OPA 90 OIL SPILL RESPONSE PLAN
SEMINOLE ZONE PIPELINE SYSTEM

Enterprise Products Operating, LLC
P. O. Box 4324
Houston, Texas 77210
(713) 381-6500

ACKNOWLEDGMENT AND PLAN APPROVAL

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

The information and procedures contained herein are considered to be accurate as of this date and are consistent with the National Contingency Plan (NCP) and applicable Area Contingency Plans (ACP) as detailed in Section 1.5.

CERTIFICATION OF QUALIFIED INDIVIDUAL AND ALTERNATE QUALIFIED INDIVIDUAL

Enterprise Products Operating hereby certifies that the individuals identified as Qualified Individual and Alternate Qualified Individual in this Plan have the full authority in accordance with the applicable federal and state regulations and as detailed in this Plan to:

1. Activate and engage in contracting with oil spill removal organizations.
2. Act as a liaison with the pre-designated Federal On-Scene Coordinate (OSC), and
3. Obligate funds required to carry out response activities.

Plan Approved:

Terry Hurlburt, Senior V.P., Operations

Date: 11/14/12

OPERATOR'S STATEMENT – SIGNIFICANT AND SUBSTANTIAL HARM AND CERTIFICATION OF RESPONSE RESOURCES

FACILITY NAME: Enterprise Products Operating, LLC
FACILITY ADDRESS: 1100 Louisiana
Houston, TX 77002

1. Is the pipeline greater than 6 and 5/8 inches (168 mm) in outside nominal diameter, greater than 10 miles (16.1 km) in length? and

YES ✓ NO ____

2. Has any line section experienced a release greater than 1,000 barrels within the previous five years? or

YES ____ NO ✓

3. Has any line section experienced two or more reportable releases, as defined in 49CFR 195.5, within the previous five years? or

YES ____ NO ✓

4. Does any line section contain any electric resistance welded pipe, manufactured prior to 1970 and operates at a maximum operating pressure established under 49CFR195.406 that corresponds to a stress level greater than 50 percent of the specified minimum yield strength of the pipe? or

YES ____ NO ✓

5. Is any line located within a 5-mile (8 km) radius of potentially affected public drinking water intakes and could reasonably be expected to reach public drinking water intakes? or

YES ✓ NO ____

6. Is any line located within a 1-mile (1.6 km) radius of potentially affected environmentally sensitive areas and could reasonably be expected to reach these areas?

YES ✓ NO ____

Based on the DOT-PHMSA criteria above the Enterprise Seminole Zone Pipeline system is considered "Significant and Substantial Harm".

Enterprise hereby certifies to the Pipeline and Hazardous Materials Safety Administration of the Department of Transportation that we have identified and ensured, by contract or by other means, the availability of personnel and equipment to respond, to the maximum extent practicable, to a worst case discharge.

Signature — Senior V.P., Operations (Title)

Terry Hurlburt (Name (please type or print)) — 11/14/12 (Date)

REVISION RECORD

CHANGE DATE	REMOVE PAGE NUMBER(S)	INSERT PAGE NUMBER(S)	DESCRIPTION OF CHANGE(S)
4/6/2004		Sec. 1 - Page 15	Addition of DOT letter dated 3/9/2004
4/6/2004		Sec. 1 - Page 3	Addition of Mont Belvieu Station to Figure 1-2 Distribution List
4/6/2004		Sec. 3 - Page 13	Correction of Typos to Figure 3.1-4 Notification and Telephone Numbers
7/30/2004	Sec. 1 - pages 5, 6, 7 Sec. 6 pages 16 - 18	Sec. 1 - pages 5, 6, 7 Sec. 6 pages 16 - 18	Addition of the Clemens lateral
10/28/2004	Removed Figure 2-2	Section 1 – Pages 5 and 9, Section 2 - all pages, Section 3 – pages 3 and 4, Section 4 – Pages 3, 5, 6, and 15, Section 5 – Page 8	Added WCD to Figure 1-3, Updated Section 1.2, Revised Figure 2-1, Removed Figure 2-2, Revised Figure 3.1-1, Revised Figure 3.1-2, Revised Figure 4.2, Updated Section 4.5, Section 4.6 added Finance Section Chief
1/10/2005		Section 1 - Page 8, Section 6 - Pages 12 through end of Section	Updated Section 1.1, Added Alternate Response Strategies to Section 6, Added Threatened and Endangered Species habitats to Section 6, Added TGLO ESI maps to Section 6
5/10/2005	Removed Cully Smith, Operation Technician		Updated of Sec 3, Figure 3.1-4
8/25/2005		Section 1 - Pages 2 and 9, Section 2 - Page 2, Section 4 - Page 3, Section 6 - Page 7, Appendix B - Page 2	Updated Section 1.2, Updated Figure 2-1, Updated Section 4.4, Updated Section 6.3, Updated Appendix B
1/18/2006	Section 7 - Page 3	Section 7 - Page 3	Added contractors equipment maintenance procedure
2/14/2006		Section 1 - Page 2, Section 3 - Page 1 and 2, Section 6 – Pages 7, and ESI Maps Appendix C - Pages 8 and 10, Appendix D - Pages 1-5, Appendix E - Page 3	Updated Record of Changes in Figure 1-1, Changed RSPA references to PHMSA in Sections 1.1, 1.2, 3 (TOC), 3.1; Appendices C.4, C.5, D, and E.1. Added ESI maps and reference to GRP's in Section 6

10/6/2006		Section 1 - Pages 2, 4 - 7, Section 3 - Pages 15 -21, Section 6 – Pages 7, 22-25 and DOT Maps, Section 7 – Page 2, Appendix B - Pages 2 -4	Add remaining Seminole pipeline to the plan
9/15/2010			1 - PHMSA | 1 - Introduction | Figure 1-3 - Information Summary | Line Sections
1/17/2011			1 - PHMSA | 1 - Introduction | Figure 1-5 - Zone Map
1/18/2011			1 - PHMSA | 1 - Introduction | Figure 1-3 - Information Summary | Information Summary
1/18/2011			1 - PHMSA | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-4 - Notifications and Telephone Numbers | USCG Classified OSRO's / Non-Classified OSRO's
1/18/2011			1 - PHMSA | 7 - Sustained Response Actions | 7.1 Response Resources | Figure 7.1-1 - Regional Company and Response Contractor’s Equipment List/Response Time
1/18/2011			1 - PHMSA | B - Contractor Response Equipment | B.1 Cooperatives and Contractors | B.1.1 OSRO Classification
1/18/2011			1 - PHMSA | B - Contractor Response Equipment | B.1 Cooperatives and Contractors | Figure B.1-1 - Evidence of Contracts
1/18/2011			1 - PHMSA | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-4 - Notifications and Telephone Numbers | USCG Classified OSRO's / Non-Classified OSRO's
1/18/2011			1 - PHMSA | 7 - Sustained

			Response Actions | 7.1 Response Resources | Figure 7.1-1 - Regional Company and Response Contractor's Equipment List/Response Time
1/18/2011			1 - PHMSA | B - Contractor Response Equipment | B.1 Cooperatives and Contractors | B.1.1 OSRO Classification
1/18/2011			1 - PHMSA | B - Contractor Response Equipment | B.1 Cooperatives and Contractors | Figure B.1-1 - Evidence of Contracts
1/18/2011			1 - PHMSA | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-4 - Notifications and Telephone Numbers | USCG Classified OSRO's / Non-Classified OSRO's
1/18/2011			1 - PHMSA | 7 - Sustained Response Actions | 7.1 Response Resources | Figure 7.1-1 - Regional Company and Response Contractor's Equipment List/Response Time
1/18/2011			1 - PHMSA | B - Contractor Response Equipment | B.1 Cooperatives and Contractors | B.1.1 OSRO Classification
1/18/2011			1 - PHMSA | B - Contractor Response Equipment | B.1 Cooperatives and Contractors | Figure B.1-1 - Evidence of Contracts
1/18/2011			1 - PHMSA | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-4 - Notifications and Telephone Numbers | USCG Classified OSRO's / Non-Classified OSRO's
1/18/2011			1 - PHMSA | 7 - Sustained Response Actions | 7.1 Response Resources | Figure 7.1-1 - Regional Company and

			Response Contractor's Equipment List/Response Time
1/18/2011			1 - PHMSA | B - Contractor Response Equipment | B.1 Cooperatives and Contractors | B.1.1 OSRO Classification
1/18/2011			1 - PHMSA | B - Contractor Response Equipment | B.1 Cooperatives and Contractors | Figure B.1-1 - Evidence of Contracts
6/21/2011			1 - PHMSA | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-4 - Notifications and Telephone Numbers | Company Personnel
6/21/2011			1 - PHMSA | A - Training / Exercises | A.2 Training Program | Figure A.2-3 - Personnel Response Training Log
6/21/2011			1 - PHMSA | 1 - Introduction | Figure 1-3 - Information Summary
8/22/2011			1 - PHMSA | 1 - Introduction | 1.5 Agency Submittal/Approval Letters
3/21/2012			1 - PHMSA | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-4 - Notifications and Telephone Numbers | Company Personnel
3/21/2012			1 - PHMSA | A - Training / Exercises | A.2 Training Program | Figure A.2-3 - Personnel Response Training Log
3/21/2012			1 - PHMSA | 1 - Introduction | Figure 1-3 - Information Summary
3/21/2012			1 - PHMSA | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-4 - Notifications and

			Telephone Numbers | Company Personnel
3/21/2012			1 - PHMSA | A - Training / Exercises | A.2 Training Program | Figure A.2-3 - Personnel Response Training Log
3/21/2012			1 - PHMSA | 1 - Introduction | Figure 1-3 - Information Summary
3/21/2012			1 - PHMSA | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-4 - Notifications and Telephone Numbers | Company Personnel
3/21/2012			1 - PHMSA | A - Training / Exercises | A.2 Training Program | Figure A.2-3 - Personnel Response Training Log
3/21/2012			1 - PHMSA | 1 - Introduction | Figure 1-3 - Information Summary
3/21/2012			1 - PHMSA | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-4 - Notifications and Telephone Numbers | Company Personnel
3/21/2012			1 - PHMSA | A - Training / Exercises | A.2 Training Program | Figure A.2-3 - Personnel Response Training Log
3/21/2012			1 - PHMSA | 1 - Introduction | Figure 1-3 - Information Summary
4/16/2012			1 - PHMSA | 1 - Introduction | Figure 1-3 - Information Summary | Line Sections
5/8/2012			1 - PHMSA | 3 - Notifications / Telephone Numbers | 3.1 Emergency Information and Notification Procedures | Figure 3.1-4 - Notifications and Telephone Numbers | USCG Classified OSRO's / Non-

			Classified OSRO's
5/8/2012			1 - PHMSA | 7 - Sustained Response Actions | 7.1 Response Resources | Figure 7.1-1 - Regional Company and Response Contractor's Equipment List/Response Time
5/8/2012			1 - PHMSA | B - Contractor Response Equipment | B.1 Cooperatives and Contractors | B.1.1 OSRO Classification
5/8/2012			1 - PHMSA | B - Contractor Response Equipment | B.1 Cooperatives and Contractors | Figure B.1-1 - Evidence of Contracts
11/1/2012			Revised format of plan included additional pipeline segments.

NOTE: It is the responsibility of the holder of this Plan to insure that all changes and updates are made. The Plan holder must:

- Remove and discard obsolete pages.
- Replace obsolete pages with the updated pages.

DISTRIBUTION LIST	
COPY NUMBER	**PLAN HOLDER (Hard Copies)**
2 Electronic	USDOT – OPS Environmental Planning Officer 1200 New Jersey Avenue, S.E. Rm E22-210 Washington, DC 20590

TABLE OF CONTENTS

Regulatory Cross-References are provided at the end of this document.

TABLE OF CONTENTS

TABLE OF CONTENTS

Page

APPENDICES

1.0 INTRODUCTION AND PLAN CONTENT

1.1 PLAN PURPOSE/OBJECTIVES

The purpose of this OPA 90 Oil Spill Response Plan ("Plan") is to assist Enterprise Products Operating pipeline personnel in preparing for and responding quickly and safely to a discharge originating from the pipelines and associated facilities. The Plan provides techniques and guidelines for achieving an efficient, coordinated, and effective response to a discharge incident which may occur along the pipeline.

The specific objectives of the Plan are to:

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

1.2 SCOPE OF PLAN

This Plan has been developed in accordance with the regulation published in 49 CFR Part 194 - Response Plans for Onshore Oil Pipelines and Texas Administrative Code Title 31 Part 1 pertaining to Oil Spill Prevention and Response.

This Plan contains prioritized procedures for Company personnel to mitigate or prevent any discharge resulting from the operation of the pipeline. A description of the pipeline's details is presented in Figure 1.1 with additional information provided in the sections and the appendices.

1.3 PLAN DISTRIBUTION PROCEDURES

The Corporate Plan Holder is responsible for maintenance and distribution of the Plan. Distribution will be handled in the following manner:

- The Company Portal will be used to maintain the Plan. E-mail notification will be used to notify stakeholders of changes to the Plan. The notifications will be made to the Distribution List in the Foreword section of the Plan (FWD-vi)

- Company personnel who may be called upon to provide assistance during discharge response activities will have access to the Plan via the Company Portal for their use and training. In addition, Qualified Individuals will have access to the plans via DVD, thumb drive or other media.

- The Plan is located on the Portal and can be accessed at:
  Go to Company Internet Portal Page and click on Departments Tab; then click on EHS&T tab; Go to Field Environmental and click on Facility Files icon; under Facility Files, click on OPA 90 Plans folder icon; finally under the OPA 90 Plans folder, click on Enterprise Products – Seminole Zone.

- Various regulatory agencies will be distributed a copy of the Plan. The list of agencies is detailed in the Distribution List located in the Foreword.

1.4 PLAN REVIEW AND UPDATE PROCEDURES

Annual Review/Update

The Corporate Plan Holder and Field Environmental Representative will coordinate the following plan review and update procedures:

- At least once each year, review and make appropriate revisions as required by operational or organizational changes.

- At least once each year, review and make appropriate revisions as required by changes in the names and telephone numbers detailed in Section 2.0.

- Review and make appropriate revisions as required by improved procedures or deficiencies identified during response team tabletop exercises or actual emergency responses.

- Coordinate the word processing, publication, and distribution efforts to complete the revisions and maintain the Plan.

1.4 PLAN REVIEW AND UPDATE PROCEDURES (Cont'd)

Agency Revision Requirements

The Company shall revise and resubmit changes to the DOT/PHMSA Pipeline Response Plans Officer within 30 days of each change that would substantially affect the implementation of the response plan. Examples of changes in operating conditions that would cause a significant change to the Plan include:

Conditions Requiring Changes

- An extension of the existing pipeline or construction of a new pipeline in a response zone not covered by the previously approved plan.
- Relocation or replacement of portions of the pipeline which in any way substantially affect the information included in this Plan, such as a change in the Worst Case Discharge volume.
- A change in the type of oil handled, stored, or transferred that materially alters the required response resources.
- A change in the name of the Oil Spill Removal Organization ("OSRO").
- A material change in capabilities of the OSROs that provide equipment and personnel.
- A change in emergency response procedures.
- A change in the Qualified Individual.
- A change in the National Contingency Plan ("NCP") or an Area Contingency Plan ("ACP") that has significant impact on the equipment appropriate for response activities.
- Any other changes that materially affect the implementation of the Plan.
- As a result of post incident or drill evaluations.

DOT/PHMSA must be provided with two copies of such revisions. The Company must submit the DOT/PHMSA issued Facility Control Number with the changes (the PHMSA Control Number is listed in Figure 1.1). In addition to periodic updates, when applicable, the Facility will resubmit the response plan to DOT/PHMSA every five years from the last approval date of the Plan.

Except as provided above, amendments to the following do not require approval by DOT/PHMSA:

- Personnel and telephone number lists included in the Plan.
- OSRO(s) change which does not result in a material change in support capabilities.

1.5 REGULATORY COMPLIANCE

The development, maintenance, and use of this Plan implements company policy and addresses the following regulatory requirements and guidelines:

- Federal Oil Pollution Act of 1990: U.S. DOT Final Rule for Transportation Related On-shore Facilities (49 CFR Part 194).

The response zone has been reviewed for consistency with the following plans:

- National Contingency Plan (NCP)
- EPA Region 6--Regional Integrated Contingency Plan
- USCG -- One Gulf Plan
  - Marine Safety Office Houston/Galveston Geographic Response Plan
  - Marine Safety Office Port Arthur Geographic Response Plan
  - Marine Safety Office Corpus Christi Geographic Response Plan

FIGURE 1.1

FACILITY INFORMATION

GENERAL INFORMATION		
Facility Name:	Seminole Pipeline (Red Line and Blue Line)	
PHMSA Control Number(s):	1639 (Seminole Response Zone)	
Owner Name:	Seminole Pipeline Company, LLC	
Operator Name:	Enterprise Products Operating, LLC	
Operator Addresses:	***Physical Address*** 1100 Louisiana Houston, TX 77002	***Mailing Address*** P. O. Box 4324 Houston, TX 77210-4324
Mainline Number:	(713) 381-6500 or (866) 931-3726	
Contact Person:	Rodney Sartor, Manager – Plans & Remediation	
Primary NAICS Code:	486210	
Determination of Significant and Substantial Harm (DOT/PHMSA):	The Seminole Response Zone meets the criteria for "Significant and Substantial Harm".	
Operator Statement of "Significant and Substantial Harm":	It is Enterprise Products Operating goal to respond as quickly as possible to <u>all</u> uncontrolled releases of petroleum product, regardless of the source point location along the system. Based upon this goal, and the overbreadth of the definitions provided in 49 CFR 194.103 (c)(4) & (5), Enterprise Products Operating is compelled to consider all the active line sections listed below in this Section as capable of a release potentially causing "significant and substantial harm".	
PIPELINE LOCATION		
States/Counties:	The Seminole Pipeline system covers 27 counties within the State of Texas as detailed in this Figure 1.1.	
States Traversed:	Texas	
Response Zone:	See Figure 1.2	

FIGURE 1.1

FACILITY INFORMATION (Cont'd)

PHYSICAL DESCRIPTION – PIPELINE

General:

- Enterprise Products Operating operates and maintains an "intrastate common carrier" natural gasoline pipeline system which includes transmission and handling facilities located along the pipeline.
- As an intrastate common carrier, Enterprise Products Operating operates under the rules and regulations of the Texas Railroad Commission and the oil pipeline regulations of the Department of Transportation (49 CFR Parts 194 & 195).
- The Enterprise Products Operating - Seminole Pipeline System includes the Red Line and Blue Line pipelines which are located within the Seminole Response Zone.
- This Plan is written in English and understood by personnel responsible for carrying out the plan.

Pipeline Specifications:

The basic specifications of the pipelines are as follows:

- **Product Types:** Natural Gasoline, Field Grade Butane and Y Grade Natural Gas Liquid
- **Pipe Detail:** 6", 8", 14" and 16" OD (various wall thicknesses)

FIGURE 1.1

FACILITY INFORMATION (Cont'd)

PHYSICAL DESCRIPTION – PIPELINE (Cont'd)

Response Resources:

Facility spill mitigation procedures and response guidelines are provided in Section 3.0 for discharges that could result from any of the following scenarios:

- Pipeline rupture/leak
- Explosion and/or fire
- Failure of facility piping
- Equipment failure (e.g. pumping system failure, relief valve failure, etc.)

These scenarios could result in the following discharge volume (additional details in Appendix G):

Worst Case Discharge (WCD)

Response Zone	Discharge Scenario	Potential Oil Group	DOT/PHMSA Planning Volume
Seminole Zone – Red Line	WCD	3	(b) (7)(F) [redacted]
Seminole Zone – Blue Line	WCD	3	

FIGURE 1.1

FACILITY INFORMATION (Cont'd)

SEMINOLE RESPONSE ZONE INFORMATION	
Enterprise Products Operating Contact Information	
24 Hour Emergency Contact Phone Numbers:	**(800) 546-3482 Enterprise Pipeline Control Emergency**
Qualified Individual / Emergency Coordinator:	See Figure 2.2 for Qualified Individual/Emergency Coordinator Information
Alt. Qualified Individual / Alt. Emergency Coordinator:	See Figure 2.2 for Alt. Qualified Individual/Emergency Coordinator Information
Telephone/FAX:	Telephone references, including 24 hour numbers, for the Facility, Owner, and QI/AQI are provided in Figure 2.2.
Contracted Resources:	Agreement numbers are on-file at Corporate Headquarters in Houston, Texas, and on the Enterprise portal. Classifications are detailed in Appendix A.

FIGURE 1.1

FACILITY INFORMATION (Cont'd)

SEMINOLE RESPONSE ZONE INFORMATION – RED LINE

- Enterprise Products pipelines located within Seminole Response Zone (PHMSA Control Number 1639) includes the Red Line and Blue Line and associated facilities located in twenty seven counties within Texas. These assets include:

RED LINE PIPELINES:

Pipeline Identifier: **Seminole Loop**
Pipeline #: 50
Description: 14" Line from Gaines Station to Patricia Station.
Length: Approximately 55 miles of pipe.

Potentially Affected Parishes/Counties: Gaines, Andrews and Martin (Texas).

Pipeline Identifier: **Seminole Loop**
Pipeline #: 50
Description: 14" Line from Patricia Station to Forsan Station.
Length: Approximately 56 miles of pipe.

Potentially Affected Parishes/Counties: Martin and Howard (Texas).

Pipeline Identifier: **Seminole Loop**
Pipeline #: 50
Description: 14" Line from Forsan Station to Robert Lee Station.
Length: Approximately 55 miles of pipe.

Potentially Affected Parishes/Counties: Howard, Mitchell, Sterling and Coke (Texas).

Pipeline Identifier: **Seminole Loop**
Pipeline #: 50
Description: 14" Line from Robert Lee Station to Millersview Station.
Length: Approximately 50 miles of pipe.

Potentially Affected Parishes/Counties: Coke, Runnels, and Concho (Texas).

SEMINOLE RESPONSE ZONE INFORMATION – RED LINE

RED LINE PIPELINES (Cont.)

Pipeline Identifier: **Seminole Loop**
Pipeline #: 50
Description: 14" Line from Millersview Station to San Saba Station.
Length: Approximately 58 miles of pipe.

Potentially Affected Parishes/Counties: Concho, McCulloch and San Saba (Texas).

Pipeline Identifier: **Seminole Loop**
Pipeline #: 50
Description: 14" Line from San Saba Station to Long Mountain Station.
Length: Approximately 40 miles of pipe.

Potentially Affected Parishes/Counties: San Saba and Burnet (Texas).

Pipeline Identifier: **Seminole Loop**
Pipeline #: 50
Description: 14" Line from Long Mountain Station to Coupland Station.
Length: Approximately 58 miles of pipe.

Potentially Affected Parishes/Counties: Burnet and Williamson (Texas).

Pipeline Identifier: **Seminole Loop**
Pipeline #: 50
Description: 14" Line from Coupland Station to Carmine Station.
Length: Approximately 48 miles of pipe.

Potentially Affected Parishes/Counties: Williamson, Lee, and Washington (Texas).

Pipeline Identifier: **Seminole Loop**
Pipeline #: 50
Description: 14" Line from Carmine Station to Brenham Station.
Length: Approximately 15 miles of pipe.

Potentially Affected Parishes/Counties: Washington (Texas).

SEMINOLE RESPONSE ZONE INFORMATION – RED LINE

RED LINE PIPELINES (Cont.)

Pipeline Identifier: **Seminole Loop**
Pipeline #: 50
Description: 14" Line from Brenham Station to Wharton Station.
Length: Approximately 60 miles of pipe.

Potentially Affected Parishes/Counties: Washington, Austin, Waller and Harris (Texas).

Pipeline Identifier: **Seminole Loop**
Pipeline #: 50
Description: 14" Line from Wharton Station to Mont Belvieu Station
Length: Approximately 40 miles of pipe.

Potentially Affected Parishes/Counties: Harris and Chambers (Texas).

Pipeline Identifier: **Seminole Loop To/From Wharton Station**
Pipeline #: 60
Description: 14" Line
Length: 27.2 miles of pipe.

Potentially Affected Parishes/Counties: Harris, TX

FIGURE 1.1

FACILITY INFORMATION (Cont'd)

SEMINOLE RESPONSE ZONE INFORMATION – BLUE LINE

BLUE LINE PIPELINES:

Pipeline Identifier: **Seminole Mainline**
Pipeline #: 1
Description: 14" Line from Gaines Station to Patricia Station.
Length: Approximately 55 miles of pipe.

Potentially Affected Parishes/Counties: Gaines, Andrews and Martin (Texas).

Pipeline Identifier: **Seminole Mainline**
Pipeline #: 1
Description: 14" Line from Patricia Station to Forsan Station.
Length: Approximately 56 miles of pipe.

Potentially Affected Parishes/Counties: Martin and Howard (Texas).

Pipeline Identifier: **Seminole Mainline**
Pipeline #: 1
Description: 14" Line from Forsan Station to Robert Lee Station.
Length: Approximately 55 miles of pipe.

