kathy Randall	AAPL	9/2011
Bill Orr	ConocoPhillips	9/2011
Ed Fetterman	E&B	9/2011
Tim Plaisance	ExxonMobil	9/2011
Susan Whalen	Greka – SMRC	9/2011
Kevin Drude	P&D – Energy Division	9/2011
Keith Wenal	EPI	9/20/11

Rev. 7/2011

The Santa Barbara County Emergency Response Plans are designed to be consistent with the National Contingency Plan, Area Contingency Plan and State Emergency Response Plans. The National Incident Management System (NIMS) Incident Command System (ICS) model will be utilized for emergency response issues that occur within Santa Barbara County. Utilization of the Standardized Emergency Management System (SEMS) model will promote clear communications and stakeholder involvement in all aspects of emergency response within the County.

This plan is designed to work in concert with and be a part of the Emergency Response Plans (ERPs) for those facilities that operate within Santa Barbara County and are required to have an ERP.

Introduction

Santa Barbara County has long been known for the oil and gas development, which occurs off its shores. There are numerous oil and gas platforms, pipelines, processing facilities, and marine terminals. Although both government and oil industry have gone to great lengths to reduce the risks posed by oil and gas development and the marine transportation of oil and other hazardous materials, the possibility exists that an incident could occur.

This document is directed toward the joint government and oil industry response to a petroleum related incident, which involves one or more of the onshore petroleum facilities. Examples of the types of incidents, which would require activation of this plan, are: toxic gas releases, hazardous substance spill, major fire, explosion, earthquake, or other emergency situations that exceed the operator's initial response capabilities.

The Area Oil and Gas Industry ERP has been developed pursuant to County Permit Conditions enacted upon oil and gas development projects, which have undergone or are currently undergoing the County's land use permitting process. In addition, California Government Code Section 8670-35 requires local governments with jurisdiction over or located directly adjacent to marine waters, to develop an offshore Oil Spill Contingency Plan (OSCP). The Area Oil and Gas Industry ERP was also developed to satisfy this requirement.

Purpose and Objective

The purpose of the Area Oil and Gas Industry ERP is to provide a structure for government and industries' response to an onshore oil or hazardous materials related emergency. It outlines the responsibilities of federal, state, and local responding agencies and the oil industry, and describes how these entities should coordinate their response efforts.

The objective of this plan is to provide timely, effective and coordinated response and mitigation of petroleum or hazardous materials related emergency involving one or more petroleum facilities, and oil or gas pipelines.

Scope

This plan is to be used by the oil industry and local agencies in responding to onshore petroleum related emergency occurring at one or more of the oil and gas facilities located within Santa Barbara County.

This Plan may be activated at any time that the facility or governmental Incident Commander (IC) deems it necessary to do so. Upon activation of this Plan, a Level 3 Industry emergency shall be declared. Nothing in this Plan shall override the right of a jurisdictional agency to assume full command of a Level 3 incident at any time.

Each individual facility shall utilize its own ERP for all incidents. This plan is intended to provide an overarching process for Level 3 emergency response actions.

Refer to the Emergency Levels Matrix located in this plan for definition of Emergency Levels.

Authorities

This plan is promulgated under the authorities:

- State Emergency Services Act (Govt. Code Chapter 7 of Division 1 of Title 2, Sections 8559 et seq) especially Articles 3.5 and 3.7)
- California Health & Safety Code
  - Hazardous Materials (Division 20, Chapter 6.95, Sections 25500 through 25521)
  - County Health Emergencies (Division 1, Part 2, Chapter 1158, Sections 470-474)
- California Emergency Plan
- State Hazardous Materials Incident Contingency Plan
- State OSCP
- DOT Pipeline Safety Regulations
- County of Santa Barbara Emergency Operations Plan (EOP)
- County of Santa Barbara Emergency Services Ordinance #3014
- County Board of Supervisors Emergency Plan Requirements for New Petroleum Facilities (P-3 Condition)
- County Board of Supervisors Area Emergency Planning requirements for existing and new petroleum facilities (P-4 Condition)

The federal, state and local governments have numerous plans dealing with emergency response. In addition, there are different industry OSCPs for platforms, marine terminals and onshore facilities. The purpose of this section is to describe the different government and industry OSCPs and explain how these plans interrelate. The plans included in this discussion are those that focus on oil spill response or have an Annex that deals with that issue.