Potentially Affected Parishes/Counties: Howard, Mitchell, Sterling and Coke (Texas).

Pipeline Identifier: **Seminole Mainline**
Pipeline #: 1
Description: 14" Line from Robert Lee Station to Millersview Station.
Length: Approximately 48 miles of pipe.

Potentially Affected Parishes/Counties: Coke, Runnels, and Concho (Texas).

FIGURE 1.1
FACILITY INFORMATION (Cont'd)

SEMINOLE RESPONSE ZONE INFORMATION – BLUE LINE

BLUE LINE PIPELINES:

Pipeline Identifier: **Seminole Mainline**
Pipeline #: 1
Description: 14" Line from Millersview Station to San Saba Station.
Length: Approximately 58 miles of pipe.

Potentially Affected Parishes/Counties: Concho, McCulloch and San Saba (Texas).

Pipeline Identifier: **Seminole Mainline**
Pipeline #: 1
Description: 14" Line from San Saba Station to Long Mountain Station.
Length: Approximately 40 miles of pipe.

Potentially Affected Parishes/Counties: San Saba and Burnet (Texas).

Pipeline Identifier: **Seminole Mainline**
Pipeline #: 1
Description: 14" Line from Long Mountain Station to Coupland Station.
Length: Approximately 58 miles of pipe.

Potentially Affected Parishes/Counties: Burnet and Williamson (Texas).

Pipeline Identifier: **Seminole Loop**
Pipeline #: 1
Description: 14" Line from Coupland Station to Carmine Station.
Length: Approximately 48 miles of pipe.

Potentially Affected Parishes/Counties: Williamson, Lee, and Washington (Texas).

Pipeline Identifier: **Seminole Mainline**
Pipeline #: 1
Description: 14" Line from Carmine Station to Brenham Station.
Length: Approximately 15 miles of pipe.

Potentially Affected Parishes/Counties: Washington (Texas).

FIGURE 1.1
FACILITY INFORMATION (Cont'd)

SEMINOLE RESPONSE ZONE INFORMATION – BLUE LINE

BLUE LINE PIPELINES:

Pipeline Identifier: **La Grange Lateral**
Pipeline #: 6
Description: 8.625" Line from Brenham Station
Length: 27.2 miles of pipe.

Potentially Affected Parishes/Counties: Fayette and Austin (Texas)

Pipeline Identifier: **Seminole Mainline**
Pipeline #: 1
Description: 14" Line from Brenham Station to Cat Springs Station.
Length: Approximately 19 miles of pipe.

Potentially Affected Parishes/Counties: Austin (Texas)

Pipeline Identifier: **Seminole Mainline**
Pipeline #: 1
Description: 14" Line from Cat Springs Station to Beasley Station
Length: Approximately 35 miles of pipe.

Potentially Affected Parishes/Counties: Austin and Fort Bend (Texas)

Pipeline Identifier: **Seminole Mainline**
Pipeline #: 1
Description: 14" Line from Beasley Station to Clemens Station
Length: Approximately 45 miles of pipe.

Potentially Affected Parishes/Counties: Fort Bend and Brazoria (Texas)

Pipeline Identifier: **Seminole Mainline**
Pipeline #: 1
Description: 14" Line from Clemens Station to Stratton Ridge Station
Length: Approximately 16 miles of pipe.

Potentially Affected Parishes/Counties: Brazoria (Texas)

FIGURE 1.1
FACILITY INFORMATION (Cont'd)

SEMINOLE RESPONSE ZONE INFORMATION – BLUE LINE

BLUE LINE PIPELINES:

Pipeline Identifier: **Seminole Mainline**
Pipeline #: 1
Description: 14" Line from Stratton Ridge Station to Mont Belvieu Station
Length: Approximately 76 miles of pipe.

Potentially Affected Parishes/Counties: Brazoria, Harris and Chambers (Texas)

Pipeline Identifier: **Clemens Alt. – Copano Meter to Seminole Loop**
Pipeline #: 33
Description: 6.625" Line from Breham Station to a station located south of Westheimer Road and Westheimer Place Drive.
Length: 18.5 miles of pipe.

Potentially Affected Parishes/Counties: Harris, TX

FIGURE 1.1
FACILITY INFORMATION (Cont'd)

SEMINOLE RESPONSE ZONE INFORMATION (Cont'd)
STATIONS (PUMP STATIONS, etc)
(b) (7)(F) [redacted]

FIGURE 1.2

PIPELINE SYSTEM OVERVIEW DIAGRAM

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

2.1 INTERNAL NOTIFICATION

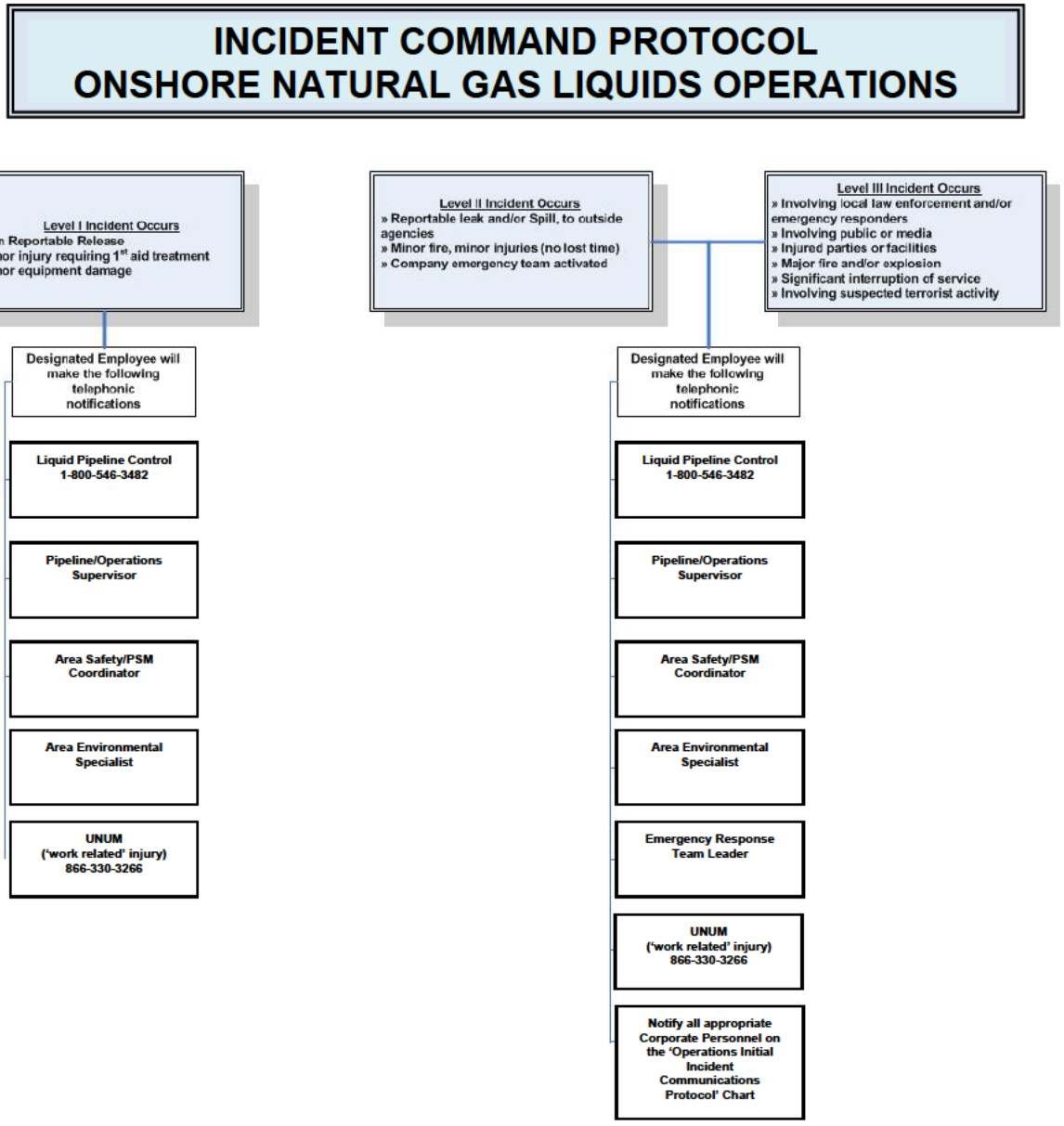
Internal notifications will be conducted in accordance with the applicable Enterprise Emergency Response Plan, Section 2.1 of the Enterprise Safety Manual and as outlined in Figure 2.1.

In no event shall notification be delayed because the immediate supervisor is inaccessible. Authorization is given to bypass management levels if necessary to provide timely notification to appropriate management.

Contact information for local personnel is listed in Figure 2.2.

Information to be supplied when reporting the release to Pipeline Control is listed in Figure 2.3.

FIGURE 2.1
INTERNAL NOTIFICATION SEQUENCE
(Phone references are provided in Figure 2.2)



!! IMPORTANT !!

Telephonic notification to Liquid Pipeline Control will activate the next level of Incident Protocol notifications if required . This process will generate an email to a pre-determined distribution list and initiate pre-recorded telephone messages sent to Sr. Leadership.

!! IMPORTANT !!

Positive telephone contact is required. If the employee listed on the flowchart is unavailable please try an alternate Employee in the Department.

FIGURE 2.2

INTERNAL NOTIFICATION REFERENCES

INTERNAL NOTIFICATIONS			
POSITION/TITLE	**NAME**	**OFFICE**	**OTHER**
Operations Manager (QI)	Ralph Winkler	281-240-5100 x 226	713-299-0317 MBL
Operations Supervisor (QI)	Vincent Tabone	979-836-3801	713-823-2120 MBL
Pipeline Supervisor (QI)	Rex Morsey	432-681-2609	432-559-8944 MBL
Pipeline Supervisor (QI)	Marvin Thrasher	979-798-7299	713-725-5010 MBL
Maintenance Specialist (QI)	Vincent DeSalvo	919-836-3801	979-830-3697 MBL
Maintenance Coordinator (QI)	Mark Winford	979-836-6204	979-830-3697 MBL
Maintenance Specialist (QI)	John Anderson	(281) 325-3230	(979) 848-9588 MBL
Maintenance Coordinator (QI)	Jason Welsh	(281) 325-3235	(713) 823-2124 MBL
Maintenance Coordinator (QI)	Robert Willison	(432) 681-2624	(432) 813-1877 MBL
Pipeline Technician (QI)	Charlie Evans	432-681-2625	432-559-2891
Field Environmental Representatives	Dina Babinski	210-528-3824	210-232-4880 MBL
	Wesley Heefner	281-351-0153	832-746-3119 MBL
	James Heap	432-686-5404	432-260-0239 MBL
Field Safety/PSM Coordinators	Jose Baldavinos	432-685-9511	432-556-9362 MBL
	Joel Kingston	713-381-7505	505-631-6746 MBL
	Bobby Wilson	281-240-5110 x224	281-468-8558

FIGURE 2.2

INTERNAL NOTIFICATION REFERENCES (Cont'd)

CORPORATE SUPPORT ROSTER INTERNAL NOTIFICATIONS			
DEPARTMENT/TITLE	**NAME**	**OFFICE**	**ALTERNATE**
Pipeline Control Center	Emergency Notification	(800) 546-3482	(800) 331-3032 24-hr
Sr. Vice President, Northern Operations	Terry L. Hurlburt	(713) 381-8298	(713) 504-4429 MBL
Sr. Director, Environmental	Matthew Marra	(713) 381-6684	(281) 605-9289 MBL
Public Affairs	Rick Rainey	(713) 381-3635	(713) 259-9214 MBL
Insurance Claims	Scott Toth	(713) 381-6673	(713) 503-5212 MBL

CORPORATE

2.2 EXTERNAL NOTIFICATIONS

External notifications are those made to entities outside of the company including federal, state and local regulatory agencies, as well as railroad and utility companies. These notifications include both verbal and written requirements.

2.2.1 Verbal Notification Requirements

Immediate internal notification is to be made in accordance with Section 2.1 when a system operational failure or other type of incident occurs. This will allow immediate evaluation and classification of incidents and prompt immediate telephonic notification as detailed in Figure 2.4 and 2.5 to the National Response Center (NRC), state agencies, local agencies, and other federal agencies as required. The information found on the Release Event Report, Figure 2.3, should be used to disseminate incident information to the appropriate agencies.

Detailed external telephonic contact information is contained in Figure 2.5 and the appropriate Enterprise Emergency Response Plan (Appendices J through N).

For the purpose of this procedure, **immediate reporting** means reporting the instant a person has knowledge of an actual *or suspected* leak, uncontrolled release of product, any unplanned spill or other pipeline system failure. Information that causes any employee to reasonably suspect a leak or uncontrolled release of product must be immediately reported, even when the actual existence or location of a leak or release cannot yet be confirmed.

2.2.2 Written Notification Requirements

A written report is to be filed as soon as practical, but not later than 30 days after discovery of the incident to the Information Resources Manager, Office of Pipeline Safety, Pipeline and Hazardous Materials Safety Administration, US Department of Transportation. Information concerning the event shall be reported on DOT Form 7000-1 or a facsimile (a copy is provided in Appendix G). Two (2) copies of each report shall be filed. This report is to be filed for all incidents reported telephonically and other incidents required to be reported in accordance with the criteria listed below.

The information required for completing the 30-day written report will be furnished by the **Region Offices** to the **DOT Pipeline Integrity Pipeline Compliance Department** for submission to the DOT. Any subsequent or additional information that was not reported on the initial written report must be reported to the DOT Pipeline Integrity Pipeline Department by the Region Office. This information will be utilized in filing a supplemental written report to the DOT as soon as possible, but no later than 30 days after its discovery**.**

NOTE: Refer to Figure 2.5 for any additional state written reporting requirements.

FIGURE 2.3
RELEASE EVENT REPORT

What information must I provide for **Emergency Releases**?

1. Your **Name**, **Title**, and **Phone Number**
2. Release **Location**, i.e. legal description, aerial marker, address, nearest city, facility name, etc.
3. Release **Verification Time** (be very specific, e.g. 4:23 AM CST)
4. **Nature** of Release (major pipeline failure, pinhole, etc.)
5. Approximate Release **Volume** (gallons, barrels, SCF, etc.)
    - If volume is unknown and evidence indicates the release may be significant
        1. Liquid Lines: Report product volume between two nearest block valves or 10 miles of pipeline
        2. Natural Gas Lines: Obtain best estimate of released volume from Operations and Field Engineering
    - If the release can be visually sighted and is not significant (weeping seal on a pump, leaking packing on an aboveground valve, small pinhole with no indication in pipeline control, etc.) the release amount will either reported as unknown or estimated using the best available information.

NOTE: For liquid lines, if in doubt, report the volume between the nearest block, or similar, valves.

6. Are there **homes nearby** or **is the public in immediate danger?**
7. **Media impacted**, i.e. soil/water/air
    - Report name of waterway if available, i.e. Dawson's Creek, etc.

NOTE: It is imperative to note if the released product has impacted surface water or threatens to impact surface water

8. Anything of **significance**, i.e. injuries, highway/railroad closures, media interest, method of notification (local fire dept., sheriff, etc.)

Always provide as much information as possible!

Definitions:

Release – the placing, discharging, spilling, percolating, draining, pumping, leaking, mixing, leaching, migrating, seeping, emitting, disposing, by-passing, or other escaping of controlled chemicals or pipeline products to the environment

FIGURE 2.4

EXTERNAL NOTIFICATION FLOWCHART

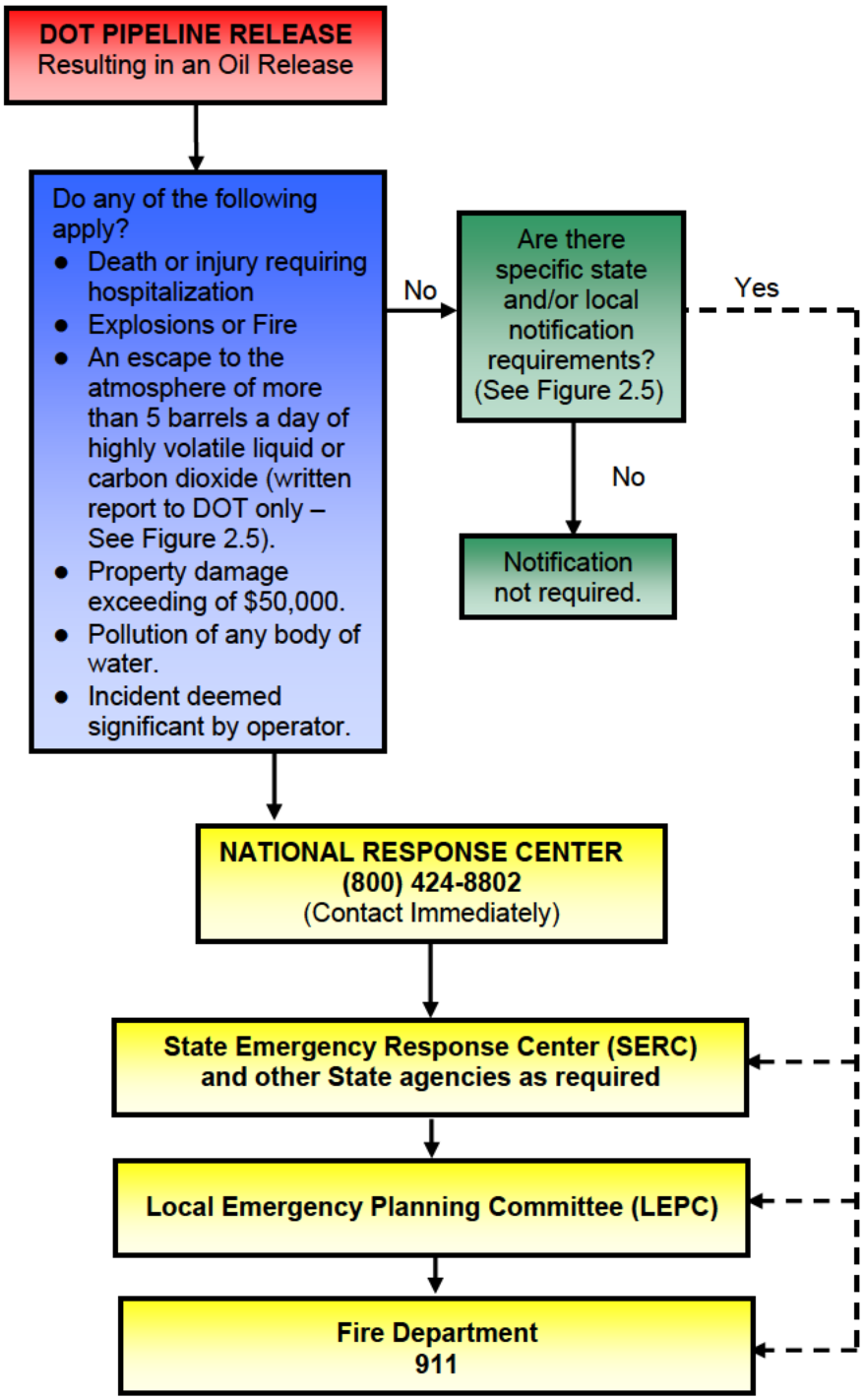


FIGURE 2.5

EXTERNAL NOTIFICATION REFERENCES

FEDERAL

REQUIRED NOTIFICATIONS	
NATIONAL RESPONSE CENTER	
National Response Center c/o United States Coast Guard (G-RPF) 2100 2nd Street Southwest Room 2111-B Washington, D.C. 20593-0001	(800) 424-8802 (24 Hr.) (202) 267-2675 (24 Hr.) (202) 267-1322 (Fax) (202) 267-2180 (Direct)

REPORTING REQUIREMENTS

TYPE: For all spills that impact or threaten to impact navigable water or for any failure in a pipeline system that:

1. caused a death or a personal injury requiring hospitalization.
2. resulted in either a fire or explosion not intentionally set by the carrier.
3. caused estimated damage to the property of the carrier or others, or both, of a total of $50,000 or more.
4. resulted in the pollution of any stream, river, lake, reservoir, or other similar body of water that violated applicable water or adjoining shoreline, causing a discoloration or emulsion beneath the surface of the water or upon adjoining shorelines.
5. in the judgment of the carrier, was significant even though it did not meet the criteria of any other subparagraph of this paragraph **(cleared through Management).**

NOTE: A call to the NRC must also be made for spills or releases of hazardous substances that meet or exceed their RQ (Spill Release and Reporting Guide).

VERBAL: Immediate notification required.

WRITTEN: Not required

FIGURE 2.5

EXTERNAL NOTIFICATION REFERENCES (Cont'd)

FEDERAL

REQUIRED NOTIFICATIONS (FOR DOT JURISDICTIONAL FACILITIES)	
DEPARTMENT OF TRANSPORTATION	
US Dept. of Transportation Information Resources Manager Office of Pipeline Safety Pipeline and Hazardous Materials Safety Administration Room 2103, 400 Seventh Street SW Washington, DC 20590-0001 (202) 366-4566 (Fax filing)	(800) 424-8802 (24 Hr.) (202) 366-4433 (Direct) (202) 366-3666 (Fax) (713) 272-2859 (Southwest) (816) 329-3800 (Central) (202) 260-8500 (Eastern)

REPORTING REQUIREMENTS

TYPE: In addition to the reporting of accidents to the NRC, a written accident report (PHMSA Form 7000-1, provided in Appendix G) must be submitted for releases resulting in any of the following:

1. Explosion or fire not intentionally set by the operator.
2. Release of five gallons or more of hazardous liquid or carbon dioxide, except that no report is required for a release of less than five barrels resulting from a pipeline maintenance activity if the release is:
   a. not one described under the NRC's reporting conditions.
   b. confined to Enterprise property or pipeline right-of-way; and
   c. cleaned up promptly.
3. Death of any person.
4. Personal injury necessitating hospitalization.
5. Estimated property damage, including cost of cleanup and recovery, value of lost product, and damage to the property of the operator or others, or both, exceeding $50,000.

VERBAL: Call to the NRC meets the required verbal notification under DOT reporting requirement.

WRITTEN: As soon as practicable, an accident meeting any of the above criteria must be reported on PHMSA Form 7000-1. The report must be sent to DOT no later than 30 days after the release. Changes or additions to the original report (PHMSA Form 7000-1) must be filed as a supplemental report within 30 days.

OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA)	
Area Office	(800) 321-6742 (24 Hr.)

REPORTING REQUIREMENTS

TYPE: Fatality or personal injury (3 or more hospitalizations)

VERBAL: Immediately

WRITTEN: As requested

FIGURE 2.5

EXTERNAL NOTIFICATION REFERENCES (Cont'd)

FEDERAL NOTIFICATIONS		
NON-REQUIRED ASSISTANCE/ADVISORY NOTIFICATIONS (Outside Resources)		
AGENCY	**LOCATION**	**OFFICE/ALTERNATE**
CHEMTREC / Bureau of Explosives	National	(800) 424-9300
Federal Bureau of Investigation Washington Metropolitan Field Office 601 4th Street, N.W. Washington, D.C. 20535-0002	National	(202) 324-3000 (24-hour)
U.S. Environmental Protection Agency - EPA Region 6 1445 Ross Avenue, Suite 1200 Dallas, TX 75202-2733	Statewide	(866) 372-7745 (24-hour)
U. S. Coast Guard Sector	Houston, TX	(713) 671-5113 (24-hour Houston/Galveston)
	Galveston, TX	(409) 978-2708 (409) 682-1264 (409) 978-2759 (Facilities)
U.S. Coast Guard District Response Group (DRG) and District Response Advisory Team (DRAT) Commander (mep) Eighth Coast Guard District Hale Boogs Federal Bldg. 501 Magazine Street New Orleans, LA 70130-3396	Statewide	(504) 589-6901 (daytime) (504) 589-6225 (24-hour)
U.S. Department of Interior Office of Environmental Policy & Compliance	Statewide	(505) 766-3565
U.S. Fish and Wildlife Service Washington DC Director	National	(202) 208-7535 (202) 208-4717
U.S. Fish and Wildlife Service Region 2 Office	Statewide	(505) 248-6282

FIGURE 2.5

EXTERNAL NOTIFICATION REFERENCES (Cont'd)

FEDERAL NOTIFICATIONS (Cont'd)		
NON-REQUIRED ASSISTANCE/ADVISORY NOTIFICATIONS (Outside Resources) (Cont'd)		
AGENCY	**LOCATION**	**OFFICE/ALTERNATE**
U.S. Fish and Wildlife Service Dr. Brian Cain, Contaminant Specialist	Houston, TX	(281) 286-8282
Federal Aviation Administration Approach Supervisor On Duty	Dallas, TX – DFW	(972) 615-2500
	Dallas, TX – Dallas Love	(214) 353-1500
	Houston, TX – IAH	(281) 209-8660
U.S. Department of Commerce NOAA SSC	National	(206) 526-6317
National Oceanic and Atmospheric Administration Damage Assessment Center	National	(301) 713-3038 x110
National Oceanic and Atmospheric Administration Coastal References	National	(214) 665-8365
National Oceanic and Atmospheric Administration National Marine Fisheries Service	National	(206) 526-4911 (206) 526-4563
National Audubon Society National Office	New York, NY	(212) 979-3000
Sierra Club National Office	San Francisco, CA	(415) 977-5500
National Wildlife Federation National Office	Vienna, VA	(703) 438-6000
Ducks Unlimited (Conserves, Restore & Manages Wetlands Only) National Office	Memphis, TN	(901) 758-3825

Texas

FIGURE 2.5

EXTERNAL NOTIFICATION REFERENCES (Cont'd)

TEXAS

OTHER POTENTIAL REQUIRED NOTIFICATIONS (Cont'd)	
TEXAS EMERGENCY RESPONSE CENTER (TERC)	
Texas Commission on Environmental Quality (Hotline will notify TCEQ, TGLO, TRRC as applicable; follow-up calls to all applicable agencies is advisable.)	(800) 832-8224 (24 Hr.)
REPORTING REQUIREMENTS TYPE: All spills of petroleum products into waters of the state and discharges onto land that meet or exceed 210 gallons (25 gallons for Non-PST exempt facilities) or exceed a RQ. VERBAL: Immediately WRITTEN: As the agency may request depending on circumstances	

TEXAS GENERAL LAND OFFICE	
Oil Spill Program 1700 N. Congress Ave. Austin, TX 78701	(512) 475-1575 (800) 832-8224 (alternate)
REPORTING REQUIREMENTS TYPE: Any unauthorized discharge or threat of discharge into the coastal environment. VERBAL: Within one (1) hour of discovery. WRITTEN: Within sixty (60) days after the response actions have been declared complete.	
US BUREAU OF RECLAMATION	
US Department of the Interior, Bureau of Reclamation – Great Plains Region Oklahoma – Texas Area Office 5316 Hwy 290 W, Suite 510 Austin, TX 78735-8931	(512) 899-4150 (512) 899-4179 (Fax)
REPORTING REQUIREMENTS TYPE: Notification must be made to the Bureau of Reclamation for releases impacting reservoirs. VERBAL: Immediate WRITTEN: As requested by agency.	

TEXAS

FIGURE 2.5

EXTERNAL NOTIFICATION REFERENCES (Cont'd)

TEXAS

* See the appropriate Enterprise Emergency Response Plan for local emergency responder contact information.

LOCAL EMERGENCY SERVICES		
DIAL 911 for All Police, Fire, and Ambulance Emergencies		
USCG CLASSIFIED OIL SPILL REMOVAL ORGANIZATIONS (OSRO)		
COMPANY	**LOCATION**	**TELEPHONE**
SWS Environmental Services	1700 North E Street LaPorte, TX 77571 *(Field)*	(281) 867-9131
Anderson Pollution Control	1011 W. Lewis, Suite A Conroe, TX 77301-2219	866-609-6208 (24 Hr) 936-539-2099
T&T Marine Salvage	9723 Teichmans Point Galveston, TX 77554	(409) 744-1222 (24 Hr.) (409) 744-5218 (Fax)
Talon LPE	921 N. Bivins Amarillo, TX 79107	(866) 742-0742
Eco-logical Environmental Services	2200 Market Midland, TX 79703	(800) 375-0100
Garner Environmental Services, Inc.	1717 W 13th St. Deer Park, TX 77536 *(Corporate)*	(281) 930-1200 (24 Hr.) (800) 424-1716 (24 Hr.)

3.0 RESPONSE ACTIONS

3.1 INITIAL RESPONSE ACTIONS

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

The pages that follow discuss initial response actions for a release of product. It is important to note that **these actions are intended only as guidelines**. The appropriate response to a particular incident may vary depending on the nature and severity of the incident and on other factors that are not readily addressed. Note that, **without exception, personnel and public safety is first priority**. Guidelines for other scenarios such as bomb threats, natural disasters, etc., are included in the appropriate Enterprise Emergency Response Plan.

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

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

INITIAL RESPONSE ACTIONS – SUMMARY
PERSONNEL AND PUBLIC SAFETY IS FIRST PRIORITY
CONTROL
• Eliminate sources of ignition
• Isolate the source of the discharge, minimize further flow
NOTIFY
• Make internal and external notifications
• Activate the Local Response Team as necessary
• Activate response contractors and other external resources as necessary
CONTAIN
• Begin spill mitigation and response activities
• Monitor and control the containment and clean-up effort
• Protect the public and environmental sensitive areas

3.1 INITIAL RESPONSE ACTIONS (Cont'd)

FIRST COMPANY PERSON NOTIFIED/ON SCENE

- _____ Follow the appropriate ***"Specific Incident Response Checklist"*** in Figure 3.1 and ***"Product Specific Response Considerations"*** in Figures 3.2, 3.3 and Appendix I (MSDSs).
- _____ Notify **Company Management** of the incident.

AREA MANAGEMENT

- _____ **Evaluate the Severity**, Potential Impact, Safety Concerns, and Response Requirements based on the initial data provided by the first person on scene.
- _____ Utilize local emergency services as necessary (police, fire, medical).
- _____ Assume the role of **Incident Commander**.
- _____ **Confirm safety** aspects at site, including need for personal protective equipment, sources of ignition, and potential need for evacuation.
- _____ Activate the **Local Response Team and primary response contractors**, as the situation demands.
- _____ Coordinate/perform **activation of additional spill response contractors,** as the situation demands (telephone reference is provided in Figure 2.5).
- _____ Perform notifications as per Figure 2.1, as appropriate.
- _____ Proceed to spill site and **coordinate response and clean-up operations.**
- _____ Direct containment, dispersion, and/or clean-up operations in accordance with the **"Product Specific Response Considerations"** provided in Figures 3.2 and 3.3.

LOCAL RESPONSE TEAM

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

REGIONAL ENVIRONMENTAL COORDINATOR

- _____ Perform notifications as per Figure 2.1.

INITIAL RESPONSE

FIGURE 3.1

SPECIFIC INCIDENT RESPONSE CHECKLIST

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

INITIAL RESPONSE

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

All personnel are reminded that outsiders other than emergency services will not be allowed in the area during the time of an emergency, and that statements issued to the media or other interested parties should be given by designated Company Management. Be courteous with media representatives and direct them to the designated spokesman.

FIGURE 3.1

SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)

LINE BREAK OR LEAK, SPECIFIC RESPONSE

- _____ Shut down pumping equipment.
- _____ Close upstream and downstream block valves.
- _____ Mitigate spreading of the product, as the situation demands. Potential containment strategies include:
  - Earthen dike/berm
  - Ditching
  - Spreading sorbent material over the spill
- _____ Prevent the spill from entering the waterways, sewer, etc. to the greatest extent possible.
- _____ Determine the direction and expected duration of spill movement. Refer to the maps in Section 6.0.
- _____ If located within containment area, ensure that drainage valve(s) is "closed".
- _____ If the spill escapes the containment area, review the location of socio-economic and environmentally sensitive areas identified in Section 6.0 and the ACP. Determine which of these may be threatened by the spill and direct the response operation to these locations. Initiate protection and recovery actions.
- _____ Qualified personnel should utilize Combustible Gas Indicator, O_2 meter, proper colormetric indicator and/or other air sampling measurements to assure that areas are safe to enter for continued response operations.
- _____ Drain the line section, as the situation demands.
- _____ Inform local operators such as utilities, telephone company, railway.
- _____ Clean up spilled product to eliminate any possible environmental problems. Be alert for underground cables.
- _____ Make all necessary repairs.
- _____ Return the line/rack to service when repairs are complete.
- _____ Complete follow-up and written reporting, as the situation demands.

FIGURE 3.1

SPECIFIC INCIDENT RESPONSE CHECKLIST (Cont'd)

STORAGE TANK LEAK, SPECIFIC RESPONSE

- _____ Shut down all tank farm product movement operations and isolate the tank.
- _____ Initiate Confined Space Entry procedures, as applicable.
- _____ Ensure that the containment area drainage valve(s) is “closed”.
- _____ If possible, block drainage of spilled material from traveling offsite.
- _____ If near tank bottom, consider filling tank with water and maintain water bottom to suspend the discharge.
- _____ Determine the direction and expected duration of spill movement. Refer to the maps in Section 6.0.
- _____ If the spill escapes the containment area, review the location of socio-economic and environmentally sensitive areas identified in Section 6.0 and the ACP. Determine which of these may be threatened by the spill and direct the response to these locations. Initiate protection and recovery actions.
- _____ Qualified personnel should utilize Combustible Gas Indicator, O_2 meter, proper colormetric indicator and/or other air sampling measurements to assure that areas are safe to enter for continued response operations.
- _____ Stop all traffic in hazardous area (inside and outside of property boundaries), as the situation demands.
- _____ Inform local operators such as utilities, telephone company, railway.
- _____ Remove product from containment area (at a sump or in a low area) with an explosion proof pump, oil skimmer, and/or vacuum truck w/ skimmer attachments.
- _____ If applicable, process remaining product through the separator system.
- _____ Clean up product spill to eliminate any possible environmental problems. Be alert for underground cables.
- _____ Stockpile waste for eventual disposal.
- _____ Make all necessary repairs. Return the line/tank to service when repairs are complete and tested.
- _____ Complete follow-up and written reporting, as the situation demands.

FIGURE 3.2

FLAMMABLE GASES (Including Refrigerated Liquids)

The following information is intended to provide the initial responder(s) with data that may be useful in making quick decisions and executing prompt response actions. The information is intended for guideline purposes only.

PRODUCTS **NATURAL GASOLINE**

HAZARD IDENTIFICATION / RECOGNITION

GUIDE NO. 115

DANGERS

- EXTREMELY FLAMMABLE.
- Will be easily ignited by heat, sparks or flames.
- Will form explosive mixtures with air.
- Vapors from liquefied gas are initially heavier than air and spread along ground. CAUTION: Hydrogen (UN1049), Deuterium (UN1957), Hydrogen, refrigerated liquid (UN1966) and Methane (UN1971) are lighter than air and will rise. Hydrogen and Deuterium fires are difficult to detect since they burn with an invisible flame. Use an alternate method of detection (thermal camera, broom handle, etc.)
- Vapors may travel to source of ignition and flash back.
- Cylinders exposed to fire may vent and release flammable gas through pressure relief devices.

HEALTH / FIRST AID

- Move victim to fresh air.
- Call 911 or emergency medical service.
- Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult.
- Remove and isolate contaminated clothing and shoes.
- Clothing frozen to the skin should be thawed before being removed.
- In case of contact with liquefied gas, thaw frosted parts with lukewarm water.
- In case of burns, immediately cool affected skin for as long as possible with cold water. Do not remove clothing if adhering to skin.
- Keep victim warm and quiet.
- Ensure that medical personnel are aware of the material(s) involved and take precautions to protect
- themselves.

PUBLIC SAFETY

- As an immediate precautionary measure, isolate spill or leak area for at least 100 meters (330 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Many gases are heavier than air and will spread along ground and collect in low or confined areas (sewers, basements, tanks).
- Keep out of low areas.

EVACUATION

Large Spill

- Consider initial downwind evacuation for at least 800 meters (1/2 mile).

Fire

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 1600 meters (1 mile) in all directions; also,
- consider initial evacuation for 1600 meters (1 mile) in all directions.

Information provided by the Emergency Response Guidebook 2012.

FIGURE 3.3

GASES – TOXIC - FLAMMABLE (Extreme Hazard)

The following information is intended to provide the initial responder(s) with data that may be useful in making quick decisions and executing prompt response actions. The information is intended for guideline purposes only.

PRODUCTS **Hydrogen Sulphide**

HAZARD IDENTIFICATION / RECOGNITION

GUIDE NO. 117

DANGERS

- TOXIC; Extremely Hazardous.
- May be fatal if inhaled or absorbed through skin.
- Initial odor may be irritating or foul and may deaden your sense of smell.
- Contact with gas or liquefied gas may cause burns, severe injury and/or frostbite.
- Fire will produce irritating, corrosive and/or toxic gases.
- Runoff from fire control may cause pollution.

HEALTH

- Move victim to fresh air. Call 911 or emergency medical service.
- Apply artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult.
- **Do not use mouth-to-mouth method if victim ingested or inhaled the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device.**
- Remove and isolate contaminated clothing and shoes.
- Clothing frozen to the skin should be thawed before being removed.
- In case of contact with substance, immediately flush skin or eyes with running water for at least 20 minutes.
- In case of contact with liquefied gas, thaw frosted parts with lukewarm water.
- In case of burns, immediately cool affected skin for as long as possible with cold water.
- Do not remove clothing if adhered to skin.
- Keep victim warm and quiet.
- Keep victim under observation.
- Effects of contact or inhalation may be delayed.
- Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

PUBLIC SAFETY

- Isolate spill or leak area immediately for at least 100 meters (330 feet) in all directions.
- Keep unauthorized personnel away.
- Stay upwind.
- Many gases are heavier than air and will spread along the ground and collect in low or confined areas (sewers, basements, tanks).
- Keep out of low areas.
- Ventilate closed spaces before entering.

EVACUATION

Large Spill

- Consider initial downwind evacuation for at least 2.1 kilometers (1.3 miles) during the day and at least 6.2 kilometers (3.9 miles) at night.

Fire

- If tank, rail car or tank truck is involved in a fire, ISOLATE for 1,600 meters (1 mile) in all directions; also, consider initial evacuation for 1,600 meters (1 mile) in all directions.

Information provided by the Emergency Response Guidebook 2012.

3.2 DOCUMENTATION OF INITIAL RESPONSE ACTIONS

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

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

3.3 OIL CONTAINMENT, RECOVERY AND DISPOSAL

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

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

Based on this assessment, additional clean-up personnel and equipment will be dispatched to the site and deployed to control and contain the spill *See OSRO contacts in Figure 2.5 of Section 2. Boom may be deployed in waterways to contain the spill and to protect socio-economic and environmentally sensitive areas. Booms may also be used in waterways to deflect or guide the spill to locations where it can more effectively be cleaned up using skimmers, vacuum trucks, or sorbent material. Clean-up equipment and material will be used in the manner most effective for rapid and complete clean-up of all spilled product.

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

3.4 STORAGE/DISPOSAL

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

- In the event of a product spill, Facilities have limited capacity to store recovered product and water. Separated product is pumped to trucks to be carried to the Facility for processing.

- Oily debris will be segregated on site and containerized for temporary storage prior to disposal in accordance with RCRA/CERCLA regulations.

- Waste associated with the spill will be disposed of at Company pre-approved sites which have the necessary permits to accept the type of waste to be discharged.

The Field Environmental Representative or designated contractor will coordinate activities and secure the necessary permits to ensure proper disposal or recycling of recovered product and debris.

3.5 SAMPLING AND WASTE ANALYSIS PROCEDURES

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

3.6 SAFETY AWARENESS

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

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

- All employees/contractors must have received orientation from the applicable Emergency Response Plan.

- All contractor response personnel must be in compliance with OSHA training requirements.

- All other personnel will have completed appropriate training for their position as outlined in Section 4.0.

- No employee/contractor shall engage in activities which place them at risk without the appropriate protective equipment and training.

3.6 SAFETY AWARENESS (Cont'd)

3.6.1 General Response Safety

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

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

3.6.2 Air Monitoring

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

- The air monitoring equipment shall be activated and checked at the location in which it is stored.
- Calibration of instruments should be performed before use.
- Air monitoring measurements which are to be made prior to entry into the spill area include:
  - Oxygen content
  - Lower Explosive Limit (LEL)
  - Benzene level
  - Hydrogen Sulfide
- LEL readings above 10% require immediate evacuation of the area and elimination of ignition sources.
- Oxygen readings below 19.5% require the use of air supplied respiratory protection.

3.6 SAFETY AWARENESS (Cont'd)

3.6.2 Air Monitoring (Cont'd)

- After assuring that there are no hazards relating to explosion or oxygen depletion, sampling for benzene shall dictate the appropriate respiratory devices to be used by persons entering the area as follows:

- The Incident Commander is responsible for industrial hygiene monitoring in the post discovery period.

3.6.3 Decontamination

Through training programs, Facility personnel know and understand the importance of the removal of hazardous substances from their person if they are contaminated. Eyewash stations and safety showers provide a means to quickly remove gross contamination of harmful agents, including gasoline. Personnel must immediately shower and remove any clothing which is wet or otherwise contaminated. Showers in the change room are to be used for thorough cleansing. Persons should inspect themselves thoroughly before donning a fresh change of clothing.

Contaminated clothing should be disposed of properly. Contaminated personal protective equipment must be washed and sanitized before re-using. The washing of contaminated equipment is performed in a "contained area" to assure that the disposal of the wash water can be handled properly.

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

- Regardless of the decontamination facilities available, all efforts to minimize personnel exposure should be taken.

- Decontamination facilities should be positioned prior to employee/ contractor entrance to areas where the potential for exposure to contamination exists. The appropriate Material Safety Data Sheets (MSDS) are available to aid health professionals treating the injured parties. MSDS are separately maintained at the Facility.

- Decontamination facilities should be designed to prevent further contamination of the environment and should have a temporary storage area for items that will be reused in the contaminated area.

- Particular attention should be paid to personal hygiene prior to eating, drinking, or smoking.

3.6 SAFETY AWARENESS (Cont'd)

3.6.4 Personal Protective Equipment (PPE)

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

Personal Protective Equipment (PPE)	
LEVEL A ● Self Contained Breathing Apparatus (SCBA) (worn inside suit) ● Encapsulated Chemical Protective Suit ● Chemical Protective Gloves ● Chemical Protective Boots ● Hard Hat	**LEVEL B** ● SCBA (worn outside suit) ● Chemical Protective Suit w/Hood ● Chemical Protective Boots ● Chemical Protective Gloves ● Hard Hat
LEVEL C ● Air Purifying Respirator (APR) ● APR ½ Face / Full Face ● Hard Hat ● Glasses (worn with ½ face APR) ● Chemical Protective Boots ● Chemical Protective Gloves ● Chemical Protective Suit/Tyvek	**LEVEL D** ● Hard Hat ● Safety Glasses ● Work Uniform / Clothes ● Leather Gloves ● Safety Boots ● Nomex

3.7 EMERGENCY MEDICAL TREATMENT AND FIRST AID

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

- The potential for contamination of the patient, responders, and equipment should be addressed. Responders should arrange to treat all patients **AFTER** the injured party has been decontaminated according to the Site Safety and Health Plan.

- Site personnel should make the initial assessment of the patient and determine the severity of the injury/illness.

- If the treatment needed is critical care or "life saving" treatment, rapid decontamination of the injured/ill party should be started. Refer to the Site Safety and Health Plan for steps to be taken in an "abbreviated" decontamination for medical treatment.

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

- **The need for full decontamination should be carefully weighed against the need for prompt medical treatment.**

- The ambulance responding to medical emergencies shall be contacted as soon as possible and instructed exactly where to respond when needed and the nature of the contaminant. Telephone reference is provided in Figure 2.5.

- MSDS information will be available from the Incident Commander and should be provided to medical personnel to alert them of decontamination requirements.

- If emergency medical treatment is needed, the Incident Commander, or his designated representatives, will request assistance from trained medical personnel.

4.0 RESPONSE TEAMS

4.1 INTRODUCTION

This section describes organizational features and duties of the Local Response Team and the broader Corporate Rapid Response Team.

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

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

These response teams will use the National Incident Command System ("NIMS") for the corporate Incident Command System ("ICS") to manage the emergency response activities. Because ICS is a management tool that is readily adaptable to incidents of varying magnitude, it will typically be used for all emergency incidents. Staffing levels will be adjusted to meet specific response team needs based on incident size, severity, and type of emergency.

4.2 QUALIFIED INDIVIDUAL

It is the responsibility of the Qualified Individual (QI) or his/her designee to coordinate with the Federal On-Scene Coordinator (FOSC) and State On-Scene Coordinator (SOSC) throughout the response, if applicable.

Vital duties of the Qualified Individual (QI) include:

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

4.2 QUALIFIED INDIVIDUAL (Cont'd)

- Assess the possible hazards to human health and the environment due to the release. This assessment must consider both the direct and indirect effects of the release (i.e., the effects of any toxic, irritating, or asphyxiating gases that may be generated, or the effects of any hazardous surface water runoffs from water or chemical agents used to control fire and heat-induced explosion).

- Assess and implement prompt removal actions to contain and remove the substance released – *See OSRO contacts in Figure 2.5 of Section 2.

- Coordinate rescue and response actions as previously arranged with all response personnel.

- Activate and engage in contracting with oil spill response organizations.

- Use authority to immediately access company funding to initiate cleanup activities.

- Direct cleanup activities until properly relieved of this responsibility.

- Arrangements will be made to ensure that the Qualified Individual (QI) or the Alternate Qualified Individual (AQI) is available on a 24-hour basis and is able to arrive at the Facility in a reasonable time.

- The AQI shall replace the QI in the event of his/her absence and have the same responsibilities and authority.

4.3 LOCAL RESPONSE TEAM (LRT)

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

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

The LRT, once fully staffed, is designed to cover all aspects of a comprehensive and prolonged incident response. The number of positions/ personnel required to staff the LRT will depend on the size and complexity of the incident. During a prolonged response, additional personnel may be cascaded in, and more than one level within the Team may be involved to sustain 24-hour operations.

4.3 LOCAL RESPONSE TEAM (LRT) (Cont'd)

The LRT is basically organized according to the NIMS Incident Command System principles led by the Incident Commander; the team is composed of the following principal components:

- Command
- Planning
- Finance
- Operations
- Logistics

A complete functional ICS organization is shown in Figure 4.1. The LRT should try to fill the necessary positions and request additional support from the Corporate Rapid Response Team to fill/back up all the positions as the incident may dictate. Detailed job descriptions of the primary response team positions are provided in Section 4.2.

4.4 CORPORATE RAPID RESPONSE TEAM (CRRT)

The CRRT is staffed by specially trained personnel from various facility/corporate locations, and by various contract resources as the situation requires. The role of the CRRT is to support the LRT by providing resources and technical expertise that may not be readily available at the local level. The CRRT will provide support on an as-needed basis as determined by the Incident Commander. CRRT members would either provide short term advisory assistance or long term support depending upon the type and duration of the incident. The CRRT may be asked to fill roles/positions under the NIMS Incident Management System or provide other support functions as the situation demands.

4.5 INCIDENT COMMAND SYSTEM (ICS)

The Incident Command System is intended to be used as an emergency management tool to aid in mitigating all types of emergency incidents. This system is readily adaptable to very small emergency incidents as well as more significant or complex emergencies. The Incident Command System utilizes the following criteria as key operational factors:

- Assigns overall authority to one individual
- Provides structured authority, roles and responsibilities during emergencies
- The system is simple and familiar, and is used routinely at a variety of incidents
- Communications are structured
- There is a structured system for response and assignment of resources
- The system provides for expansion, escalation, and transfer/transition of roles and responsibilities
- The system allows for "Unified Command" where agency involvement at the command level is required

Effective establishment and utilization of the Incident Command System during response to all types of emergencies can:

- Provide for increased safety

4.5 INCIDENT COMMAND SYSTEM (Cont'd)

- Shorten emergency mitigation time by providing more effective and organized mitigation

- Cause increased confidence and support from local, state, and federal public sector emergency response personnel

- Provide a solid cornerstone for emergency planning efforts

Section 3.5.3 of the attached Emergency Response Plans and describe the roles and responsibilities for the various personnel.

4.6 UNIFIED COMMAND

As a component of an ICS, the Unified Command (UC) is a structure that brings together the Incident Commanders of all major organizations involved in the incident to coordinate an effective response while still meeting their own responsibilities. The UC links the organizations responding to the incident and provides a forum for the Responsible Party and responding agencies to make consensus decisions. Under the UC, the various jurisdictions and/or agencies and responders may blend together throughout the organization to create an integrated response team. The ICS process requires the UC to set clear objectives to guide the on-scene response resources.

Multiple jurisdictions may be involved in a response effort utilizing Unified Command. These jurisdictions could be represented by any combination of:

- Geographic boundaries
- Government levels
- Functional responsibilities
- Statutory responsibilities

The participants of Unified Command for a specific incident will be determined taking into account the specifics of the incident and existing response plans and/or decisions reached during the initial meeting of the UC. The UC may change as an incident progresses, in order to account for changes in the situation.

The UC is responsible for overall management of an incident. The UC directs incident activities and approves and releases resources. The UC structure is a vehicle for coordination, cooperation and communication which is essential to an effective response.