This plan shall be updated as changes are made to the Communications Plan or at least every three years to assure accuracy, adequacy and consistency with other related plans.

This plan will be activated when an incident involves one or more facilities or has the potential for an impact upon the community. It does not supersede the facility plans but coordinates implementation of those plans when more than one facility is impacted or assistance is required from neighboring facilities.

FEDERAL PLANS

National Contingency Plan

The National Contingency Plan serves as the umbrella document guiding the Federal Government's response to an oil spill or other hazardous materials discharge, occurring anywhere in the United States, both offshore and inland. Offshore includes: the navigable waters, the waters of the contiguous zone, and the ocean waters of which the natural resources are under the exclusive management of the United States. Specifically, the plan discusses and describes federal response policies, the national response organization; the responsibilities of the Federal On-Scene Coordinator; the agencies included on the National Response Team and their responsibilities; and the National Response Center.

The Oil Pollution Act of 1990 (OPA '90) requires that the oil spill response component of the National Contingency Plan be amended to address a worst-case discharge, which is a complete loss of cargo from an oil tanker. Specifically, the plan is required to include the following:

- Identification, maintenance, storage and procurement of equipment and supplies;
- Establishment of a National Response Unit and Coast Guard District Response Groups;
- A surveillance and notification system to ensure the earliest possible notification of an oil spill or other hazardous materials discharge;
- Establishment of a national center to provide coordination and direction for operations in carrying out the plan;
- Procedures and techniques to be used in identifying, containing, dispersing and removing oil or other hazardous materials discharge;

- A section identifying dispersants or other chemical used to mitigate the effects of an oil spill, which must include identification of the water where dispersants may be used and the quantity of dispersants which may be used in these waters;
- Procedures for reimbursing a State for its response to an oil spill;
- Procedures to coordinate the activities of Coast Guard Strike Teams, the Federal On-Scene Coordinator, Coast Guard District Response Groups, and Area Committees; and
- A fish and wildlife response plan for immediate and effective protection, rescue and rehabilitation of fish and wildlife resources.

Region IX – Mainland Regional Contingency Plan

The Region IX – Mainland Regional Contingency Plan describes the response actions of Region IX – Mainland Regional Response Team. The plan is to be used in the event of an oil spill and other hazardous substance discharges both onshore and offshore of Region IX – Mainland. Region IX – Mainland includes Arizona, California and Nevada.

The Region IX – Mainland Regional Contingency Plan is to be used in conjunction with the National Contingency Plan. The Regional Contingency Plan describes the responsibilities of the Regional Response Team; procedures for establishing Federal Local Contingency Plans (see below); and procedures for conduction response actions pursuant to the Clean Water Act and the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended by SARA.

Specifically, the Region IX – Mainland Plan does the following:

- Pre-designates specifically who the Federal On-Scene Coordinator is for the different geographical areas within Region IX – Mainland;
- Describes the formation of the Region IX – Mainland Regional Response Team, its specific membership and their responsibilities in both of response planning and in the event of an oil spill;
- Discusses funding, public information, and community relations in the event of an oil spill or other hazardous materials discharge.

The main difference between the National Contingency Plan and the Region IX – Mainland Regional Contingency Plan is the National Contingency Plan focuses on the federal response to an oil spill, including the responsibilities of the Federal On-Scene Coordinator, the National Response Team, the Coast Guard Strike Teams, and the National Response Center. The Region IX – Mainland Regional Contingency Plan describes the responsibilities of the Region IX – Mainland Regional Response Team and how it assists the Federal On-Scene Coordinator in the event of an oil spill.

U.S. Coast Guard Marine Safety Office/Group Los Angeles – Long Beach Oil and Hazardous Substance Pollution Contingency Plan

The National Contingency Plan requires the Coast Guard to develop federal local plans to provide for the integrated and coordinated response to an offshore oil spill or other hazardous substance discharge, between federal, state and local government agencies, and non-government entities. Federal Local Plans are much more specific than the National and Regional Contingency Plans since the Federal Local Plans describe the response procedures for a particular geographic area. The federal local plan in which Santa Barbara County is included is the U.S. Coast Guard Marine Safety Office/Group Los Angeles – Long Beach Oil and Hazardous Substance Pollution Contingency Plan. The plan also includes Orange, Los Angeles and Ventura Counties. The intent of this plan is to provide an integrated and coordinated response to an offshore oil spill or other hazardous substance discharge, between federal, state and local government agencies, and non-government entities.