UC representatives must be able to:

- Agree on common incident objectives and priorities

- Have the capability to sustain a 24-hour-7-day-a-week commitment to the incident

- Have the authority to commit agency or company resources to the incident

4.6 UNIFIED COMMAND (Cont'd)

- Have the authority to spend agency or company funds
- Agree on an incident response organization
- Agree on the appropriate Command and General Staff assignments
- Commit to speak with "one voice" through the Information Officer or Joint Information Center
- Agree on logistical support procedures
- Agree on cost-sharing procedures

4.7 DISCHARGE CLASSIFICATION

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

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

4.7 DISCHARGE CLASSIFICATION (Cont'd)

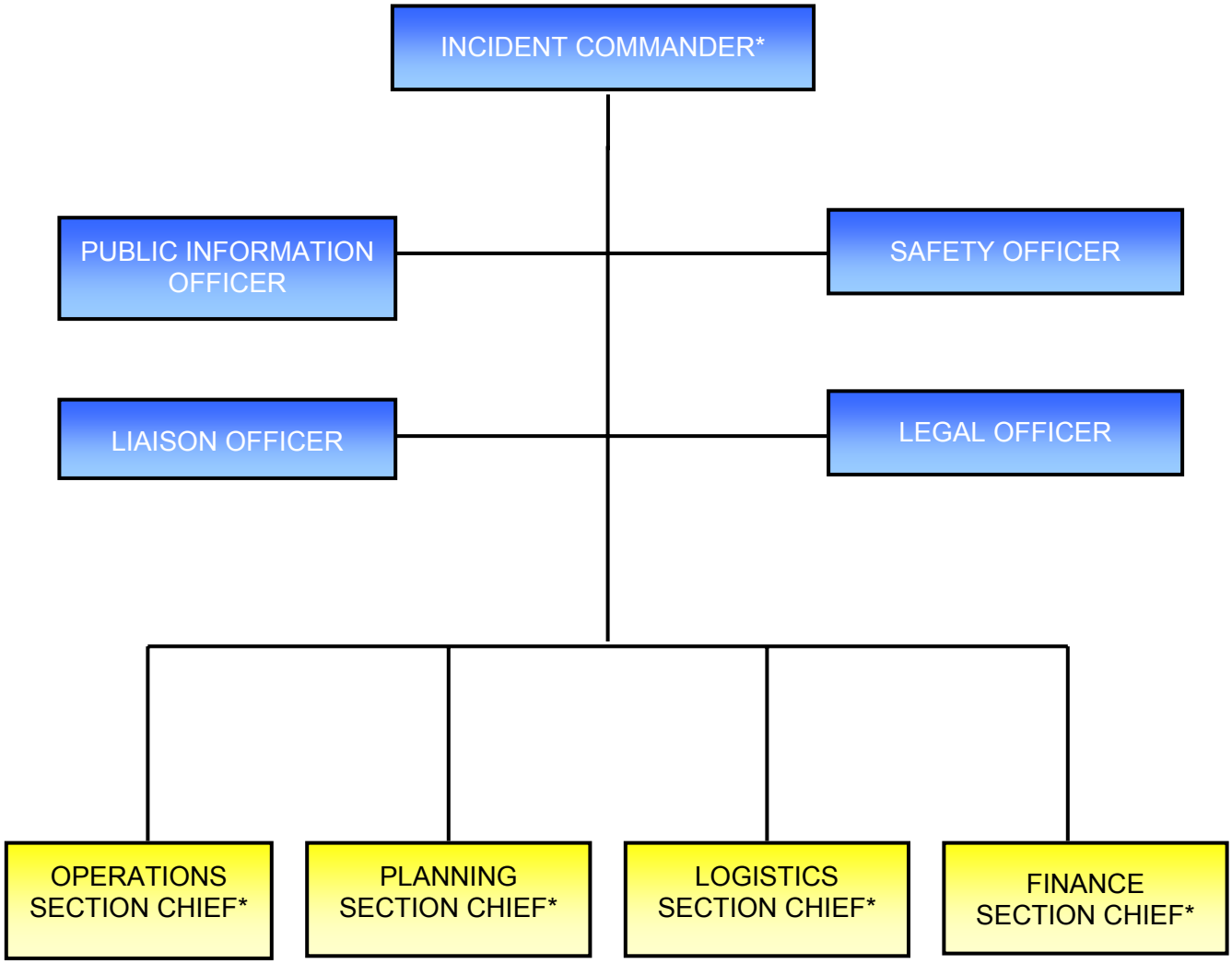
LEVEL II EVENT
Local Company resources may have to be supplemented with Corporate Office and external resources to manage the spill incident.
Exposure
The potential public and environmental exposure is moderately high. The type and quantity of material released, while considering the overall nature of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

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

FIGURE 4.1

LOCAL RESPONSE TEAM

(For Initial Response and Level I & II Incidents)



* NOTE: CRRT personnel can assume any of these positions as deemed necessary by the Incident Commander.

Further description of the roles and responsibilities for each individual/position is contained in the local Enterprise Emergency Response Plan.

5.1 INCIDENT ACTION PLAN

Emergency response activities are planned and coordinated through the use of an Incident Action Plan (IAP), which is developed for each Operational Period of a response by the Incident Management Team. For small responses, an ICS 201 (Incident Briefing Form provided in Figure 5.1), may be used as the IAP and, for all incidents, the ICS 201 will serve as the initial IAP.

For larger or more complex incidents a more complete IAP will be necessary. These IAP's are generally created through the completion and compilation of several standard ICS forms. These forms include, but are not limited to:

ICS FORM NUMBER	FORM TITLE	PREPARED BY*	REVISED DATE
CG IAP Cover Sheet	CG IAP Cover Sheet	**Planning Section -** Situation Unit Leader	6/1/2000
ICS 201-CG	Incident Briefing	**Command Section -** Initial Response IC	Undated
ICS 202-CG	Incident Objectives	**Planning Section -** Planning Section Chief	Undated
ICS 203-CG	Organization Assignment List	**Planning Section -** Resources Unit Leader	Undated
ICS 204-CG ICS 204a-CG	Assignment List & Attachment	**Operations Section -** Chief & Resources Unit Leader	Undated Undated
ICS 205-CG ICS 205a-CG	Incident Radio Communications Plan & List	**Logistics Section -** Communications Unit Leader	Undated Undated
ICS 206-CG	Medical Plan	**Logistics Section -** Medical Unit Leader	Undated
ICS 207-CG	Incident Organization	**Planning Section -** Resources Unit Leader	Undated
ICS 209-CG	Incident Status Summary	**Command Section -** Incident Commander	Undated
ICS 214-CG	Unit Log	**Planning Section -** Situation Unit Leader	Undated
ICS 218-CG	Support Vehicle Inventory	**Logistics Section -** Ground Support Unit Leader	Undated
ICS 220-CG	Air Operations Summary	**Operations Section -** Air Operations Branch Director	Undated
ICS 232-CG ICS 232a-CG	Resources at Risk Summary & ACP Index Site	**Planning Section -** Situation Unit Leader	Undated

* The Planning Section Chief may assign preparation of forms to other personnel on the Incident Management Team if identified position is unassigned or vacant when the IAP is produced. ICS Forms may also be retrieved off the internet on the U. S. Coast Guard web page: http://www.uscg.mil/pacarea/pm/icsforms/ics.htm.

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

3. Approved by:

FOSC _____

SOSC _____

RPIC _____

_____ _____

_____ _____

INCIDENT ACTION PLAN

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

- ☐ ICS 202-OS (Response Objectives)
- ☐ ICS 203-OS (Organization List) - OR - ICS 207-OS (Organization Chart)
- ☐ ICS 204-OSs (Assignment Lists)
  One Copy each of any ICS 204-OS attachments:
  - ☐ Map
  - ☐ Weather forecast
  - ☐ Tides
  - ☐ Shoreline Cleanup Assessment Team Report for location
  - ☐ Previous day's progress, problems for location
- ☐ ICS 205-OS (Communications List)
- ☐ ICS 206-OS (Medical Plan)
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____
- ☐ _____

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

INCIDENT BRIEFING (ICS 201)

1. Incident Name:	2. Incident Number:	3. Date/Time Initiated: Date: Time:

4. Map/Sketch (include sketch, showing the total area of operations, the incident site/area, impacted and threatened areas, overflight results, trajectories, impacted shorelines, or other graphics depicting situational status and resource assignment)**:**

5. Situation Summary and Health and Safety Briefing (for briefings or transfer of command)**:** Recognize potential incident Health and Safety Hazards and develop necessary measures (remove hazard, provide personal protective equipment, warn people of the hazard) to protect responders from those hazards.

6. Prepared by: Name: _____ Position/Title: _____ Signature: _____

 Date/Time: _____

INCIDENT BRIEFING (ICS 201)

1. Incident Name:	2. Incident Number:	3. Date/Time Initiated: Date: Time:

7. Current and Planned Objectives:

8. Current and Planned Actions, Strategies, and Tactics:

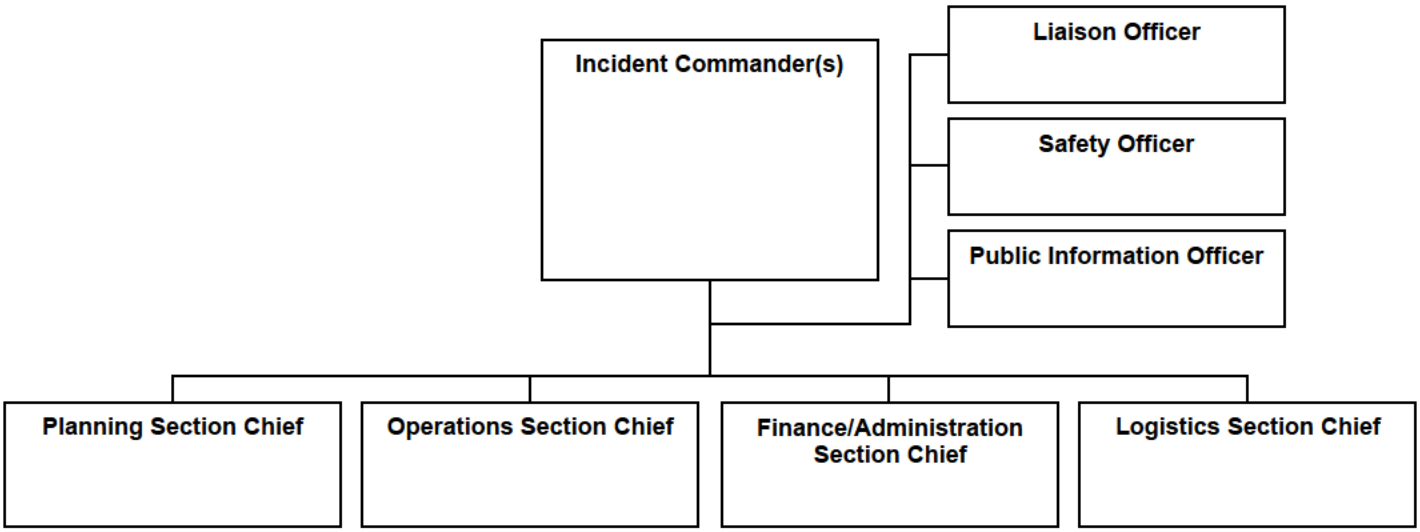
Time:	Actions:

6. Prepared by: Name: _____ Position/Title: _____ Signature: _____

INCIDENT BRIEFING (ICS 201)

1. Incident Name:	2. Incident Number:	3. Date/Time Initiated: Date: Time:

9. Current Organization (fill in additional organization as appropriate):



6. Prepared by: Name: _____ Position/Title: _____ Signature: _____

ICS 201, Page 3 Date/Time: _____

INCIDENT BRIEFING (ICS 201)

1. Incident Name:	2. Incident Number:	3. Date/Time Initiated: Date: Time:

10. Resource Summary:

Resource	Resource Identifier	Date/Time Ordered	ETA	Arrived	Notes (location/assignment/status)
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	
				☐	

6. Prepared by: Name: _____ Position/Title: _____ Signature: _____

Date/Time: _____

INCIDENT OBJECTIVES (ICS 202)

1. Incident Name:	2. Operational Period: Date From: Date To: Time From: Time To:

3. Objective(s):

4. Operational Period Command Emphasis:

General Situational Awareness

5. Site Safety Plan Required? Yes ☐ No ☐

Approved Site Safety Plan(s) Located at:

6. Incident Action Plan (the items checked below are included in this Incident Action Plan)**:**

☐ ICS 202	☐ ICS 206	Other Attachments:
☐ ICS 203	☐ ICS 207	☐ _____
☐ ICS 204	☐ ICS 208	☐ _____
☐ ICS 205	☐ Map/Chart	☐ _____
☐ ICS 205A	☐ Weather Forecast/Tides/Currents	☐ _____

7. Prepared by: Name: _____ Position/Title: _____ Signature: _____

8. Approved by Incident Commander: Name: _____ Signature: _____

ICS 202	IAP Page _____	Date/Time: _____

ORGANIZATION ASSIGNMENT LIST (ICS 203)

1. Incident Name:	2. Operational Period: Date From: Date To: Time From: Time To:

3. Incident Commander(s) and Command Staff:	
IC/UCs	
Deputy	
Safety Officer	
Public Info. Officer	
Liaison Officer	

4. Agency/Organization Representatives:	
Agency/Organization	Name

5. Planning Section:	
Chief	
Deputy	
Resources Unit	
Situation Unit	
Documentation Unit	
Demobilization Unit	
Technical Specialists	

6. Logistics Section:	
Chief	
Deputy	
Support Branch	
Director	
Supply Unit	
Facilities Unit	
Ground Support Unit	
Service Branch	
Director	
Communications Unit	
Medical Unit	
Food Unit	

7. Operations Section:		
Chief		
Deputy		
Staging Area		
Branch		
Branch Director		
Deputy		
Division/Group		
Division/Group		
Division/Group		
Division/Group		
Division/Group		
Branch		
Branch Director		
Deputy		
Division/Group		
Division/Group		
Division/Group		
Division/Group		
Division/Group		
Branch		
Branch Director		
Deputy		
Division/Group		
Division/Group		
Division/Group		
Division/Group		
Division/Group		
Air Operations Branch		
Air Ops Branch Dir.		

8. Finance/Administration Section:	
Chief	
Deputy	
Time Unit	
Procurement Unit	
Comp/Claims Unit	
Cost Unit	

9. Prepared by: Name: _____ Position/Title: _____ Signature: _____

ICS 203	**IAP Page** _____	Date/Time: _____

ASSIGNMENT LIST (ICS 204)

1. Incident Name:	2. Operational Period: Date From: Date To: Time From: Time To:	3. Branch:
4. Operations Personnel: Name / Contact Number(s) Operations Section Chief: _____ Branch Director: _____ Division/Group Supervisor: _____		Division: Group: Staging Area:

5. Resources Assigned:		# of Persons	Contact (e.g., phone, pager, radio frequency, etc.)	Reporting Location, Special Equipment and Supplies, Remarks, Notes, Information
Resource Identifier	Leader			

6. Work Assignments:

7. Special Instructions:

8. Communications (radio and/or phone contact numbers needed for this assignment)**:**

Name/Function	Primary Contact: indicate cell, pager, or radio (frequency/system/channel)
/	
/	
/	
/	

9. Prepared by: Name: _____ Position/Title: _____ Signature: _____

ICS 204	IAP Page _____	Date/Time: _____

1. Incident Name	2. Operational Period (Date/Time) From: To:	ASSIGNMENT LIST ATTACHMENT ICS 204a-CG
3. Branch	4. Division/Group	
5. Strike Team/Task Force/Resource (Identifier)	6. Leader	7. Assignment Location

8. Work Assignment Special Instructions, Special Equipment/Supplies Needed for Assignment, Special Environmental Considerations, Special Site Specific Safety Considerations

Approved Site Safety Plan Located at:

9. Other Attachments (as needed)

☐ Map/Chart ☐ Weather Forecast/Tides/Currents ☐ _____

☐ _____ ☐ _____ ☐ _____

10. Prepared by: Date/Time	11. Reviewed by (PSC): Date/Time	12. Reviewed by (OSC): Date/Time

INCIDENT RADIO COMMUNICATIONS PLAN (ICS 205)

1. Incident Name:	2. Date/Time Prepared: Date: Time:	3. Operational Period: Date From: Date To: Time From: Time To:

4. Basic Radio Channel Use:

Zone Grp.	Ch #	Function	Channel Name/Trunked Radio System Talkgroup	Assignment	RX Freq N or W	RX Tone/NAC	TX Freq N or W	TX Tone/NAC	Mode (A, D, or M)	Remarks

5. Special Instructions:

6. Prepared by (Communications Unit Leader)**:** Name: _____ Signature: _____

ICS 205	IAP Page _____	Date/Time: _____

COMMUNICATIONS LIST (ICS 205A)

1. Incident Name:	2. Operational Period: Date From: Time From:	Date To: Time To:

3. Basic Local Communications Information:

Incident Assigned Position	Name (Alphabetized)	Method(s) of Contact (phone, pager, cell, etc.)

4. Prepared by: Name: _____ Position/Title: _____ Signature: _____

ICS 205A	IAP Page _____	Date/Time: _____

MEDICAL PLAN (ICS 206)

1. Incident Name:	2. Operational Period: Date From: Date To: Time From: Time To:

3. Medical Aid Stations:

Name	Location	Contact Number(s)/Frequency	Paramedics on Site?
			☐ Yes ☐ No
			☐ Yes ☐ No
			☐ Yes ☐ No
			☐ Yes ☐ No
			☐ Yes ☐ No
			☐ Yes ☐ No

4. Transportation (indicate air or ground)**:**

Ambulance Service	Location	Contact Number(s)/Frequency	Level of Service
			☐ ALS ☐ BLS
			☐ ALS ☐ BLS
			☐ ALS ☐ BLS
			☐ ALS ☐ BLS

5. Hospitals:

Hospital Name	Address, Latitude & Longitude if Helipad	Contact Number(s)/ Frequency	Travel Time		Trauma Center	Burn Center	Helipad
			Air	Ground			
					☐ Yes Level:_____ ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
					☐ Yes Level:_____ ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
					☐ Yes Level:_____ ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
					☐ Yes Level:_____ ☐ No	☐ Yes ☐ No	☐ Yes ☐ No
					☐ Yes Level:_____ ☐ No	☐ Yes ☐ No	☐ Yes ☐ No

6. Special Medical Emergency Procedures:

☐ Check box if aviation assets are utilized for rescue. If assets are used, coordinate with Air Operations.

7. Prepared by (Medical Unit Leader)**:** Name: _____ Signature: _____

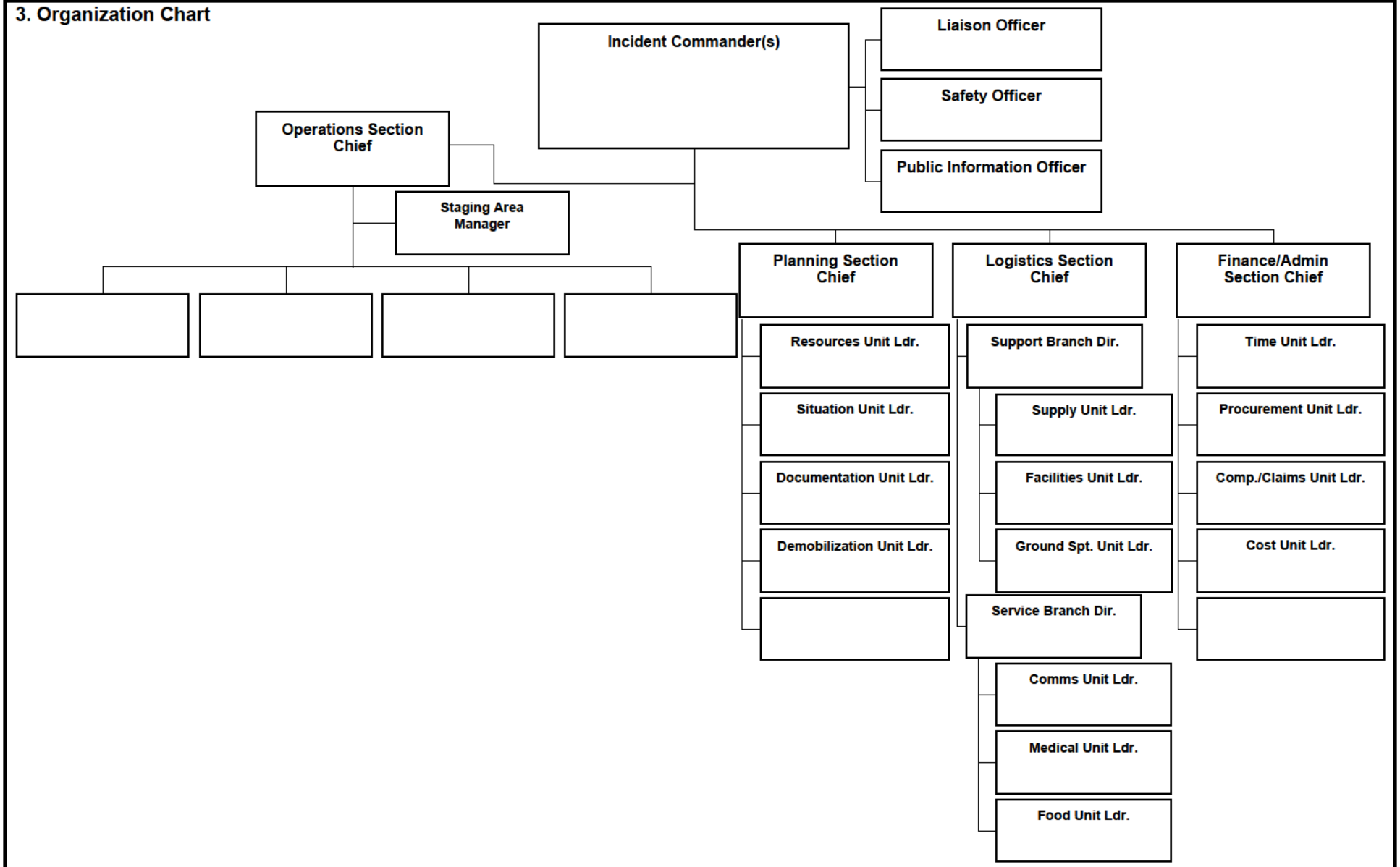
8. Approved by (Safety Officer)**:** Name: _____ Signature: _____

ICS 206	IAP Page _____	Date/Time: _____

INCIDENT ORGANIZATION CHART (ICS 207)

1. Incident Name:	2. Operational Period: Date From: Date To: Time From: Time To:

3. Organization Chart



ICS 207	IAP Page ___	4. Prepared by: Name:_____ Position/Title: _____ Signature: _____ Date/Time: _____

INCIDENT STATUS SUMMARY (ICS 209)

***1. Incident Name:**			**2. Incident Number:**	
***3. Report Version** (check one box on left)**:** ☐ Initial Rpt # (if used): ☐ Update ☐ Final	***4. Incident Commander(s) & Agency or Organization:**		**5. Incident Management Organization:**	***6. Incident Start Date/Time:** Date: _____ Time: _____ Time Zone: _____
7. Current Incident Size or Area Involved (use unit label – e.g., "sq mi," "city block")**:**	**8. Percent (%) Contained** _____ **Completed** _____	***9. Incident Definition:**	**10. Incident Complexity Level:**	***11. For Time Period:** From Date/Time: _____ To Date/Time: _____

Approval & Routing Information

***12. Prepared By:** Print Name: _____ ICS Position: _____ Date/Time Prepared: _____	***13. Date/Time Submitted:** **Time Zone:**
***14. Approved By:** Print Name: _____ ICS Position: _____ Signature: _____	***15. Primary Location, Organization, or Agency Sent To:**

Incident Location Information

***16. State:**	***17. County/Parish/Borough:**	***18. City:**
19. Unit or Other:	***20. Incident Jurisdiction:**	**21. Incident Location Ownership** (if different than jurisdiction)**:**
22. Longitude (indicate format)**:** **Latitude** (indicate format)**:**	**23. US National Grid Reference:**	**24. Legal Description** (township, section, range)**:**
***25. Short Location or Area Description** (list all affected areas or a reference point)**:**		**26. UTM Coordinates:**
27. Note any electronic geospatial data included or attached (indicate data format, content, and collection time information and labels)**:**		

Incident Summary

***28. Significant Events for the Time Period Reported** (summarize significant progress made, evacuations, incident growth, etc.)**:**				
29. Primary Materials or Hazards Involved (hazardous chemicals, fuel types, infectious agents, radiation, etc.)**:**				
30. Damage Assessment Information (summarize damage and/or restriction of use or availability to residential or commercial property, natural resources, critical infrastructure and key resources, etc.)**:**	A. Structural Summary	B. # Threatened (72 hrs)	C. # Damaged	D. # Destroyed
	E. Single Residences			
	F. Nonresidential Commercial Property			
	Other Minor Structures			
	Other			

** Required when applicable.*

INCIDENT STATUS SUMMARY (ICS 209)

*1. Incident Name:	2. Incident Number:

Additional Incident Decision Support Information

*31. Public Status Summary:	A. # This Reporting Period	B. Total # to Date
C. Indicate Number of Civilians (Public) Below:		
D. Fatalities		
E. With Injuries/Illness		
F. Trapped/In Need of Rescue		
G. Missing *(note if estimated)*		
H. Evacuated *(note if estimated)*		
I. Sheltering in Place *(note if estimated)*		
J. In Temporary Shelters *(note if est.)*		
K. Have Received Mass Immunizations		
L. Require Immunizations *(note if est.)*		
M. In Quarantine		
N. Total # Civilians (Public) Affected:		

*32. Responder Status Summary:	A. # This Reporting Period	B. Total # to Date
C. Indicate Number of Responders Below:		
D. Fatalities		
E. With Injuries/Illness		
F. Trapped/In Need of Rescue		
G. Missing		
H. Sheltering in Place		
I. Have Received Immunizations		
J. Require Immunizations		
K. In Quarantine		
N. Total # Responders Affected:		

33. Life, Safety, and Health Status/Threat Remarks:

35. Weather Concerns (synopsis of current and predicted weather; discuss related factors that may cause concern)**:**

*34. Life, Safety, and Health Threat Management:	A. Check if Active
A. No Likely Threat	☐
B. Potential Future Threat	☐
C. Mass Notifications in Progress	☐
D. Mass Notifications Completed	☐
E. No Evacuation(s) Imminent	☐
F. Planning for Evacuation	☐
G. Planning for Shelter-in-Place	☐
H. Evacuation(s) in Progress	☐
I. Shelter-in-Place in Progress	☐
J. Repopulation in Progress	☐
K. Mass Immunization in Progress	☐
L. Mass Immunization Complete	☐
M. Quarantine in Progress	☐
N. Area Restriction in Effect	☐
	☐
	☐
	☐
	☐

36. Projected Incident Activity, Potential, Movement, Escalation, or Spread and influencing factors during the next operational period and in 12-, 24-, 48-, and 72-hour timeframes:

12 hours:

24 hours:

48 hours:

72 hours:

Anticipated after 72 hours:

37. Strategic Objectives (define planned end-state for incident)**:**

** Required when applicable.*

INCIDENT STATUS SUMMARY (ICS 209)

*1. Incident Name:	2. Incident Number:

Additional Incident Decision Support Information *(continued)*

38. Current Incident Threat Summary and Risk Information in 12-, 24-, 48-, and 72-hour timeframes and beyond. Summarize primary incident threats to life, property, communities and community stability, residences, health care facilities, other critical infrastructure and key resources, commercial facilities, natural and environmental resources, cultural resources, and continuity of operations and/or business. Identify corresponding incident-related potential economic or cascading impacts.

12 hours:

24 hours:

48 hours:

72 hours:

Anticipated after 72 hours:

39. Critical Resource Needs in 12-, 24-, 48-, and 72-hour timeframes and beyond to meet critical incident objectives. List resource category, kind, and/or type, and amount needed, in priority order:

12 hours:

24 hours:

48 hours:

72 hours:

Anticipated after 72 hours:

40. Strategic Discussion: Explain the relation of overall strategy, constraints, and current available information to:

1) critical resource needs identified above,
2) the Incident Action Plan and management objectives and targets,
3) anticipated results.

Explain major problems and concerns such as operational challenges, incident management problems, and social, political, economic, or environmental concerns or impacts.

41. Planned Actions for Next Operational Period:

42. Projected Final Incident Size/Area (use unit label – e.g., "sq mi")**:**

43. Anticipated Incident Management Completion Date:

44. Projected Significant Resource Demobilization Start Date:

45. Estimated Incident Costs to Date:

46. Projected Final Incident Cost Estimate:

47. Remarks (or continuation of any blocks above – list block number in notation)**:**

** Required when applicable.*

INCIDENT STATUS SUMMARY (ICS 209)

1. Incident Name:	2. Incident Number:

Incident Resource Commitment Summary

48. Agency or Organization:	49. Resources (summarize resources by category, kind, and/or type; show # of resources on top ½ of box, show # of personnel associated with resource on bottom ½ of box):																					50. Additional Personnel not assigned to a resource:	51. Total Personnel (includes those associated with resources – e.g., aircraft or engines – *and* individual overhead):
52. Total Resources																							

53. Additional Cooperating and Assisting Organizations Not Listed Above:

ICS 209, Page ___ of ___	** Required when applicable.*

ACTIVITY LOG (ICS 214)

1. Incident Name:	2. Operational Period: Date From: Time From:	Date To: Time To:

3. Name:	4. ICS Position:	5. Home Agency (and Unit):

6. Resources Assigned:

Name	ICS Position	Home Agency (and Unit)

7. Activity Log:

Date/Time	Notable Activities

8. Prepared by: Name: _____ Position/Title: _____ Signature: _____

 Date/Time: _____

ACTIVITY LOG (ICS 214)

1. Incident Name:	**2. Operational Period:** Date From: Date To: Time From: Time To:

7. Activity Log (continuation)**:**

Date/Time	Notable Activities

8. Prepared by: Name: ____________________ Position/Title: ____________________ Signature: ____________________

ICS 214, Page 2	Date/Time: ____

SUPPORT VEHICLE/EQUIPMENT INVENTORY (ICS 218)

1. Incident Name:	2. Incident Number:	3. Date/Time Prepared: Date: Time:	4. Vehicle/Equipment Category:

5. Vehicle/Equipment Information

Order Request Number	Incident ID No.	Vehicle or Equipment Classification	Vehicle or Equipment Make	Category/ Kind/Type, Capacity, or Size	Vehicle or Equipment Features	Agency or Owner	Operator Name or Contact	Vehicle License or ID No.	Incident Assignment	Incident Start Date and Time	Incident Release Date and Time

ICS 218	6. Prepared by: Name: _____ Position/Title: _____ Signature: _____

AIR OPERATIONS SUMMARY (ICS 220)

1. Incident Name:	**2. Operational Period:** Date From: Date To: Time From: Time To:	**3. Sunrise:** **Sunset:**

4. Remarks (safety notes, hazards, air operations special equipment, etc.)**:**	**5. Ready Alert Aircraft:** Medivac: New Incident:	**6. Temporary Flight Restriction Number:** Altitude: Center Point:

7. Personnel:	Name:	Phone Number:
Air Operations Branch Director		
Air Support Group Supervisor		
Air Tactical Group Supervisor		
Helicopter Coordinator		
Helibase Manager		

8. Frequencies:	AM	FM
Air/Air Fixed-Wing		
Air/Air Rotary-Wing – Flight Following		
Air/Ground		
Command		
Deck Coordinator		
Take-Off & Landing Coordinator		
Air Guard		

9. Fixed-Wing (category/kind/type, make/model, N#, base)**:**

Air Tactical Group Supervisor Aircraft:

Other Fixed-Wing Aircraft:

10. Helicopters (use additional sheets as necessary)**:**

FAA N#	Category/Kind/Type	Make/Model	Base	Available	Start	Remarks

11. Prepared by: Name: _____ Position/Title: _____ Signature: _____

 Date/Time: _____

AIR OPERATIONS SUMMARY (ICS 220)

1. Incident Name:	**2. Operational Period:** Date From: Date To: Time From: Time To:	**3. Sunrise:** **Sunset:**

12. Task/Mission/Assignment (category/kind/type and function includes: air tactical, reconnaissance, personnel transport, search and rescue, etc.)**:**

Category/Kind/Type and Function	Name of Personnel or Cargo (if applicable) or Instructions for Tactical Aircraft	Mission Start	Fly From	Fly To

11. Prepared by: Name: _____ Position/Title: _____ Signature: _____

ICS 220, Page 2 Date/Time: _____

1. Incident Name	2. Operational Period (Date/Time) From: To:	**RESOURCES AT RISK SUMMARY** **ICS 232-CG**

3. Environmentally-Sensitive Areas and Wildlife Issues

Site #	Priority	Site Name and/or Physical Location	Site Issues

Narrative

4. Archaeo-cultural and Socio-economic Issues

Site #	Priority	Site Name and/or Physical Location	Site Issues

Narrative

5. Prepared by: (Environmental Unit Leader) **Date/Time**

1. Incident Name	2. Operational Period (Date/Time) From: To:	ACP Site Index ICS 232a-CG

3. Index to ACP/GRP sites shown on Situation Map

Site #	Priority	Site Name and/or Physical Location	Action	Status

Note: This form is designed to be posted next to the situation map. Use additional sheets, as needed.

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

The Enterprise Safety forms to be used, as needed, during an emergency response consist of the following. At a minimum, a SF49 Emergency Response Site Safety and Action Plan should be completed for all releases.

Enterprise SF FORM NUMBER	FORM TITLE
SF12	Emergency Response Pre-Plans
SF13	Emergency Response Drill Critique
SF19	Hazard Assessment Form
SF49	Emergency Response Site Safety and Action Plan
SF50	Emergency Response Personnel Roster
SF51	Evacuation Assembly Area Accountability
SF52	Emergency Response Stating Form
SF53	Emergency Response Incident Log
SF54	Emergency Response General Message
SF58	Emergency Response – ICS Organization Chart
SF59	Emergency Scene Map Sketch

5.1 INCIDENT ACTION PLAN (Cont'd)

Depending on the nature and severity of the emergency, additional documents may be included in the IAP. These may include:

- Sensitivity Maps (Provided in Section 6)
- Waste Management & Disposal Plans (Provided in Appendix G)
- Plans for use of Alternative Technologies (Dispersant/In-situ Burning/ Bioremediation)
- Security Plans
- Decontamination Plans
- Traffic Plans
- Copies of Permits

5.2 SITE SAFETY PLAN

Site Safety Plans (SSP) are required by OSHA (29CFR1910.120(b)(4)) for all hazardous waste operations. The SSP should address all on-site operations and hazardous as well as on-site emergency procedures. A template for use in producing an SSP is provided as SF49.

The SSP is typically prepared by the Safety Officer and approved by the Incident Commander. All personnel must be familiar with the contents of the SSP and the SSP must be updated as conditions, operations and hazards associated with the response change.

Enterprise Products	Safety Policies Manual	Form Number: SF12
	Category: Safety Forms	Revision Date: 12/08/2006

Emergency Pre-Plans

Area:		Date:	

1.	Major Equipment/Building Located in Area:
2.	Worst Case Scenario:
3.	Most Likely Scenario:
4.	Alternate Scenario:
5.	Special Conditions:
6.	Potential Exposures:
7.	PPE Equipment Requirements
8.	Isolation Points:
9.	Resources Available in Area:

Reviewed By: (signature):

Enterprise Products	Safety Policies Manual	Form Number: SF12
	Category: Safety Forms	Revision Date: 12/08/2006

Enterprise Products	Safety Policies Manual	Policy Number: SF13
	Safety Forms	Revision Date: 03/30/2012

Emergency Response Incident or Drill Critique

Incident Location :					
Incident Date:		**Incident Start Time:**		**Incident Finish Time:**	
Critique Date:		**Critique Start Time:**			

1.	**Type of Event**			
	☐ Exercise/Drill or ☐ Incident			
2.	**Type of Exercise/Drill**	☐ N/A		
	☐ Notification	☐ Announced	☐ Unannounced	☐ Deployment
	☐ Tabletop	☐ Full Scale	☐ Functional	Other:
3.	**Frequency of Exercise/Drill**	☐ N/A		
	☐ Quarter	☐ 1st	☐ 2nd	☐ 3rd	☐ 4th
	☐ Annual Drill	☐ Semi-Annual Drill		
4.	**PREP Core Components Exercised**	☐ N/A		

1.	☐ Notifications	6.	☐ Containment	11.	☐ Transportation
2.	☐ Staff Mobilization	7.	☐ Recovery	12.	☐ Personnel Support
3.	☐ Incident Command	8.	☐ Protection	13.	☐ Equipment Maintenance & Support
4.	☐ Source Control	9.	☐ Disposal	14.	☐ Procurement
5.	☐ Assessment	10.	☐ Communications	15.	☐ Documentation

5.	**Type of Incident**			
	☐ Medical	☐ Hazmat Liquid	☐ Fire Spill	☐ Weather
	☐ Rescue	☐ Hazmat Gas Release	☐ Security	Other:

6.	**Explanation of Incident:**
7.	**Explanation of Actions Taken:**
8.	**Positive Points**
9.	**Points to Improve on**

Enterprise Products	Safety Policies Manual	Policy Number: SF13
	Safety Forms	Revision Date: 03/30/2012

Emergency Response Incident or Drill Critique

10.	Critique of Standard Operating Guidelines:			
a)	**Notification** – Were notification procedures followed and adequate?	☐ Yes	☐ No	☐ N/A
	Response Technique Utilized and Corrective Actions:			
b)	**Safely Respond** – Was the scene approached properly?	☐ Yes	☐ No	☐ N/A
	Response Technique Utilized and Corrective Actions:			
c)	**Accountability** – Where all personnel accounted for?	☐ Yes	☐ No	☐ N/A
	Response Technique Utilized and Corrective Actions:			
d)	**Isolate and Deny Entry** – Were zones, corridors, and evacuation routes used properly?	☐ Yes	☐ No	☐ N/A
	Response Technique Utilized and Corrective Actions:			
e)	**Command** – Was Incident Command established and used properly?	☐ Yes	☐ No	☐ N/A
	Response Technique Utilized and Corrective Actions:			
f)	**Identification of Hazards** – Were hazards identified in an appropriate time and manner?	☐ Yes	☐ No	☐ N/A
	Response Technique Utilized and Corrective Actions:			
g)	**Assessment/Action Plan** – Was written action plan developed and followed?	☐ Yes	☐ No	☐ N/A
	Response Technique Utilized and Corrective Actions:			
h)	**Protective Equipment** – Was PPE identified and air monitoring performed?	☐ Yes	☐ No	☐ N/A
	Response Technique Utilized and Corrective Actions:			
i)	**Control** – Were ignition sources eliminated? Was confinement/containment performed?	☐ Yes	☐ No	☐ N/A
	Response Technique Utilized and Corrective Actions:			
j)	**Protective Actions** – Was Evacuation/Shelter-in-place used? Were Zones maintained?	☐ Yes	☐ No	☐ N/A
	Response Technique Utilized and Corrective Actions:			
k)	**Decontamination** – Was decontamination conducted appropriately?	☐ Yes	☐ No	☐ N/A
	Response Technique Utilized and Corrective Actions:			
l)	**Disposal** – Was waste material(s) disposed of properly?	☐ Yes	☐ No	☐ N/A
	Response Technique Utilized and Corrective Actions:			
m)	**Termination** – Was the incident terminated at the appropriate time, and all de-briefed?	☐ Yes	☐ No	☐ N/A
	Response Technique Utilized and Corrective Actions:			
n)	**Medical** – Was medical and/or first aid available and used properly?	☐ Yes	☐ No	☐ N/A
	Response Technique Utilized and Corrective Actions:			
o)	**Documentation** – Was all documentation gathered?	☐ Yes	☐ No	☐ N/A

Enterprise Products	Safety Policies Manual	Policy Number: SF13
	Safety Forms	Revision Date: 03/30/2012

Emergency Response Incident or Drill Critique

11.	Attachments to this Report
	☐ SF49 – Emergency Response Site Safety and Action Plan
	☐ SF51 – Evacuation Assembly Area Accountability
	☐ SF50 – Emergency Response Personnel Roster
	☐ SF52 – Emergency Response Staging Form
	☐ SF53 – Emergency Response Incident Log
	☐ SF54 – Emergency Response General Message
	☐ SF58 – Emergency Response ICS Organization Chart
	☐ SF59 – Emergency Response Scene Map Sketch
	Other:

Incident Commander/Preparer:	Date:

NIMS ICS-224 / 225 Compatible

Enterprise Products	Safety Policies Manual	Policy Number: SF13
	Safety Forms	Revision Date: 03/13/2012

Emergency Response Incident or Drill Critique

Sign In Sheet

Location:		**Date:**	
Facilitator:			

Print Name	Agency Name	Address	City, State, Zip	Phone Number	Email	Signature

Enterprise Products	Safety Policies Manual	Form Number: SF-19
	Safety Forms	Revision Date: 12/08/2006

HAZARD ASSESSMENT FORM

Location:		**Date of Assessment:**	
Area/Region:			
Conducted By:			

Area	Task	Hazard	Engineering Controls	Administrative Controls	PPE Specified
					☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Other
					☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Other
					☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Other
					☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Other

Level 1	*Safety Glasses or Chemical Goggles, Hard Hat, FRC Garments, Safety Toe Shoes/Boots*
Level 2	*Chemical Goggles and Face Shield, Hard Hat, FRC Garments, Safety Toe Shoes/Boots, Rubber or Neoprene Gloves, Splash Aprons*
Level 3	*Chemical Goggles and Face Shield, Hard Hat, FRC Garments, Safety Toe Rubber Boots, Rubber or Neoprene Gloves, Full slicker or chemical suit*
Other	*List Special PPE Equipment (i.e., Hearing Protection, Respiratory Protection, Specified Gloves)*

Enterprise Products	Safety Policies Manual	Form Number: SF-19
	Safety Forms	Revision Date: 12/08/2006

Area	Task	Hazard	Engineering Controls	Administrative Controls	PPE Specified
					☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Other
					☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Other
					☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Other
					☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Other
					☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Other

Level 1	*Safety Glasses or Chemical Goggles, Hard Hat, FRC Garments, Safety Toe Shoes/Boots*
Level 2	*Chemical Goggles and Face Shield, Hard Hat, FRC Garments, Safety Toe Shoes/Boots, Rubber or Neoprene Gloves, Splash Aprons*
Level 3	*Chemical Goggles and Face Shield, Hard Hat, FRC Garments, Safety Toe Rubber Boots, Rubber or Neoprene Gloves, Full slicker or chemical suit*
Other	*List Special PPE Equipment (i.e., Hearing Protection, Respiratory Protection, Specified Gloves)*

Area	Task	Hazard	Engineering Controls	Administrative Controls	PPE Specified
					☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Other
					☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Other
					☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Other
					☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Other
					☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Other

Level 1	*Safety Glasses or Chemical Goggles, Hard Hat, FRC Garments, Safety Toe Shoes/Boots*
Level 2	*Chemical Goggles and Face Shield, Hard Hat, FRC Garments, Safety Toe Shoes/Boots, Rubber or Neoprene Gloves, Splash Aprons*
Level 3	*Chemical Goggles and Face Shield, Hard Hat, FRC Garments, Safety Toe Rubber Boots, Rubber or Neoprene Gloves, Full slicker or chemical suit*
Other	*List Special PPE Equipment (i.e., Hearing Protection, Respiratory Protection, Specified Gloves)*

Enterprise Products	Safety Policies Manual	Form Number: SF-19
	Safety Forms	Revision Date: 12/08/2006

Area	Task	Hazard	Engineering Controls	Administrative Controls	PPE Specified
					☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Other
					☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Other
					☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Other
					☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Other
					☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Other

Level 1	*Safety Glasses or Chemical Goggles, Hard Hat, FRC Garments, Safety Toe Shoes/Boots*
Level 2	*Chemical Goggles and Face Shield, Hard Hat, FRC Garments, Safety Toe Shoes/Boots, Rubber or Neoprene Gloves, Splash Aprons*
Level 3	*Chemical Goggles and Face Shield, Hard Hat, FRC Garments, Safety Toe Rubber Boots, Rubber or Neoprene Gloves, Full slicker or chemical suit*
Other	*List Special PPE Equipment (i.e., Hearing Protection, Respiratory Protection, Specified Gloves)*

Enterprise Products	Safety Policies Manual	Form Number: SF-19
	Safety Forms	Revision Date: 12/08/2006

Area	Task	Hazard	Engineering Controls	Administrative Controls	PPE Specified
					☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Other
					☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Other
					☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Other
					☐ Level 1 ☐ Level 2 ☐ Level 3 ☐ Other

Certification of Hazard Assessment:
I have reviewed the above information and certify that the Hazard assessment was performed for the purpose of identifying workplace hazards and any associated hazard control methods.

Site/Facility Supervisor's Name (printed):	Signature:	Date:

Level 1	*Safety Glasses or Chemical Goggles, Hard Hat, FRC Garments, Safety Toe Shoes/Boots*
Level 2	*Chemical Goggles and Face Shield, Hard Hat, FRC Garments, Safety Toe Shoes/Boots, Rubber or Neoprene Gloves, Splash Aprons*
Level 3	*Chemical Goggles and Face Shield, Hard Hat, FRC Garments, Safety Toe Rubber Boots, Rubber or Neoprene Gloves, Full slicker or chemical suit*
Other	*List Special PPE Equipment (i.e., Hearing Protection, Respiratory Protection, Specified Gloves)*

Enterprise Products	Safety Policies Manual	Form Number: SF49
	Category: Safety Forms	Revision Date: 01/20/2011

Emergency Response Site Safety and Action Plan

1. Description Section

Location :			
Date:		Time:	

Type of Incident

☐ Medical	☐ Hazmat Liquid Spill	☐ Fire	☐ Weather
☐ Rescue	☐ Hazmat Gas Release	☐ Security	Other:

Description of Incident

Hazardous Materials Involved

2. Accountability Section

Accountability Established for Responders?	YES ☐	NO ☐	
Area Evacuated?	YES ☐	NO ☐	
Are All Evacuees Accounted For?	YES ☐	NO ☐	If no, describe

3. Command Section

Location of Command Post:

Incident Commander:

Safety Officer:

EOC Activated: YES ☐ NO ☐ If yes, location:

4. Agencies Section

Agencies Involved (Include name of representative)

5. Communications Section

Methods used: Radio Channel: Phone Number: Other:

6. Access Zones Section

Is Site Secure? YES ☐ NO ☐

Exclusion (Hot) Zone Description:

Exclusion (Hot) Zone PPE: Level 1 ☐ Level 2 ☐ Level 3 ☐ Other:

Contamination Reduction (Warm) Zone Description:

Contamination Reduction (Warm) Zone PPE: Level 1 ☐ Level 2 ☐ Level 3 ☐ Other:

Method of Decontamination Used:

Support (Cold) Zone Description:

Support (Cold) Zone PPE: Level 1 ☐ Other:

Area Monitoring Provided: YES ☐ NO ☐ Area Monitoring Described:

Enterprise Products	Safety Policies Manual	Form Number: SF49
	Category: Safety Forms	Revision Date: 01/20/2011

7.	**Emergency Procedures Section**
	Review of Alarm and Emergency Evacuation by Responders: YES ☐ NO ☐ Method of Recall Used:
	Nearest Hospital/Clinic: Phone:
	Nearest Fire Department: Phone:
	Nearest Police Department: Phone:
8.	**Actions Section**
	Defensive Actions Taken:
	Offensive Actions Taken:
9.	**Objectives Section**
	Objectives Description:
	List Potential Exposures:
10.	**Assets Section**
	Is Mutual Aid Involved? YES ☐ NO ☐
	List Fixed Equipment:
	List Mobile Equipment:
11.	**Rehab Section**
	Location of Rehab:
	Method of Rehab:
12.	**Safety Message for Specified Operational Period:**
	Incident Commander/Preparer (Name/Signature):
	Safety Officer (Name/Signature):

NIMS ICS-201 / 202 / 205 / 206 / 208 / 215 / 215A Compatible

Enterprise Products	Safety Policies Manual	Form Number: SF50
	Category: Safety Forms	Revision Date: 09/25/2009

Emergency Response Personnel Roster

Incident Date :		***Incident Time:***			
Incident Name:					
Roster Location:	***EOC:*** ☐	***ICP:*** ☐	***Operations:*** ☐	Staging: ☐	***Other:***

Name	Duty	Time In	Time Out

Preparer (Name):

NOTE: Upon Completion – Attach to "Emergency Response Critique Form"

NIMS ICS-203 / 211 Compatible

Enterprise Products	Safety Policies Manual	Form Number: SF51
	Category: Safety Forms	Revision Date: 09/25/2008

Evacuation Assembly Area Accountability

Incident Date :		**Incident Time:**	
Incident Name:			
Assembly Location:			

Name	Company	Contact Phone Number

Preparer (Name):

NOTE: Upon Completion – Attach to "Emergency Response Critique Form"

Enterprise Products	Safety Policies Manual	Form Number: SF52
	Category: Safety Forms	Revision Date: 09/25/2008

Emergency Response Staging Form

Incident Date :		***Incident Time:***	
Incident Name:			
Staging Location:			

Company	Number Of People	Equipment	Time In	Time Out

Preparer (Name):

NOTE: Upon Completion – Attach to "Emergency Response Critique Form"

NIMS ICS-211 Compatible

Enterprise Products	Safety Policies Manual	Form Number: SF53
	Category: Safety Forms	Revision Date: 09/25/2008

Emergency Response Incident Log

Incident Date :		**Incident Time:**			
Incident Name:					
Log Location:	**EOC:** ☐	**ICP:** ☐	**Operations:** ☐	Staging: ☐	**Other:**

Time:	**Major Events**

Preparer (Name):

NOTE: Upon Completion – Attach to "Emergency Response Critique Form"

NIMS ICS-214 Compatible

Enterprise Products	Safety Policies Manual	Form Number: SF54
	Category: Safety Forms	Revision Date: 09/25/2008