The Oil Pollution Act of 1990 requires some modification to the Federal Local Plans. For example, OPA '90 requires that Area Committees, consisting of qualified federal, state, and local officials, be established to work with the Federal On-Scene Coordinator in developing what they are now calling Area Contingency Plans. As with the federal local plans the Area Contingency Plans will be more site specific than the National and Regional Contingency Plans and must describe the response procedures for worst-case spill occurring within the jurisdiction of each Area Committee.

The Area Contingency plans to be used in conjunction with the National Contingency Plan and the Regional Contingency Plan in the event of an oil spill or other hazardous substance discharge. The plans are required to describe the Coast Guard and other federal response agencies' exact responsibilities in the event of an oil spill or other discharge, and the joint response between federal, state and local response agencies. The plans must also include:

- A description of areas within the jurisdiction of the Area Committee that are of special environmental or economic importance;
- A list of available equipment and personnel; and
- The responsibilities of governmental agencies and the vessel or facility owner or operator responding to a discharge.

The Area Committee in which Santa Barbara County is included in the same geographic region covered by the Marine Safety Office/Group Los Angeles – Long Beach which includes the counties of Orange, Los Angeles, Ventura and Santa Barbara.

California Hazardous Materials Incident Contingency Plan (HMICP)

The California State Office of Emergency Services pursuant to Government Code Section 8574.16 requires a state toxic disaster plan to be prepared. The plan addresses the release or threatened release of hazardous materials, including an oil spill and radiological release. The HMICP serves primarily as an umbrella and reference document, not an operational tool. Specifically, the plan:

- Describes the ICS and provides examples for how the system works;
- Delineates the respective responsibilities for the local, state, and federal agencies, interagency organizations, and non-governmental organizations;
- Describes the different federal and state funding sources available to federal, state, and local agencies for financing or reimbursing their response to an oil spill other hazardous materials release, and
- Facilitates mutual aid to supplement local needs.

The HMICP provides a good description of the overall hazardous materials emergency response organization in California.

State Oil Spill Contingency Plan

The State's OSCP is a stand-alone Annex to the HMICP and specifically addresses the state's response to an oil spill. In 1990 however, the State Legislature passed the Lempert-Keene-Seastrand Oil Spill Prevention and Response Act, which requires that the State OSCP be amended to include a marine OSCP section. The State Office of Oil Spill Prevention and Response within the Department of Fish and Game, is charged with developing the new planning section that must provide for the best achievable protection of California's coast and marine waters and must include the following elements:

- A Marine Response Element that will specify the hierarchy for state and local agencies responding to an oil spill;
- A Regional and Local Planning Element which will provide the framework for the involvement of regional and local agencies in the State's response to an oil spill;
- A Coastal Protection Element which will establish the State standard for coastal protection; and
- An Environmentally and Ecologically Sensitive Areas Element, which will consist of maps depicting environmentally and ecologically sensitive areas in marine waters or along the coast.

Emergency Operations Plan (EOP)

The EOP is the county emergency plan required by the State of California. This plan addresses the jurisdiction's planned response to extraordinary emergency situations associated with natural disasters, technological incidents and nuclear defense operations.

The EOP is activated as the umbrella response plan for all major emergencies. However, the County Hazardous Materials Emergency Response Area Plan would also be activated in the event of an oil spill. The Offshore OSCP and this plan would be activated as a component of the Hazardous Materials Emergency Response Area Plan.

Hazardous Materials Emergency Response Area Plan

California Health and Safety Code Section 2550 et seq. requires local governments to develop Hazardous Materials Emergency Response Area Plans. The purpose of these plans is to detail how city and county emergency response agencies will respond in the event of an actual or threatened hazardous materials release. In Santa Barbara County the original plan was developed by OEM but the plan is currently being revised by the Santa Barbara County Fire Department Hazardous Materials Unit (CUPA) for the County and the Cities within the County.

The Area Plan for the Santa Barbara County area is intended to be used as a resource and guidance document for emergency response agencies and organizations during a hazardous materials release or threatened release. This plan does not specifically address the County or Cities' response to an oil spill but there are general guidelines, which are applicable to both a hazardous materials emergency occurring onshore and offshore.