Emergency Response General Message

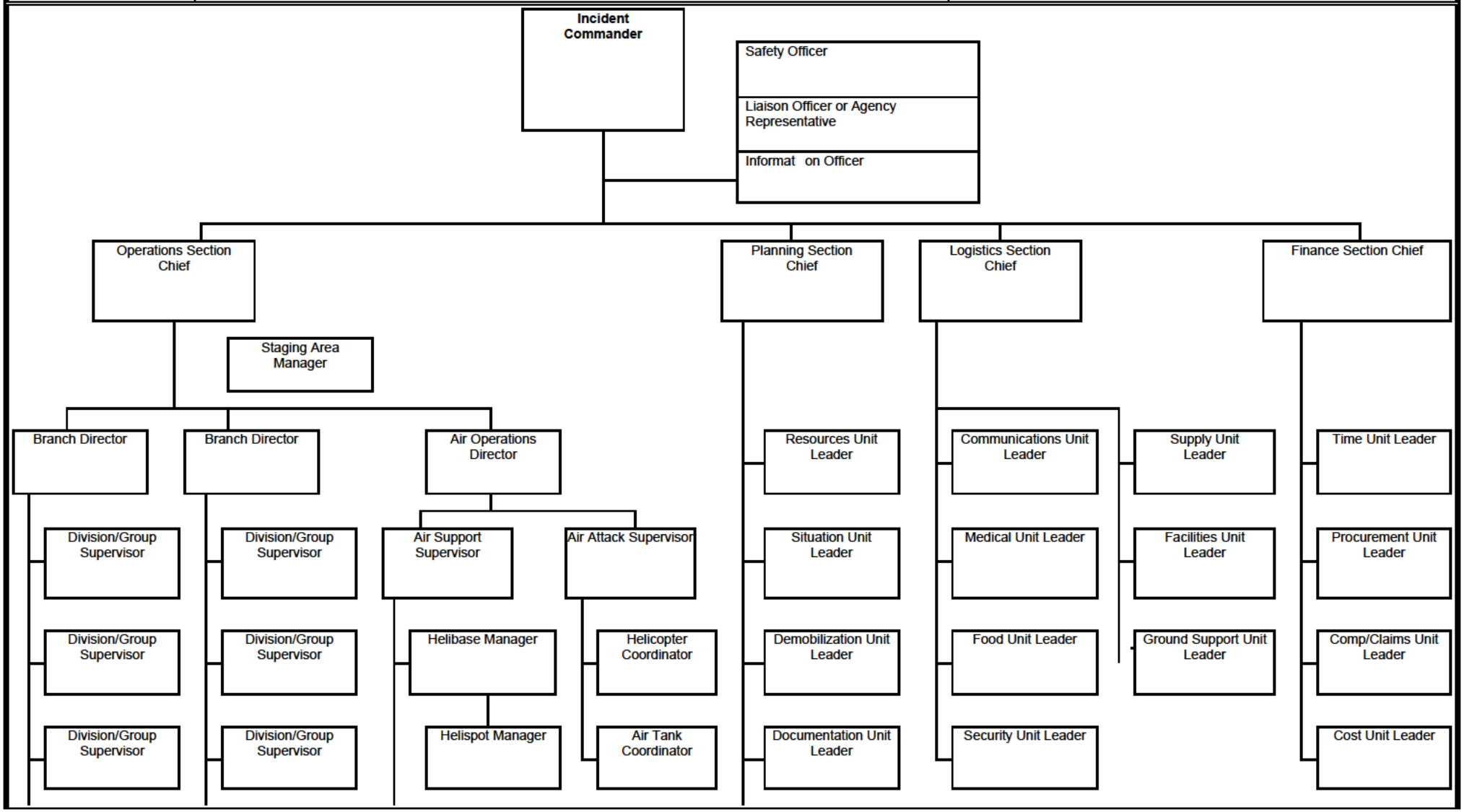
To :		***Position:***	
From:		***Position:***	
Subject:		***Date:***	**Time:**
Message:			
Name / Signature:		***Position:***	
Reply:			
Date:	**Time:**	***Signature / Position:***	
NOTE: Upon Completion – Attach to "Emergency Response Critique Form"			

NIMS ICS-213 Compatible

Enterprise Products	Safety Policies Manual	Form Number: SF58
	Category: Safety Forms	Revision Date: 11/18/2011

Emergency Response - ICS 207 Organization Chart

Location or Name: | ***Operational Period: From to***



Enterprise Products	Safety Policies Manual	Form Number: SF59
	Category: Safety Forms	Revision Date: 11/18/2011

Emergency Scene Map / Sketch

L ation or Name:	*Operational Period: From*	*to*

Wind Direction: _____
Wind Speed: _____
Temp: _____
Conditions: _____

6.0 SPILL IMPACT CONSIDERATIONS

6.1 CRITICAL AREAS TO PROTECT

The critical areas to protect are classified as high, moderate, and low sensitivity to oil for non-coastal/inland environments. The Federal, State, and Local authorities will further clarify these categories at the time of the response. The categories are defined as follows:

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

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

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

6.2 ENVIRONMENTAL/SOCIO-ECONOMIC SENSITIVITIES

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

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

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

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

The environmental and socio-economic sensitivities in the vicinity of the Pipeline have been broken down into specific categories and identified in this Section. To further clarify the location of the sensitive areas of concern references to published Area Contingency Plans and Environmental Sensitivity Maps are also provided in this section.

6.3 WILDLIFE PROTECTION AND REHABILITATION

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

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

6.3.1 Wildlife Rescue

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

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

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

6.3 WILDLIFE PROTECTION AND REHABILITATION (Cont'd)

6.3.2 Search and Rescue - Points to Consider

- **The Company's involvement should be limited to offering assistance as needed or requested by the agencies.**

- Prior to initiating any organized search and rescue plan, **authorization must be obtained from the appropriate federal/state agency.**

- **Initial search and rescue efforts, if needed, should be left up to the appropriate agencies.** They have the personnel, equipment, and training to immediately begin capturing contaminated wildlife.

- With or without authorization it must be anticipated that volunteer citizens will aid distressed/contaminated wildlife of their own. It is important to communicate that it may be illegal to handle wildlife without express authority from appropriate agencies. Provisions should be made to support an appropriate rehabilitator, however, **no support should be given to any unauthorized volunteer rescue efforts.**

- The regulatory agencies and response personnel should be provided the name and location of a qualified rehabilitator in the event contaminated wildlife is captured.

- Resources and contacts that can assist with wildlife rescue and rehabilitation are provided in Section 2.0. This list includes:

  - Outside rehabilitation organizations
  - Local regulatory agencies
  - Other resources

6.4 STAGING AREAS

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

- Access to waterborne equipment launching facilities and/or land equipment.

- Access to open space for staging/deployment of heavy equipment and personnel.

- Access to public services utilities (electricity, potable water, public phone, restroom and washroom facilities, etc.)

- Access to the environmental and socio-economically sensitive areas which are projected for impact.

6.5 CONTAINMENT AND RECOVERY OF SPILLED PRODUCT

General descriptions of various specific response techniques that may be applied during a response effort are discussed below. Company responders are free to use all or any combination of these methods as incident conditions require, provided they meet the appropriate safety standards and other requirements relative to the situation encountered. Data was obtained from reports, manuals and pamphlets prepared by the American Petroleum Institute, Environmental Protection Agency and the United States Coast Guard. The most effective cleanup of a product spill will result from an integrated combination of clean-up methods. Each operation should complement and assist related operations and not merely transfer spillage problems to areas where they could be more difficult to handle.

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

6.5.1 Spill on Land (Soil Surfaces)

- **Confinement Methods**

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

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

- **Removal Methods**

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

6.5 CONTAINMENT AND RECOVERY OF SPILLED PRODUCT (Cont'd)

6.5.1 Spill on Land (Soil Surfaces) (Cont'd)

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

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

- Other steps and procedures have been executed and a determination has been made that this is the safest remaining method of control.
- Intentional burning will not unduly damage the pipeline, adjacent property, or the environment.
- Controlled burning is permitted by government authorities. Local government authorities to be contacted may include city council, county board of commissioners, city or county fire chiefs, the county forestry commission or firetower, and the local environmental protection agency. In seeking permission from these authorities, be prepared to convince them that adequate safety precautions have been and will be taken during the operation.
- Controlled burning is conducted with the consent of local landowners.
- Safety must always be a prime consideration when considering controlled burning of product. Sparks and heat radiation from large fires can start secondary fires and strong winds make fire control difficult. There must be no danger of the fire spreading beyond control limits. All persons must be at a safe distance from the edge of the inflammable area. Remember that all burning must be controlled burning.

6.5 CONTAINMENT AND RECOVERY OF SPILLED PRODUCT (Cont'd)

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

- **Confinement Methods**

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

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

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

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

- **Removal Methods**

  If the confined slick is thick enough, regular suction equipment may be used first; however, in most instances, a floating skimmer should be removed. If judged appropriate or useful, a surface collecting agent should be applied once the slick is isolated to facilitate the removal. The surface collecting agent will concentrate the product into a smaller area and make the floating skimmer work more efficiently.

  Additions of more surface collecting agent from time to time may improve the skimming efficiency of the skimmer. It will continue to concentrate the slick into a smaller area, thus making the film thickness greater. Drawing the boom closer to the bank as product is removed will also keep film of product thicker. However, when the slick becomes too thin, the skimmer should be stopped and an absorbent applied (with a boat if necessary) to remove the final amounts.

  The floating skimmer (if speed is a must) or hand skimmers (if water is shallow enough) or both can be used to pick up the product-soaked absorbent. Before pumping the product-soaked absorbent with a floating skimmer, insure that the absorbent in question can be pumped and will not harm the pump.

6.5 CONTAINMENT AND RECOVERY OF SPILLED PRODUCT (Cont'd)

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

Several types are nonabrasive to pump internals. If the floating skimmer is used first, the product-soaked absorbent/water mixture should be pumped into a tank truck.

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

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

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

- **Confinement Methods**

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

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

6.5 CONTAINMENT AND RECOVERY OF SPILLED PRODUCT (Cont'd)

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

At the same time, the water is flowing under the barrier and over the top of the dam. The barrier should be placed at an angle of 45^0 across the pool to decrease the effective water velocity beneath it. Also, it helps to concentrate the product at the bank and not all along the barrier. A second barrier should be placed approximately 10 to 15 feet downstream of the first one as a secondary back-up.

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

Containment boom can be used to contain product or protect sensitive areas if the characteristics of the water body will permit. An advantage of using a containment boom is the speed and flexibility of deployment and the fact that there is not need for additional support as with the stationary boom.

6.5 CONTAINMENT AND RECOVERY OF SPILLED PRODUCT (Cont'd)

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

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

- **Removal Methods**

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

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

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

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

6.5 CONTAINMENT AND RECOVERY OF SPILLED PRODUCT (Cont'd)

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

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

6.5.4 Spill on Large Streams and Rivers

- **Confinement Methods**

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

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

If the boom are positioned straight across a river or stream, at right angles to the flow, surface water tends to dive beneath the barrier (boom) when current velocities exceed about ½ knot (0.8 ft./sec.). However, if the current of the entire river is ½ knot or less, then a boom can be positioned straight across the river or large stream, but angled slightly in relation of the banks. By placing the boom at an angle to the banks, product on the surface is diverted along the boom to the side of the river.

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

Where the current velocity of the chosen site exceeds ½ knot, the boom should be positioned in two smooth curves from a point of maximum velocity (usually the center of the river) to both banks.

6.5 CONTAINMENT AND RECOVERY OF SPILLED PRODUCT (Cont'd)

6.5.4 Spill on Large Streams and Rivers (Cont'd)

However, this double-boom required product to be removed from both sides of the river. To determine the appropriate angle of boom placement and support (mooring) needed to hold the booms in position, the current velocity should be measured by timing a floating object which is 80% submerged over a distance of 100 feet. A time of 60 seconds over this distance indicates a water current of approximately 1 knot. For currents from 1 to 2.5 knots (1.7 to 4.2 ft./sec.), the more the boom will have to be angled acute to the bank. The length of the boom will have to be such to reach the center of the river. For currents between ½ and 1 knot (0.8 and 1.7 ft./sec.), the angle of employment can be enlarged.

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

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

- **Removal Methods**

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

The absorbents (type that can be placed on water before product arrival straw is an example) would then be used upstream of the secondary boom to absorb the underflow from the primary boom.

6.5 CONTAINMENT AND RECOVERY OF SPILLED PRODUCT (Cont'd)

6.5.4 Spill on Large Streams and Rivers (Cont'd)

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

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

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

6.5.5 Spill on Stream which Flows into Lake or Pond

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

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

- **Confinement Methods**

  Product on a stream flowing into a lake should be boomed as close to the entrance as possible. The boom should be positioned on the lake at an angle to the residential stream current so as to direct the surface water to a slower moving area. The area where the product is being deflected should be enclosed by booms to contain it.

6.5 CONTAINMENT AND RECOVERY OF SPILLED PRODUCT (Cont'd)

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

An additional boom for sweeping the product to the bank will be required. This area of containment should not have a current velocity of more than 1/2 knot (0.8 ft./sec.), preferably less.

- **Removal Methods**

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

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

6.5.6 Spill in a Mud or Tidal Flat Area

- **Confinement Method**

  Shoreline boom lined with absorbent boom should be placed at the surf line to prevent oil from washing up onto the flat area. If oiling has already occurred the boom is used to prevent further oiling and keep oil that has impacted the flat from spreading.

- **Removal Methods**

  Natural Recovery, Flooding and Sorbents are the three preferred methods. Any invasive type of recovery method poses a risk of driving the oil into the substrate of the flat and endangering the biologicals that live there. Invasive methods should only be used in order to protect more sensitive areas.

6.5.7 Spill in Urban Areas

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

6.5 CONTAINMENT AND RECOVERY OF SPILLED PRODUCT (Cont'd)

6.5.7 Spill in Urban Areas (Cont'd)

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

6.6 SHORELINE DESCRIPTORS AND RESPONSE CONSIDERATIONS

The following is an excerpt taken from the NOAA Shoreline Assessment Manual, Third Edition, August 2000. It is intended to offer guidance on the response considerations for the various shoreline types and structures found within the response zones. The descriptors, including oil behavior and response considerations is as follows:

Exposed Rocky Cliffs

DESCRIPTION

- The intertidal zone is steep (greater than 30^{o} slope), with very little width.
- Sediment accumulations are uncommon and usually ephemeral, because waves remove the debris that has slumped from the eroding cliffs.
- There is strong vertical zonation of intertidal biological communities.
- Species density and diversity vary greatly, but barnacles, snails, mussels, seastars, limpets, sea anemones, shore crabs, polychaetes, and macroalgae are often very abundant.

PREDICTED OIL BEHAVIOR

- Oil is held offshore by wave reflecting off the steep cliffs.
- Any oil that is deposited is rapidly removed from exposed faces.
- The most resistant oil would remain as a patchy band at or above the high-tide line.
- Impacts to intertidal communities are expected to be short-term in duration. An exception would be where heavy concentrations of a light refined product came ashore very quickly.

RESPONSE CONSIDERATIONS

- Cleanup is usually not required.
- Access can be difficult and dangerous.

6.6 SHORELINE DESCRIPTORS AND RESPONSE CONSIDERATIONS (Cont'd)

Exposed, Solid Man-Made Structures

DESCRIPTION

- This shoreline type consists of solid man-made structures such as seawalls, groins, revetments, piers, and port facilities.
- They are constructed of concrete, wood, or metal.
- Often there is no exposed substrate at low tide, but a wide range of habitats may be present.
- They are built to protect the shore from erosion by waves, boat wakes, and currents, and thus are exposed to rapid natural removal processes.
- Attached animals and plants are sparse to moderate.

PREDICTED OIL BEHAVIOR

- Oil is held offshore by waves reflecting off the steep, hard surface in exposed settings.
- Oil readily adheres to the dry, rough surfaces, but it does not adhere to wet substrates.
- The most resistant oil would remain as a patchy band at or above the high-tide line.

RESPONSE CONSIDERATIONS

- Cleanup is usually not required.
- High-pressure water spraying may be conducted to: remove persistent oil in crevices; improve aesthetics; or reduce leaching of oil.

Wave-Cut Platforms

DESCRIPTION

- The intertidal zone consists of a flat rock bench of highly variable width.
- The shoreline may be backed by a steep scarp or low bluff.
- There may be a beach of sand- to boulder-sized sediments at the base of the scarp.
- The platform surface is irregular and tidal pools are common.
- Small amounts of gravel can be found in the tidal pools and crevices in the platform.
- These habitats can support large populations of encrusting animals and plants, with rich tidal pool communities.

PREDICTED OIL BEHAVIOR

- Oil will not adhere to the rock platform, but rather be transported across the platform and accumulate along the high-tide line.
- Oil can penetrate in beach sediments, if present.
- Persistence of oiled sediments is usually short-term, except in wave shadows or where the oil has penetrated sediments at the high-tide line.

RESPONSE CONSIDERATIONS

- Cleanup is usually not required.
- Where the high-tide area is accessible, it may be feasible to remove heavy oil accumulations and oiled debris.

6.6 SHORELINE DESCRIPTORS AND RESPONSE CONSIDERATIONS (Cont'd)

Fine-Grained Sand Beaches

DESCRIPTION

- These beaches are generally flat and hard-packed.
- Though they are predominantly fine sand, there is often a small amount of shell hash.
- There can be heavy accumulations of wrack present.
- They are utilized by birds and turtles for nesting and feeding.
- Upper beach fauna are generally sparse, although amphipods can be abundant; lower beach fauna can be moderately abundant, but highly variable.

PREDICTED OIL BEHAVIOR

- Light oil accumulations will be deposited as oily bands along the upper intertidal zone.
- Heavy oil accumulations will cover the entire beach surface; oil will be lifted off the lower beach with the rising tide.
- Maximum penetration of oil into fine-grained sand is about 10 cm.
- Burial of oiled layers by clean sand within the first week after a spill typically will be less than 30 cm along the upper beach face.
- Organisms living in the beach sediment may be killed by smothering or lethal oil concentrations in the interstitial water.
- There may be declines in infauna, which can affect important shorebird foraging areas.

RESPONSE CONSIDERATIONS

- These beaches are among the easiest shoreline types to clean.
- Cleanup should concentrate on removing oil and oily debris from the upper swash zone once oil has come ashore.
- Activity through oiled and dune areas should be limited, to prevent oiling of clean areas.
- Manual cleanup, rather than road graders and front-end loaders, is usually advised to minimize the volume of sand removed from the shore and requiring disposal.
- All efforts should focus on preventing the mixture of oil deeper into the sediments by vehicular and foot traffic.
- Mechanical reworking of lightly oiled sediments from the high-tide line to the upper intertidal zone can be effective along outer beaches.

Scarps and Steep Slopes in Sand

DESCRIPTION

- This shoreline type occurs where sandy bluffs are undercut by waves or currents and slump.
- They normally form along embankments of sandy dredge material and at cut banks in rivers; they also form where tidal creeks intercept old sandy beach ridge deposits.

6.6 SHORELINE DESCRIPTORS AND RESPONSE CONSIDERATIONS (Cont'd)

Scarps and Steep Slopes in Sand (Cont'd)

DESCRIPTION (Cont'd)

- Some scarps are fronted by narrow beaches, if the erosion rates are moderate and episodic.
- Trees growing at the top of these slopes are eventually undercut and the debris can accumulate at the base of the scarp.
- Biological utilization by birds and infauna is low.

PREDICTED OIL BEHAVIOR

- Any stranded oil will concentrate at the high-water line and may penetrate sandy sediments.
- Oil will adhere to the dry surface of any woody debris accumulated at the base of the scarp.
- There is little potential for burial except when a major slumping of the bluff occurs.
- Active erosion of the scarp will remove the oil.

RESPONSE CONSIDERATIONS

- In most cases, cleanup is not necessary because of the short residence time of the oil.
- The need for removal of oiled sediments and debris should be carefully evaluated because of the potential for increased erosion.
- Closely supervised manual labor should be used so that the minimal amount of material is removed during cleanup.

Medium- to Coarse-Grained Sand Beaches

DESCRIPTION

- These beaches have relatively steep beach faces and soft substrates.
- Coarse-sand beaches can undergo rapid erosion/deposition cycles, even within one tidal cycle.
- The amount of wrack varies considerably.
- They are utilized by birds and turtles for nesting and feeding.

PREDICTED OIL BEHAVIOR

- Light oil accumulations will be deposited as oily bands along the upper intertidal zone.
- Heavy oil accumulations will cover the entire beach surface; oil will be lifted off the lower beach with the rising tide.
- Maximum oil penetration is about 20 cm.
- Burial of oiled layers by clean sand within the first week after a spill can be up to 50 cm.
- Organisms living in the beach sediments may be killed by smothering or lethal oil concentrations in the interstitial water.
- There may be declines in infauna, which can affect important shorebird foraging areas.

6.6 SHORELINE DESCRIPTORS AND RESPONSE CONSIDERATIONS (Cont'd)

Medium- to Coarse-Grained Sand Beaches (Cont'd)

RESPONSE CONSIDERATIONS

- Coarse sand sediments are less trafficable, increasing the risk of mixing oil into the substrate by foot and vehicular traffic.
- Cleanup should concentrate on removing oil and oily debris from the upper swash zone once oil has come ashore.
- Traffic through oiled and dune areas should be limited, to prevent oiling of clean areas.
- Manual cleanup, rather than road graders and front-end loaders, is advised to minimize the volume of sand removed from the shore and requiring disposal.
- All efforts should focus on preventing the mixture of oil deeper into the sediments by vehicular and foot traffic.
- Mechanical reworking of lightly oiled sediments from the high-tide zone to the upper intertidal zone can be effective along outer beaches.

Mixed Sand and Gravel Beaches

DESCRIPTION

- These beaches are moderately sloping and composed of a mixture of sand and gravel.
- Because of the mixed sediment sizes, there may be zones of pure sand, pebbles, or cobbles.
- There can be large-scale changes in the sediment distribution patterns depending upon season, because of the transport of the sand fraction offshore during storms.
- Because of sediment desiccation and mobility on exposed beaches, there are low densities of attached animals and plants.
- The presence of attached algae and animals indicates beaches that are relatively sheltered, with the more stable substrate supporting a richer biota.

PREDICTED OIL BEHAVIOR

- During small spills, oil will be deposited along and above the high-tide swash.
- Large spills will spread across the entire intertidal area.
- Oil penetration into the beach sediments may be up to 50 cm; however, the sand fraction can be quite mobile, and oil behavior is much like on a sand beach if the sand exceeds 40 percent.
- Burial of oil may be deep at and above the high-tide line, where oil tends to persist, particularly where beaches are only intermittently exposed to waves.
- In sheltered pockets on the beach, pavements of asphalted sediments can form if there is no removal of heavy oil accumulations, because most of the oil remains on the surface.
- Once formed, these asphalt pavements can persist for many years.
- Oil can be stranded in the coarse sediments on the lower part of the beach, particularly if the oil is weathered or emulsified.

6.6 SHORELINE DESCRIPTORS AND RESPONSE CONSIDERATIONS (Cont'd)

Mixed Sand and Gravel Beaches (Cont'd)

RESPONSE CONSIDERATIONS

- Remove heavy accumulations of pooled oil from the upper beach face.
- All oiled debris should be removed.
- Sediment removal should be limited as much as possible.
- Low-pressure flushing can be used to float oil away from the sediments for recovery by skimmers or sorbents. High-pressure spraying should be avoided because of potential for transporting contaminated finer sediments (sand) to the lower intertidal or subtidal zones.
- Relocation of oiled sediments from the high-tide zone to the upper intertidal zone can be effective in areas regularly exposed to wave activity (as evidence by storm berms). However, oiled sediments should not be relocated below the mid-tide zone.
- Tilling may be used to reach deeply buried oil layers in the middle zone on exposed beaches.

Gravel Beaches

DESCRIPTION

- Gravel beaches are composed of sediments ranging in size from pebbles to boulders. The gravel-sized sediments can be made up of shell fragments.
- They can be very steep, with multiple wave-built berms forming the upper beach.
- Attached animals and plants are usually restricted to the lowest parts of the beach, where the sediments are less mobile.
- The presence of attached algae, mussels, and barnacles indicates beaches that are relatively sheltered, with the more stable substrate supporting a richer biota.

PREDICTED OIL BEHAVIOR

- Deep penetration and rapid burial of stranded oil is likely on exposed beaches.
- On exposed beaches, oil can be pushed over the high-tide and storm berms, pooling and persisting above the normal zone of wave wash.
- Long-term persistence will be controlled by the depth of penetration versus the depth of routine reworking by storm waves.
- On the more sheltered portions of beaches, formation of asphalt pavements is likely where accumulations are heavy.

RESPONSE CONSIDERATIONS

- Heavy accumulations of pooled oil should be removed quickly from the upper beach.
- All oiled debris should be removed.
- Sediment removal should be limited as much as possible.
- Low- to high-pressure flushing can be used to float oil away from the sediments for recovery by skimmers or sorbents.
- Relocation of oiled sediments from the high-tide zone to the upper intertidal zone can be effective in areas regularly exposed to wave activity (as evidenced by storm berms). However, oiled sediments should not be relocated below the mid-tide zone.
- Tilling may be used to reach deeply buried oil layers in the upper- to mid-tide zone on exposed beaches.

6.6 SHORELINE DESCRIPTORS AND RESPONSE CONSIDERATIONS (Cont'd)

Riprap

DESCRIPTION

- Riprap is composed of cobble- to boulder-sized blocks of granite, limestone, or concrete.
- Riprap structures are used for shoreline protection and channel stabilization (jetties).
- Attached biota are sparse.

PREDICTED OIL BEHAVIOR

- Oil adheres readily to the rough surfaces of the blocks.
- Deep penetration of oil between the blocks is likely.
- Uncleaned oil can cause chronic leaching until the oil solidifies.

RESPONSE CONSIDERATIONS

- When the oil is fresh and liquid, high pressure flushing and/or water flooding may be effective, making sure to recover all liberated oil.
- Heavy and weathered oils are more difficult to remove, requiring scrapping and/or hot-water flushing.
- In extreme cases, it may be necessary to remove heavily oiled blocks and replace them.

Exposed Tidal Flats

DESCRIPTION

- Exposed tidal flats are broad intertidal areas composed primarily of sand and minor amounts of shell and mud.
- The dominance of sand indicates that currents and waves are strong enough to mobilize the sediments.
- They are usually associated with another shoreline type on the landward side of the flat, though they can occur as separate shoals; they are commonly associated with tidal inlets.
- Biological utilization can be very high, with large numbers of infauna, heavy use by birds for roosting and foraging, and use by foraging fish.

PREDICTED OIL BEHAVIOR

- Oil does not usually adhere to the surface of exposed tidal flats, but rather moves across the flat and accumulates at the high-tide line.
- Deposition of oil on the flat may occur on a falling tide if concentrations are heavy.
- Oil does not penetrate water-saturated sediments.
- Biological damage may be severe, primarily to infauna, thereby reducing food sources for birds and other predators.

RESPONSE CONSIDERATIONS

- Currents and waves can be very effective in natural removal of the oil.
- Cleanup is very difficult (and possibly only during low tides).
- The use of heavy machinery should be restricted to prevent mixing of oil into the sediments.

6.6 SHORELINE DESCRIPTORS AND RESPONSE CONSIDERATIONS (Cont'd)

Sheltered Rocky Shores

DESCRIPTION

- These are bedrock shores of variable slope (from vertical cliffs to wide, rocky ledges) that are sheltered from exposure to most wave and tidal energy.
- Wide shores may have some surface sediments, but bedrock is the dominant substrate type.
- Species density and diversity vary greatly, but biota are often very abundant.

PREDICTED OIL BEHAVIOR

- Oil will adhere readily to the rough rocky surface, particularly along the high-tide line, forming a distinct oil band.
- Even on wide ledges, the lower intertidal zone usually stays wet (particularly when algae covered), preventing oil from adhering to the rock surface.
- Heavy and weathered oils can cover the upper zone with little impacts to the rich biological communities of the lower zone.
- Where surface sediments are abundant, oil will penetrate into the crevices formed by the surface rubble, forming persistent pavements.
- Where the rubble is loosely packed, oil will penetrate deeply, causing long-term contamination of the subsurface sediments.

RESPONSE CONSIDERATIONS

- Low-pressure flushing at ambient temperatures is most effective when the oil is fresh.
- Extreme care must be taken not to spray in the biologically rich lower intertidal zone or when the tidal level reaches that zone.
- Cutting of oiled, attached algae is not recommended; tidal action will eventually float this oil off, so sorbent booms should be deployed.

Sheltered, Solid Man-made Structures

DESCRIPTION

- These structure are solid man-made structures such as seawalls, groins, revetments, piers, and port facilities.
- Most structures are constructed of concrete, wood, or metal, and their composition, design and condition are highly variable.
- Often there is no exposed beach at low tide, but a wide variety habitats may be present.
- Attached animal and plant life can be moderate to high.

PREDICTED OIL BEHAVIOR

- Oil will adhere readily to the rough surface, particularly along the high-tide line, forming a distinct oil band.
- The lower intertidal zone usually stays wet (particularly if algae covered), preventing oil from adhering to the surface.

RESPONSE CONSIDERATIONS

- Cleanup of seawalls is usually conducted for aesthetic reasons or to prevent leaching of oil.
- Low- to high-pressure flushing at ambient water temperatures is most effective when the oil is fresh. Hot water is needed for heavy or weathered oils.

6.6 SHORELINE DESCRIPTORS AND RESPONSE CONSIDERATIONS (Cont'd)

Sheltered Tidal Flats

DESCRIPTION

- Sheltered tidal flats are composed primarily of mud with minor amounts of sand and shell.
- They are present in calm-water habitats, sheltered from major wave activity, and are frequently backed by marshes.
- The sediments are very soft and cannot support even light foot traffic in many areas.
- They can be sparsely to heavily covered with algae and/or seagrasses.
- They can have very heavy wrack accumulations along the high-tide line.
- There can be large concentrations of shellfish, worms, and snails on and in the sediments.
- They are heavily utilized by birds and fish for feeding.

PREDICTED OIL BEHAVIOR

- Oil does not usually adhere to the surface of sheltered tidal flats, but rather moves across the flat and accumulates at the high-tide line.
- Deposition of oil on the flat may occur on a falling tide if concentrations are heavy.
- Oil will not penetrate the water-saturated sediments, but could penetrate burrows and root cavities.
- Biological damage may be severe.

RESPONSE CONSIDERATIONS

- These are high-priority areas for protection since cleanup options are very limited.
- Cleanup is very difficult because of the soft substrate; many methods may be restricted.
- Deluge flooding and deployment of sorbents from shallow-draft boats may be helpful.

Vegetated Low Riverine Banks

DESCRIPTION

- This shoreline type consists of either low banks with grasses or low eroding banks with trees and tree roots exposed to the water.
- The banks are flooded occasionally by high water.
- These shorelines are generally found in fresh or brackish water localities.

PREDICTED OIL BEHAVIOR

- During low water stages there could be little impact, with the oil coating a narrow band of sediment at the water level.
- During high water, the oil will cover and coat the grasses and base of the trees.
- May cause loss of the grasses, but the trees should survive unless oil penetrates and persists.

RESPONSE CONSIDERATIONS

- Low-pressure flushing of oiled areas is effective in removing moderate to heavy accumulations of oil from along the banks.
- Sorbent and containment boom should be placed on the water side of the cleanup operations to contain and collect oil outflow.
- Low- to high-pressure flushing can be used to remove oil from tree roots and trunks, if deemed necessary in high-use areas.

6.6 SHORELINE DESCRIPTORS AND RESPONSE CONSIDERATIONS (Cont'd)

Salt- and Brackish-Water Marshes

DESCRIPTION

- These marshes contain vegetation which tolerates water salinity down to about 5 ppt.
- Width of the marsh can vary widely, from a narrow fringe to extensive areas.
- Sediments are composed of organic-rich muds except on the margins of barrier islands where sand is abundant.
- Exposed areas are located along waterbodies with wide fetches and along busy waterways.
- Sheltered areas are not exposed to significant wave or boat wake activity.
- Resident flora and fauna are abundant with numerous species with high utilization by birds, fish, and shellfish.

PREDICTED OIL BEHAVIOR

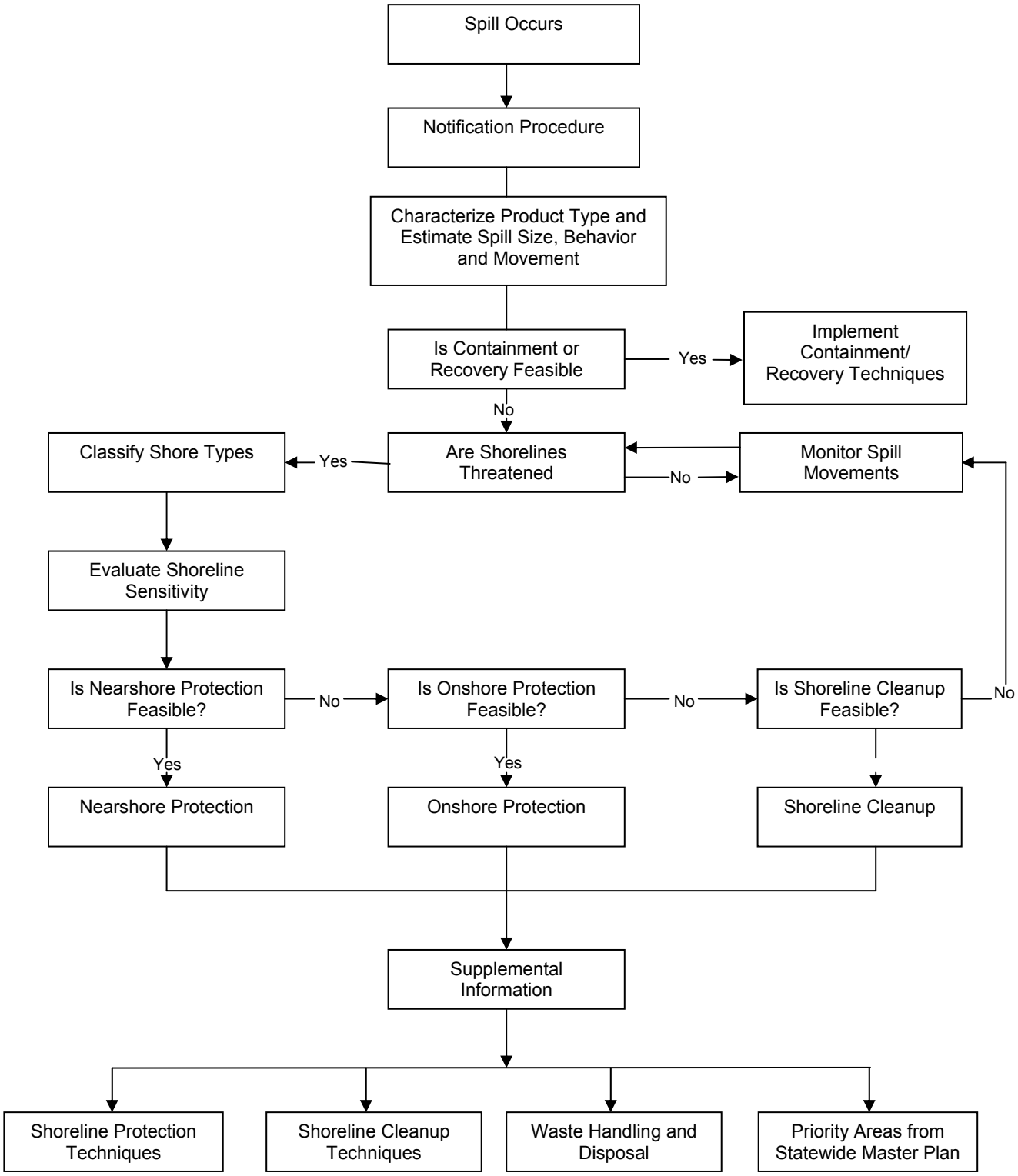
- Oil adheres readily to intertidal vegetation.
- The band of coating will vary widely, depending upon the water level at the time oil slicks are in the vegetation. There may be multiple bands.
- Large slicks will persist through multiple tidal cycles and coat the entire stem from the high-tide line to the base.
- If the vegetation is thick, heavy oil coating will be restricted to the outer fringe, although lighter oils can penetrate deeper, to the limit of tidal influence.
- Medium to heavy oils do not readily adhere to or penetrate the fine sediments, but can pool on the surface of in burrows and root cavities.
- Light oils can penetrate the top few centimeters of sediment and deeply into burrows and mud cracks (up to one meter).

RESPONSE CONSIDERATIONS

- Under light oiling, the best practice is to let the area recover naturally.
- Natural removal processes and rates should be evaluated prior to conducting cleanup.
- Heavy accumulations of pooled oil can be removed by vacuum, sorbents, or low-pressure flushing. During flushing, care must be taken to prevent transporting oil to sensitive areas down slope or along shore.
- Cleanup activities should be carefully supervised to avoid vegetation damage.
- Any cleanup activity must not mix the oil deeper into the sediments. Trampling of the roots must be minimized.
- Cutting of oiled vegetation should only be considered when other resources present are at great risk from leaving the oiled vegetation in place.

FIGURE 6.1

ON WATER RESPONSE FLOWCHART



6.7 VULNERABILITY ANALYSIS

The thorough examination of published Area Contingency Plans (ACPs) was conducted to identify sensitive areas in all the response zones.

The Environmental Sensitivity Maps located in Figure 6.2 identify sensitive areas along the pipeline. The appropriate Area Contingency Plan maps are also included to provide more detailed information on sensitivities and possible potential response options.

6.8 ALTERNATIVE RESPONSE STRATEGIES

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

FIGURE 6.2

ENVIRONMENTAL SENSITIVITY MAPS

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

SOURCE	EPA	USCG	STATE	OTHER
Texas Oil Spill Planning and Response Atlas Response Maps http://gisweb.glo.texas.gov/atlas/masterpage.pdf			Texas General Land Office	

APPENDIX A

RESPONSE RESOURCES

RESPONSE EQUIPMENT / RESOURCES

FIGURES

RESPONSE EQUIPMENT/RESOURCES

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

A.1 COMPANY OWNED RESPONSE EQUIPMENT

Company owned spill response equipment is staged at various locations in the system. This equipment is maintained according to manufacturer's recommendations by Company personnel. An equipment summary detailing locations, type and amount stored at miscellaneous spill locations is listed in Figure A.1. The Company also has contracts in place with Oil Spill Removal Organizations and other clean-up contractors that are capable of responding to all discharges along the Pipeline. Figure A.2 lists the contracted Oil Spill Removal Organization.

The Qualified Individual has the authority to activate other Company resources or that of private contractors and other experts and consultants as the situation demands.

All Pipeline personnel who might be involved in an oil spill have been informed that **detergents or other surfactants are prohibited from being used on an oil spill in the water** and that dispersants can only be used with the approval of the Regional Response Team, the interagency group composed of federal and state agency representatives that coordinates oil spill response.

A.2 OTHER COMPANY RESOURCES

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

A.3 CONTRACT RESOURCES

In the event of a discharge which is beyond the initial response capabilities of the Local Response Team, contract manpower and equipment resources can be obtained through Oil Spill Removal Organization(s) (OSRO). These OSROs can provide manpower and containment/clean-up equipment for the response operation.

The resources will be secured from a Company approved contractor. Area Management will typically handle notification/implementation of these resources. Figure A.2 provides a quick reference to the Oil Spill Removal Organizations and details their response capability and estimated response times. **Telephone reference is provided in Figure 2.5.** *(Note: The Company will ensure that each OSRO has a comprehensive maintenance program and applicable training / drills programs in place at contract renewal).*

A.4 COOPERATIVE/MUTUAL AID RESOURCES

The Company is a member of Clean Channel Association, and therefore, CCA resources are available.

A.5 EXPERTS AND CONSULTANTS

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

A.6 VOLUNTEERS

Volunteers **will not** be utilized by the Company for the response operations. All volunteers will be referred to the Federal Regional Response Team.

A.7 COMMUNICATIONS

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

Lines of communication between the Incident Commander, Local Response Team and Corporate Rapid Response Team members are demonstrated in the organization charts provided in Figures 4.1 and 4.2. Communication of the overall spill response operation between the Company and the responsible government agencies in the Federal Regional Response Team (FRRT) will occur between the Incident Commander and the Federal On-Scene Coordinator.

A.7.1 Central Communications System

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

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

A.7 COMMUNICATIONS (Cont'd)

A.7.2 Communications Equipment

Field communications during a spill response to a small or medium discharge will be handled via the existing Company communications network. This network will utilize existing radios, telephones, beepers, fax machines, and computers and will be maintained by Company personnel. In the event of a Worst Case Discharge, field communications will be enhanced with other Company and contract resources as the situation demands.

A.7.3 Communication Types

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

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

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

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

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

FIGURE A.1

COMPANY OWNED SPILL RESPONSE EQUIPMENT

The Company does not own spill response equipment and therefore will relay on contractors to provide the appropriate equipment and materials for spill response.

FIGURE A.2

CONTRACTED RESPONSE RESOURCES

USCG Classified Oil Spill Removal Organization (OSRO)							
OSRO Name	Contract Number	Environment Type	Facility Classification Level				High Volume Port
			MM	W1	W2	W3	
Clean Channel Association	on-file	Rivers/Canals	X	X	X	X	Yes
		Inland	X	X	X	X	
		Open Ocean	X	X	X	X	
		Offshore					
		Nearshore	X	X	X	X	
		Great Lakes					
SWS Environmental Services	on-file	Rivers/Canals			X	X	
		Inland			X	X	
		Open Ocean					
		Offshore					
		Nearshore					
		Great Lakes					
Garner Environmental Services	on-file	Rivers/Canals	X	X	X	X	Yes
		Inland	X	X	X	X	
		Open Ocean			X	X	
		Offshore			X	X	
		Nearshore			X	X	
		Great Lakes					
T & T Marine Salvage, Inc	on-file	Rivers/Canals	X	X	X	X	Yes
		Inland	X	X			
		Open Ocean					
		Offshore					
		Nearshore					
		Great Lakes					
Anderson Pollution Control	on-file	Rivers/Canals	X	X	X		
		Inland	X				
		Open Ocean					
		Offshore					
		Nearshore					
		Great Lakes					
Eco-logical	on-file	Rivers/Canals					
		Inland					
		Open Ocean					
		Offshore					
		Nearshore					
		Great Lakes					
Talon LPE	on-file	Rivers/Canals					
		Inland					
		Open Ocean					
		Offshore					
		Nearshore					
		Great Lakes					

Note: Classification ratings taken from the USCG's internet site www.uscg.mil/hg/g-m/nmc/response/#OSRO

FIGURE A.3

REVISED USCG OSRO CLASSIFICATIONS

The USCG has classified OSROs according to their response capabilities, within each Captain of the Port (COTP) zone, for vessels and for facilities in four types of environments. Response capabilities are rated MM, W1, W2, or W3 as described below.

MINIMUM EQUIPMENT REQUIREMENTS FOR OSRO CLASSIFICATIONS

Classification	Resource Quantity Guidelines [2,3]	Maximum Facility Response Times	Maximum Vessel Response Times
Rivers/Canals [1]			
MM	Protective Boom: 4,000*ft EDRC: 1,200 bbls TSC: 2,400 bbls	High Volume Ports: 6 hours Other Ports: 12 hours	High Volume Ports: 12 hours Other Ports: 24 hours
W 1	Protective Boom: 25,000*ft EDRC: 1,875 bbls TSC: 3,750 bbls	High Volume Ports: 12 hours Other Ports: 24 hours	High Volume Ports: 12 hours Other Ports: 24 hours
W 2	Protective Boom: 25,000*ft EDRC: 3,750 bbls TSC: 7,500 bbls	High Volume Ports: 30 hours Other Ports: 36 hours	High Volume Ports: 36 hours Other Ports: 48 hours
W 3	Protective Boom: 25,000*ft EDRC: 7,500 bbls TSC: 15,000 bbls	High Volume Ports: 54 hours Other Ports: 60 hours	High Volume Ports: 60 hours Other Ports: 72 hours
Great Lakes			
MM	Protective Boom: 6,000*ft EDRC: 1,250 bbls TSC: 2,500 bbls	All Ports: 6 hours	All Ports: 12 hours
W 1	Protective Boom: 30,000*ft EDRC: 6,250 bbls TSC: 12,500 bbls	High Volume Ports: 12 hours Other Ports: 24 hours	High Volume Ports: 12 hours Other Ports: 24 hours
W 2	Protective Boom: 30,000*ft EDRC: 12,500 bbls TSC: 25,000 bbls	All Ports: 36 hours	All Ports: 42 hours
W 3	Protective Boom: 30,000*ft EDRC: 25,000 bbls TSC: 50,000 bbls	All Ports: 60 hours	All Ports: 66 hours

FIGURE A.3 (Cont'd)

REVISED USCG OSRO CLASSIFICATIONS

The USCG has classified OSROs according to their response capabilities, within each Captain of the Port (COTP) zone, for vessels and for facilities in four types of environments. Response capabilities are rated MM, W1, W2, or W3 as described below.

MINIMUM EQUIPMENT REQUIREMENTS FOR OSRO CLASSIFICATIONS

Classification	Resource Quantity Guidelines [2,3]	Maximum Facility Response Times	Maximum Vessel Response Times
Inland [1]			
MM	Protective Boom: 6,000* ft EDRC: 1,200 bbls TSC: 2,400 bbls	High Volume Ports: 6 hours Other Ports: 12 hours	High Volume Ports: 12 hours Other Ports: 24 hours
W 1	Protective Boom: 30,000* ft EDRC: 12,500 bbls TSC: 25,000 bbls	High Volume Ports: 12 hours Other Ports: 24 hours	High Volume Ports: 12 hours Other Ports: 24 hours
W 2	Protective Boom: 30,000* ft EDRC: 25,000 bbls TSC: 50,000 bbls	High Volume Ports: 30 hours Other Ports: 36 hours	High Volume Ports: 36 hours Other Ports: 48 hours
W 3	Protective Boom: 30,000* ft EDRC: 50,000 bbls TSC: 100,000 bbls	High Volume Ports: 54 hours Other Ports: 60 hours	High Volume Ports: 60 hours Other Ports: 72 hours
Nearshore			
MM	Protective Boom: 8,000* ft EDRC: 1,200 bbls TSC: 2,400 bbls	High Volume Ports: 6 hours Other Locations: 12 hours	High Volume Ports: 12 hours Other Locations: 24 hours (for open ocean, plus travel time from shore)
W 1	Protective Boom: 30,000* ft EDRC: 12,500 bbls TSC: 25,000 bbls	High Volume Ports: 12 hours Other Locations: 24 hours	High Volume Ports: 12 hours Other Locations: 24 hours
W 2	Protective Boom: 30,000* ft EDRC: 25,000 bbls TSC: 50,000 bbls	High Volume Ports: 30 hours Other Locations: 36 hours	High Volume Ports: 36 hours Other Locations: 48 hours
W 3	Protective Boom: 30,000* ft EDRC: 50,000 bbls TSC: 100,000 bbls	High Volume Ports: 54 hours Other Locations: 60 hours (for open ocean, plus travel time from shore)	High Volume Ports: 60 hours Other Locations: 72 hours (for open ocean, plus travel time from shore)

FIGURE A.3 (Cont'd)

REVISED USCG OSRO CLASSIFICATIONS

The USCG has classified OSROs according to their response capabilities, within each Captain of the Port (COTP) zone, for vessels and for facilities in four types of environments. Response capabilities are rated MM, W1, W2, or W3 as described below.

MINIMUM EQUIPMENT REQUIREMENTS FOR OSRO CLASSIFICATIONS

Classification	Resource Quantity Guidelines [2,3]	Maximum Facility Response Times	Maximum Vessel Response Times
Offshore			
MM	Protective Boom: 8,000* ft EDRC: 1,200 bbls TSC: 2,400 bbls	High Volume Ports: 6 hours Other Ports: 12 hours	High Volume Ports: 12 hours Other Ports: 24 hours
W [1]	Protective Boom: 15,000* ft EDRC: 12,500 bbls TSC: 25,000 bbls	High Volume Ports: 24 hours Other Ports: 48 hours	High Volume Ports: 24 hours Other Ports: 48 hours
W [2]	Protective Boom: 15,000* ft EDRC: 25,000 bbls TSC: 50,000 bbls	High Volume Ports: 30 hours Other Ports: 36 hours	High Volume Ports: 36 hours Other Ports: 48 hours
W [3]	Protective Boom: 15,000 ft EDRC: 50,000 bbls TSC: 100,000 bbls	High Volume Ports: 54 hours Other Ports: 60 hours	High Volume Ports: 60 hours Other Ports: 72 hours
Open Ocean			
MM	Protective Boom: 0 ft EDRC: 1,200 bbls TSC: 2,400 bbls	High Volume Ports: 6 hours Other Ports: 12 hours	High Volume Ports: 12 hours Other Ports: 24 hours
W [1]	Protective Boom: 0 ft EDRC: 12,500 bbls TSC: 25,000 bbls	High Volume Ports: 6 hours Other Ports: 12 hours	High Volume Ports: 12 hours Other Ports: 24 hours
W [2]	Protective Boom: 0 ft EDRC: 25,000 bbls TSC: 50,000 bbls	High Volume Ports: 30 hours Other Ports: 36 hours	High Volume Ports: 36 hours Other Ports: 48 hours
W [3]	Protective Boom: 0 ft EDRC: 50,000 bbls TSC: 100,000 bbls	High Volume Ports: 54 hours Other Ports: 60 hours	High Volume Ports: 60 hours Other Ports: 72 hours

[1] Rivers/canals include bodies of water, including the Intracoastal Waterway and other bodies artificially created for navigation, confined within an inland area and having a project depth of 12 feet (3 66 meters).

[2] EDRC stands for "effective daily recovery capacity," or the calculated recovery capacity of oil recovery devices determined by using a formula that takes into account limiting factors such as daylight, weather, sea state, and emulsified oil in the recovered material.