Area Oil and Gas Industry Emergency Response Plan (This Plan)

The Area Oil and Gas Industry ERP outlines how Industrial Mutual Aid will occur and augments operator facility ERPs and OSCPs.

Oil Spill Contingency Plan (OSCP)

The County OSCP, approved by the State, is a stand-alone Annex to the Hazardous Materials Emergency Response Area Plan. The purpose of this plan is to provide a structure for government and industries' response to an offshore oil or hazardous materials related emergency.

Industry Plans

All oil facilities in federal or state waters, onshore facilities, and all tank vessels utilizing these facilities must have an approved OSCP to be used in conjunction with their Facility ERPs. In addition, oil spill cooperatives shall have OSCP for their response areas.

OIL POLLUTION ACT OF 1990

OPA'90 requires that by February 1993, all offshore tankers and facilities and all onshore facilities that could cause a release of oil into the environment, must prepare oil spill response plans. These plans must do the following:

- Be consistent with the National Contingency Plan and the appropriate Area Contingency Plan;
- Identify the qualified individual having full authority to implement the removal actions and require immediate communications between that individual and the appropriate federal responder;
- Identify and ensure by contract, the availability of personnel and equipment necessary to remove a worst case discharge; and
- Describe the training, equipment, periodic unannounced drills and response actions of personnel on the tanker or at the facility.

In order for a tanker, offshore facility or onshore facility to continue operating, the Coast Guard and Oil Spill Prevention and Response (OSPR) must approve its oil spill response plan.

THE LEMPERT-KEENE-SEASTRAND OIL SPILL PREVENTION AND RESPONSE ACT

Under the Lempert-Keene-Seastrand Oil Spill Prevention and Response Act, all operators of tank vessels, pipelines, terminals and facilities within the marine waters of the State of California are required to prepare OSCPs. These plans are required to address the following:

- The response to a worst case oil spill;
- Measures to be taken to protect environmental and recreational resource areas:
- The hazard associated with the operation such as operating error, equipment failure and external events;
- A list of contacts to call in the event of an oil spill;
- Financial and contractual arrangements for equipment and personnel in the event of an oil spill. The amount of equipment and number of personnel must be sufficient to respond to a worst case oil spill;
- Identification of the type of equipment that would be used in the event of an oil spill, including it's location and the time it would take to deliver the equipment to the site; and
- Demonstration that all protective measures have been taken to reduce the possibility of an oil spill.

COOPERATIVE CLEAN-UP MANUALS

These manuals may be used as reference materials within the Facility ERPs as deemed appropriate. They can provide valuable information concerning clean up resources.

- Clean Seas Clean-up Manual
- Marine Spill Response Corporation (MSRC) Response Plan

NATIONAL INCIDENT MANAGEMENT SYSTEM (NIMS)/INCIDENT COMMAND SYSTEM (ICS)

The NIMS is a nationwide standardized approach to incident management and response. NIMS utilizes the ICS.

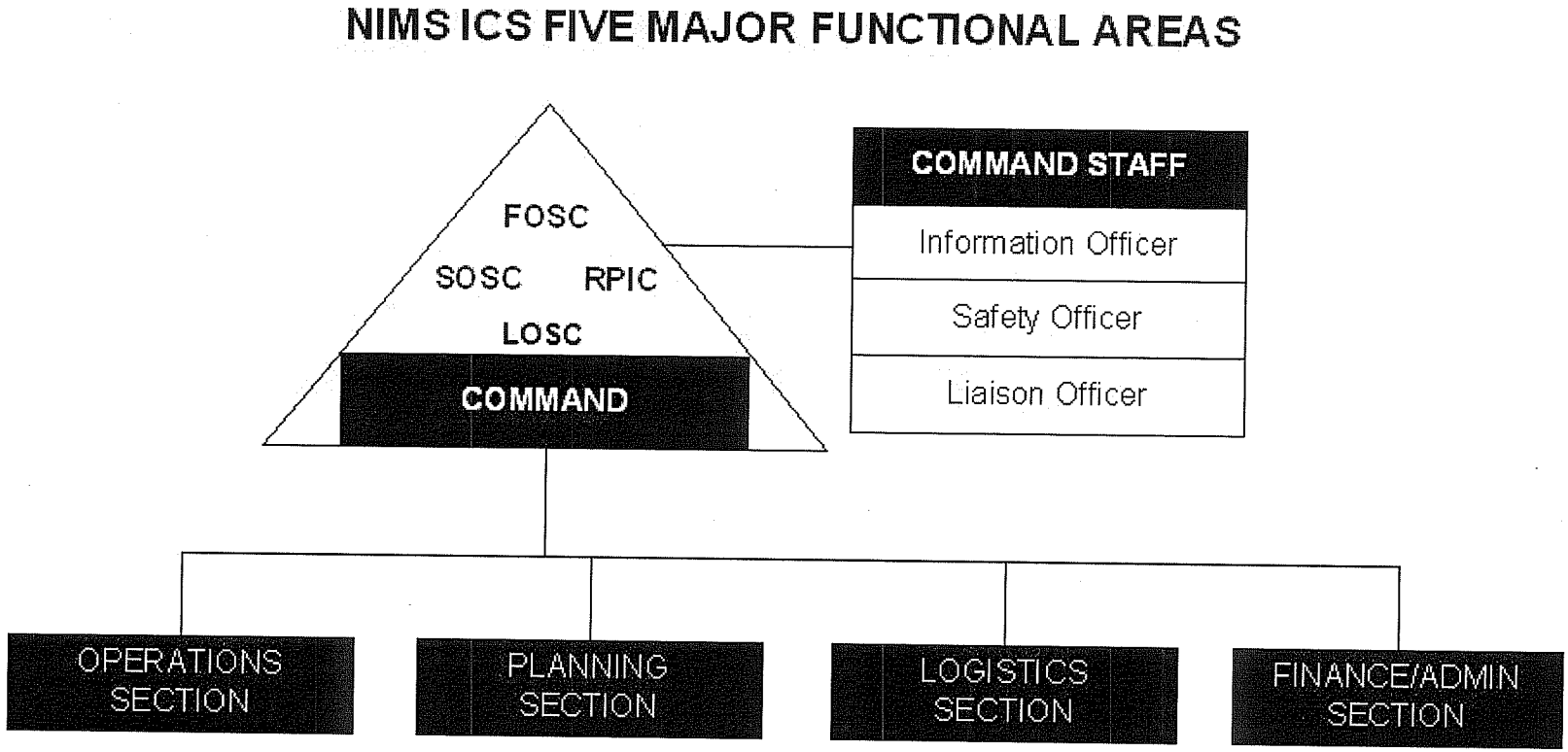
The ICS is used to manage incident response activities. ICS is readily expandable to help manage small incidents as well as larger more complex incidents. ICS is an effective safety and incident management tool and should be implemented for all emergency incidents that may cause potential harm to responders, the public, the environment or property. Staffing and resources needed to meet specific incident needs will be based on the size, complexity and severity of the incident. At minimum, Hazardous Waste Operations and Emergency Response (HAZWOPER) regulations require the ICS positions of IC and Safety Officer to be implemented during a response to a hazardous or potentially hazardous substance.

This Section contains an example of the basic NIMS ICS Organization (five functional areas) and the Operational Period Planning Cycle.

Company Stakeholders will utilize the IMH, dated August 2006, as the primary guide for incident response.

Responders may continue to utilize the current U.S. Coast Guard Oil Spill Field Operations Guide (FOG), ICS-OS-420-1 or current Incident Management Handbook (IMH) in their possession. Either of these documents is consistent with the five functional areas of NIMS ICS.

Access to complete versions of the latest U.S. Coast Guard Incident Management Handbook can be located on the U.S. Coast Guard web site at http://www.uscg.mil/hq/nsfweb/docs/FinalIMH18AUG2006.pdf.


NIMS ICS FIVE MAJOR FUNCTIONAL AREAS
FOSC
SOSC
RPIC
LOSC
COMMAND
COMMAND STAFF
Information Officer
Safety Officer
Liaison Officer
OPERATIONS SECTION
PLANNING SECTION
LOGISTICS SECTION
FINANCE/ADMIN SECTION

JUNE 2005

CHAPTER 3

OPERATIONAL PLANNING CYCLE, MEETINGS, BRIEFINGS, AND THE ACTION PLANNING PROCESS