[3] TSC stands for "temporary storage capacity," meaning sufficient storage capacity equal to twice the EDRC of an OSRO. Temporary storage may include inflatable bladders, rubber barges, certified barge capacity, or other temporary storage that can be utilized on scene at a spill response and which is designed and intended for the storage of flammable or combustible liquids. It does not include vessels or barges of opportunity for which no pre-arrangements have been made. Fixed shore-based storage capacity, ensured available by contract or other means, will be acceptable.

* In addition, 1,000 feet of containment boom plus 300 feet per skimming system.

FIGURE A.4

CLEAN CHANNEL ASSOCIATION

SERVICES AGREEMENT

THIS SERVICES AGREEMENT ("Agreement") is made as of the 13th day of April, 2012 by and between the undersigned Member (the "Member") and Clean Channel Association, Inc., a Texas nonprofit, non-stock Corporation (the "Corporation" or "CCA"), (collectively referred to as "the parties")

RECITALS

A. The Corporation or its Members own, maintain and operate certain Vessels and Equipment for the purpose of the Cleanup of Liquid Spills in the Coverage area;

B. The Member is a Member of the Corporation (individually a "Member" and sometimes collectively referred to as the "Members") and as a Member of the Corporation is entitled and obligated to enter into this agreement;

C. The Member desires to contract with the Corporation to provide standby availability of, and the actual provision of, Cleanup for Liquid Spills on the terms and conditions set forth in the Bylaws and herein;

D. CCA has established a level of "Membership Equipment" for each class of Members that defines what each Member will be required to commit in the event of a CCA Response.

AGREEMENTS

In consideration of the mutual promises and covenants set forth in this agreement, the parties hereto hereby agree as follows:

ARTICLE I

Definitions

As used in this agreement, the following terms shall have the following respective meanings. Any term not otherwise capitalized and defined herein shall have the meaning assigned to it by the Bylaws of the Corporation, as such Bylaws may be amended from time to time.

"Bylaws" shall mean the Bylaws of the Corporation as in effect from time to time.

"Cleanup" shall mean containment of a Liquid Spill on open water plus skimming recovery services attendant to containment.

"Contingency Plan" shall mean the Members' emergency response plan, discharge

prevention and response plan, spill prevention counter measure and control plan and other similar documents or, when required, the Contingency Plan approved by any Federal or State agency.

"Direct Costs" shall mean the rental rates for the Equipment adopted by the Corporation from time to time and all identifiable direct operating expenditures involved in any particular Liquid Spill Cleanup activity, including but not limited to, costs for Equipment not owned by the Corporation, materials and personnel used, additional insurance premiums and repairs and maintenance required as a result of the Cleanup activity. The cost of the Equipment (i.e., Vessels and Equipment owned or leased on a regular basis by the Corporation) shall be included in Indirect Costs and shall not be included in Direct Costs.

"Equipment" shall mean the Vessels (including their crews) and equipment owned, leased or otherwise used for the purpose of a Cleanup.

"Indirect Costs" shall mean all indirect expenditures incurred by the Corporation including, but not limited to, office overhead and an allowance for amortization or cost recovery of equipment owned by the Corporation.

"Percentage Interest" shall mean a percentage which is equal to the Member's Membership Interest in the Corporation (i.e., the pro rata percentage voting rights, service fee and capital contribution or dues obligation and ownership interest of the Member in the Corporation) as determined pursuant to the Bylaws. The Percentage Interest shall remain the same as and change consistent with the Member's Membership Interest as it may be adjusted from time to time pursuant to the Bylaws.

ARTICLE II

Term

2.1 Term. The term of this agreement shall begin on the effective date hereof provided CCA has signed this agreement and has adopted a response plan and end on December 31, 2012, thereafter, the term shall be renewed automatically, without notice, for successive one-year terms beginning on each January 1 and ending on each December 31, unless earlier terminated pursuant to Sections 2.2 and 2.3.

2.2 Termination Upon Termination of Membership. This agreement shall terminate, without notice, automatically and concurrently upon the effective date the Member ceases to be a Member of the Corporation as provided in the Bylaws of CCA (the "termination date"). Within thirty (30) days of the termination date, the Member shall pay to the Corporation those amounts specified in paragraph 3.6 Obligations on

Termination of the Bylaws of CCA.

2.3 Termination Upon Dissolution of the Corporation. This agreement shall terminate without notice, automatically and concurrently upon dissolution of the Corporation.

ARTICLE III

Services

3.1 General. The Corporation shall provide the services to the Member within the Coverage area. The services include, but are not limited to, Equipment, supplies and personnel available for Cleanup of Liquid Spills. The services shall also be available on a standby basis for a significant risk of a Liquid Spill and shall include actual Cleanup of a Liquid Spill by a Member. The decision on whether to respond to a Liquid Spill shall in all instances be made by CCA. If CCA determines that the Liquid Spill can be safely Cleaned up with the Equipment and/or personnel available to CCA and without danger to the safety or health of Response personnel or undue danger to the Equipment, then CCA will respond to the Liquid Spill, if requested to do so. By signing this agreement, the Member agrees to abide by the final decision of CCA on whether to respond to a Liquid Spill and further agrees to waive any and all claims, causes of action or rights it may have against CCA, its Members and/or the Administrative Director or his designee for any act or failure to act in such capacity as Administrative Director. If the Liquid Spill originates within the Coverage area but a Response is required outside the Coverage area, CCA may respond outside the Coverage Area as reasonably required and subject to meeting requirements of applicable law.

3.2. Notification. In the event of an actual Liquid Spill or significant risk of a Liquid Spill by the Member or for which it is or may be legally responsible under the Oil Pollution Act of l990, the Texas Oil Spill Prevention and Response Act of l99l or any other federal or state law originating within the Coverage area and if the Member desires services with respect to such Liquid Spill then the Member shall promptly notify the Corporation of the actual Liquid Spill or the significant risk of a Liquid Spill. The notification shall include the location and nature and size of the Liquid Spill, if known. The initial notification may be oral but it shall be confirmed in writing as soon as practicable.

3.3 Member's Responsibility. The Member understands and agrees that during a CCA Response, the Member requesting the Response will maintain sole responsibility for the operation, management and supervision of the Cleanup of the Liquid Spill. Neither CCA nor its Members (except the Member requesting the CCA Response) will assume any responsibility, supervision of or liability for the Cleanup operations.

The Member further understands and agrees that in the event of a CCA Response, any Member providing Equipment and personnel (with the exception of the Member requesting the CCA Response), transfers complete control and possession of its equipment and personnel over to CCA. CCA will respond to the Liquid Spill as directed by the Member requesting the CCA Response and/or the Federal or State On-Scene Coordinator. The Member understands and agrees that if it requests a CCA Response, it will maintain sole responsibility for the operation, management, and supervision of the Cleanup of the Liquid Spill. In all circumstances during the time such Equipment and supplies are so utilized, complete possession and control thereof shall be maintained by the Corporation. The Member shall return the Equipment and supplies and materials in a condition which is as good as when called into service by the Member, subject to ordinary wear and tear, or at the discretion of the Corporation, the Member may pay CCA the amount of money required to comply with such requirement.

3.4 Priority. It is mutually agreed and acknowledged that the Corporation will respond to requests for services in the order requested. If the Corporation has responded to a prior Liquid Spill, except to the extent a Federal or State On-Scene Coordinator has expressly requested otherwise, the Corporation shall not be obligated to respond to the request of the Member for services until the prior CCA Response is terminated by CCA.

3.5 Contingency Plans. The Member may identify the Corporation in any Contingency Plans as being available to provide Oil spill assistance to the Member in accordance with the Bylaws and this agreement. The Corporation shall supply the Member with information regarding the Cleanup capability of the Corporation as the Member may reasonably request from time to time, for use by the Member in the preparation of its Contingency Plans; but the Corporation shall not participate in the development or approval of such Contingency Plans. Within 60 days of signing this agreement, the Member agrees to submit a Contingency Plan to CCA. The Member further agrees to submit to CCA any updated Contingency Plan which the Member subsequently submits to any state or federal agency. The submission of the Contingency Plan to CCA shall not obligate the Corporation in any manner.

3.6 Duration of CCA Response. CCA Response will be limited to a period not to exceed forty-eight (48) hours beginning with the request for CCA Response unless CCA has been otherwise required by the State or Federal On-Scene Coordinator.

3.7 Evidence of Financial Security. Upon execution of this agreement, the Member shall submit to CCA evidence of compliance with the financial security requirements of the Federal Water Pollution Control Act or, when applicable, the Oil Pollution Act of 1990 or the Texas Oil Spill Prevention and Response Act of I99I, whichever is greater.

ARTICLE IV

Fees and Charges

4.1 Indirect Costs. The Member shall pay to the Corporation its Percentage Interest of Indirect Costs as provided in the Bylaws. Indirect Costs shall be billed on a quarterly basis and paid within forty-five (45) days of each billing.

4.2 Direct Costs. The Member shall pay Direct Costs resulting from its request for a CCA Response.

ARTICLE V

Membership Equipment

5.1 Classifications. Each Member of CCA will fall in only one specific classification which defines the Membership Equipment each Member will be required to commit to CCA.

If a Member qualifies for more than one classification, the Member shall be designated in only one classification. That classification will be the one requiring the most Membership Equipment and personnel. The membership classifications and membership requirements are listed below:

Class 1 - PETROLEUM REFINERIES
Membership Equipment:

Boom: 3 times the length of the largest Vessels calling at the Facility. Minimum size is 18", however, 24" is the preferred size. The boom will be equipped with universal ASTM end connectors.

Boats: 1 boat with 4 people per boat (2 onboard and 2 ashore). The boat should be a workboat (john-boat or better) and have sufficient power to deploy boom.

Skimmer: 1 skimmer with these minimum capacities:
operational within 2 hours capable of recovering a 10,000 U.S. gallon spill skimming rate of 1,000 gallon/hr. ideal conditions skimming recovery efficiency of 80%.

Class 2 - BULK STORAGE TERMINALS AND DOCK OPERATORS
Membership Equipment:
Same as Class 1

SA: 12/3/91

Class 3 - BARGE AND SHIP OPERATORS
Membership Equipment:

A. Barge Owners:

Commitment to provide one barge/tow unit during the period of CCA Response.

B. Ship Operators:

Boom: 3 times the length of the largest Vessel. Minimum size is 18", however, 24" is the preferred size. The boom will be equipped with universal ASTM end connectors.
Boats: 1 boat with 4 people per boat (2 onboard and 2 ashore). The boat should be a workboat (john-boat) or better) and have sufficient power to deploy boom.
Skimmer: 1 skimmer with these minimum capacities: operational within 2 hours capable of recovering a 10,000 U.S. gallon spill skimming rate of 1,000 gallon/hr. ideal conditions skimming recovery efficiency of 80%.

Class 4 - PIPELINE OPERATORS
Membership Equipment:

Boom: 500 feet with the same specifications as Class 1
Boats: 1 boat with 2 people with the same specifications as Class 1
Skimmer: Same as Class 1

Class 5 - TUG BOAT OPERATORS
Membership Equipment:

Commitment to provide a tug during the period of CCA Response.

Class 6 - CHEMICAL PLANTS AND COMMERCIAL HANDLERS OF HAZARDOUS MATERIALS
Membership Equipment:

Boom: One time the length of the largest Vessels calling at its Facility.

SA: 12/3/91

Class - 7 PRODUCTION OPERATORS
Membership Equipment:

Boom: 500 feet with the same specifications as Class 1
Boats: 1 boat with 2 people with the same specifications as Class 1.
Skimmer: None

5.2 Equipment Availability. In return for the services hereunder provided by the Corporation, the Member agrees to provide the Membership Equipment for its classification to the Corporation for use in CCA Response by the Corporation. Upon execution of this agreement or as soon as practicable thereafter, the Member will provide the Corporation with a listing of the Equipment it will provide, which listing shall be attached as Exhibit A to this agreement. Exhibit A may be changed from time to time upon forty-eight (48) hours written notice by the Member to CCA. The Member warrants that it will maintain all Equipment to be provided in a seaworthy condition at all times, but makes NO OTHER WARRANTIES OR REPRESENTATIONS, IMPLIED OR OTHERWISE, INCLUDING FITNESS FOR A PARTICULAR USE, regarding the Equipment. The Corporation will control the use of the Equipment when a CCA Response occurs. The Member requesting CCA Response understands and agrees that in the event a CCA Response occurs, any Member providing Equipment (with the exception of the Member requesting CCA Response) transfers complete control and possession of its Equipment over to CCA. CCA will respond to the Liquid Spill as directed by the Member requesting the CCA Response and/or the Federal or State On-Scene Coordinator. The Member hereby understands and agrees that the Member requesting the CCA Response will maintain sole responsibility for the operation, management, and supervision of the Cleanup of the Liquid Spill. Following a CCA Response, the Corporation shall return the Equipment and personnel to the Member, or if the Corporation has received reimbursement for the Equipment pursuant to Section 3.3, the Corporation shall pay the Member the amount of the reimbursement.

5.3 Personnel. In addition to its obligation under Section 5.2, the Member agrees to provide personnel identified in the Membership Equipment requirements for its classification to the Corporation for a CCA Response which meet the minimum requirements established by CCA. Upon execution of this agreement or as soon as practicable thereafter, the Member will provide the Corporation with a listing of the personnel, which listing shall be attached as Exhibit B to this agreement. Exhibit B will contain primary and substitute personnel and may be changed from time to time by verbal notice from the Member, followed by a written notice as soon as practicable. The Corporation will control and direct the activities of the personnel during the CCA Response. If CCA receives reimbursement for personnel costs as a result of a CCA Response, CCA shall reimburse the Member the amount of the reimbursement. The Member requesting CCA Response understands and agrees that in the event a CCA

Response occurs, any Member providing personnel, (with the exception of the Member requesting CCA Response) transfers complete control of its personnel and the right to direct their activities over to CCA. CCA will respond to the Liquid Spill as directed by the Member requesting the CCA Response and/or the Federal or State On-Scene Coordinator. The Member hereby understands and agrees that the Member requesting CCA personnel will maintain sole responsibility for the operation, management, and supervision of the Cleanup of the Liquid Spill.

5.4 Corporation Responsibility. The Corporation will be responsible for determining that the Equipment supplied by the Member meets the Membership Equipment requirements and that the Equipment is appropriate for the purposes to which the Corporation desires to use the Equipment. Further, the Corporation will be responsible for determining that the personnel supplied by the Member has met certain minimum requirements established by CCA to engage in the activities of the Corporation. The Corporation will have the right to inspect the Equipment and the records and documents associated therewith, upon reasonable notice and at reasonable times.

If the Corporation determines that the Equipment does not meet the Membership Equipment requirements or is not seaworthy and the Member does not make modifications to meet such requirements, then the Corporation may terminate this agreement and the Member's membership. The Corporation represents and warrants that it will use the Equipment only in Liquid Spill Response activities or unless required by a Federal or State On-Scene Coordinator.

5.5 Additional Equipment/Personnel Training. The Corporation from time to time may request the Member to modify Membership Equipment or to provide additional training. The Member may make any such modification or provide additional training at its own expense. If the Member refuses to make such modification or to provide training, the Corporation may either pay the costs for the modification or the training or terminate this agreement and the membership of the Member.

ARTICLE VI

Independent Cleanup Operations

Nothing in this agreement shall require or be construed as requiring the Member to request the services or request the use of the Equipment or supplies of the Corporation in connection with Liquid Spill Cleanup activities and the Member may, if it so desires, purchase or contract for its own Cleanup Equipment and materials, or engage any other person to assist it with the Cleanup of Liquid Spills. In addition, the Member may employ its own Equipment and materials in conjunction with those provided by the Corporation.

ARTICLE VII

Indemnification

7.1 Member Indemnification. Any Member requesting a CCA Response shall defend, indemnify and hold harmless the Corporation and its other Members and the agents, directors, officers and employees thereof (the "indemnified parties") against all claims, liability and costs incurred, including, but not limited to, attorneys' fees, expenses, penalties, fines and actual and/or punitive damages which the indemnified parties suffer, sustain or become liable for by reason of any accidents, damages or injuries, either to the person or property of the indemnified parties or to the person and/or property of any third party, including, but not limited to, federal, state and/or local governmental agencies thereof, in any matter arising out of or connected with (i) the CCA Response requested by such Member and (ii) any act or omission of the Member requesting the CCA Response, its agents, directors, officers and employees where such liability is asserted against the indemnified party by reason of its being a Member of, or otherwise associated with, the Corporation and/or responding as a Member of the Corporation. The foregoing defense, indemnity and hold harmless provisions by the Member shall be applicable to the indemnified parties regardless of whether such accident, damages or injuries are the result of the fault or negligence, or unseaworthiness of any Vessels, of an indemnified party. The Member requesting the CCA Response further agrees that the parties to whom this defense, indemnification and hold harmless provision extends shall have the right, but not the obligation, to tender the defense to the Member requesting the CCA Response of any and all lawsuits arising out of or in any way connected with matters which are the subject of this defense, indemnity and hold harmless provision, but that failure to tender any such lawsuit for defense shall in no way release or relieve the Member requesting the CCA Response of its obligations hereunder. The Member requesting the CCA Response also covenants and agrees that the defense, indemnity and hold harmless provision granted hereunder shall not be limited, restricted or in any way affected by the amount of insurance carried by the indemnifying Member, and the indemnifying Member further agrees that the indemnity agreements contained herein in the case of a CCA Response requested by the indemnifying Member shall be primary to any insurance secured by CCA and any other indemnified parties. It is the intent of the parties to this agreement that all indemnity obligations and/or liabilities assumed under the terms of this agreement be without regard to the cause or causes thereof (including pre-existing conditions), the unseaworthiness of any Vessels, strict liability or the negligence of any party or parties, whether such negligence be sole, joint or concurrent, active or passive. **FURTHER, THE MEMBER UNDERSTANDS THAT THE INDEMNITY SHALL BE APPLICABLE WHERE THE INJURY OR DAMAGE IS CAUSED BY THE SOLE NEGLIGENCE OF CCA, ITS MEMBERS, AGENTS, DIRECTORS, OFFICERS, OR EMPLOYEES.**

SA: 12/3/91

7.2 Non-Member Subscriber Indemnification. The Corporation shall obtain indemnification for itself and its Members similar to the indemnification set forth in Section 7.1 from any Non-Member Subscriber in connection with a CCA Response. It is the intent of the parties to this agreement that all indemnity obligations and/or liabilities assumed under the terms of this agreement be without regard to the cause or causes thereof (including pre-existing conditions), the unseaworthiness of any Vessels, strict liability or the negligence of any party or parties, whether such negligence be sole, joint or concurrent, active or passive.

7.3 Survivability. All indemnities made by the Member under this agreement shall survive the termination date.

ARTICLE VIII

Insurance

The Corporation may secure such insurance as the Board of Directors deems appropriate. All policies shall name the Members as an additional insureds; provided, when the party requesting a CCA Response is a Member, the Member requesting the CCA Response shall be deemed to be not covered as an additional insured under the policy with respect to such CCA Response, nor have any rights as an additional insured under CCA's insurance with respect to such CCA Response. All policies shall be endorsed to waive the right of subrogation against the Members, and shall be endorsed to be primary as against comparable insurance carried by the Members, except when a Member is the Member requesting the CCA Response, in which case the insurance maintained by the Member requesting the CCA Response shall waive the right of subrogation against CCA and its Members to the extent of the indemnity obligations contained in the Bylaws and this Services Agreement, and the indemnity obligations and insurance maintained, if any, by such Member requesting the CCA Response shall be primary to any insurance of CCA, its other Members and such other indemnified parties. The cost of all insurance secured by the Corporation shall be deemed a normal cost of performing operations and shall be chargeable to the Member as Indirect Costs in accordance with its Percentage Interest under Article IV of this agreement.

ARTICLE IX

Compliance with Laws and Regulations

The Corporation shall comply with all applicable laws, regulations, decrees, codes, ordinances, resolutions and other acts of any governmental authority, including without limitation, all federal, state or other governmental laws and regulations pertaining to equal opportunity, non-segregated facilities, listing of job openings for veterans. The

Corporation further agrees not to discriminate against any employee because of race, creed, sex or national origin, and the Corporation hereby indemnifies and agrees to defend and hold the Member harmless from and against any and all loss, damage, injury, liability and claims including reasonable attorney fees and costs thereof resulting from the Corporation's failure to do so.

ARTICLE X

Miscellaneous

10.1 Bylaws. The Member acknowledges and agrees to be bound by and subject to the provisions of the Bylaws of the Corporation to the same extent as if such provisions of the Bylaws were incorporated into this agreement. In the event of a conflict between the Bylaws and this agreement, the Bylaws shall prevail.

10.2 Representative(s) of the Member. The representative(s) of the Member, appointed from time to time pursuant to the Bylaws, shall represent the Member in its communications and transactions with the Corporation under this agreement. The Corporation and the other Members of the Corporation shall be entitled to rely upon the power and authority of the representative(s) to represent and bind the Member in all matters pertaining to this agreement.

10.3 Amendments. This agreement may not be amended, modified, supplemented or otherwise altered except pursuant to an approval of 2/3 of the Membership Interest entitled to vote in accordance with the Bylaws.

10.4 Governing Law. This agreement shall be governed by and construed in accordance with the maritime law of the United States, to the extent applicable,and otherwise in accordance with laws of the State of Texas, excluding the conflicts of law provisions of such state.

10.5 Attorneys Fees. In the event that any permissible legal action hereunder is instituted between the parties arising out of this agreement, the prevailing party therein shall be entitled to recover a reasonable allowance for attorneys fees and court expenses, to be fixed and determined by the court in which such action is filed.

10.6 Notices. Except for initial oral notices relating to requests for services in connection with Liquid Spills, any notice provided for by this agreement and any other notice, demand or communication which any party may wish to send to another shall be in writing and either delivered to such party in person, sent via a nationally recognized express mail service, sent via facsimile transmission with receipt confirmed or sent by first-class U.S. mail, postage prepaid, return receipt requested, and addressed to the

party at such party's address as set forth below or, if to the Corporation:

Clean Channel Association, Inc.
3110 Pasadena Freeway
Pasadena, TX 77503
Attn: President

or to such other address as any party shall specify by written notices so given. Any notice, demand or other communication shall be deemed given and effective as of the date of delivery in person or by facsimile, the day after the date of deposit with a nationally-recognized express mail service, or upon receipt as set forth on the return receipt if sent through the U.S. mail. The inability to deliver because of changed address of which no notice was given, or the rejection or other refusal to accept any notice, demand or other communication, shall be deemed to be the receipt of the notice, demand or other communication as of the date of such inability to deliver or the rejection or refusal to accept.

10.7 Severability. If any provision of this agreement or portion thereof should be declared invalid for any reason, the invalid provision or portion thereof shall be deemed omitted and the remaining terms shall nevertheless be carried into effect.

10.8 Waiver. The waiver of a breach of any term or condition of this agreement shall not be deemed to constitute the waiver of any other breach of the same or any other term or condition hereof.

10.9 Number and Gender. Whenever required by the context, the singular number shall include the plural, and the masculine or neuter gender shall include all genders.

10.10 Entire Agreement. This agreement and the Bylaws contain the entire understanding between the parties and supersede any prior written or oral agreements between them respecting the subject matter contained herein.

10.11 Assignment; Binding Effect. The Member may not assign its rights and obligations under this agreement except in conjunction with the assignment of its Membership Interest in the Corporation as provided in the Bylaws. Subject to and without]affecting the prohibitions herein with respect to assignment, this agreement shall be binding on the parties and their respective successors and assigns.

10.12 Counterparts. This agreement may be executed in any number of counterparts, each of which when so executed shall be deemed to be an original, and such counterparts together shall constitute and be one and the same instrument.

SA: 12/3/91

IN WITNESS WHEREOF, the parties have executed this agreement as of the date first above written.

CLEAN CHANNEL ASSOCIATION, INC.

By: _____
President

Name of the Member:

Enterprise Products

By: _____

Print Name: KEVIN BODENHAMER

Title: Sr. V.P., EHS&T

Address: 1100 Louisiana
Houston, TX 77002

SA: 12/3/91

FIGURE A.4 (Cont'd)

SWS Environmental

EPCO
HOLDINGS,
INC.

WORK CONTRACT NO. 5142
ORIGINATOR BRYAN MCARTHY
(Type/Print Department and Location)

EPCO HOLDINGS, INC.

SERVICE AGREEMENT (Rev. 07/06)

THIS CONTRACT is entered into this 18th day of July, 2007, in the City of Houston, Harris County, Texas, between EPCO Holdings, Inc., a Delaware Corporation, and its Affiliates, P. O. Box 4735, Houston, Texas 77210-4735 ("Company"), and:

SOUTHERN WASTE SERVICES, INC.,
(Full Legal Name)

A Florida Corporation
(State) (Corporation, Partnership or Sole Proprietorship)

901 McClosky Blvd
(Address)

Tampa, Florida 33605 ("Contractor")
(City) State) (Zip)

IN CONSIDERATION of the mutual promises in this Contract and other good and valuable consideration, the parties agree as follows:

I. APPROVED CONTRACTOR LIST Upon execution of this Contract by Contractor and Company, Contractor shall be included on Company's Approved Contractor List, indicating Contractor's eligibility to perform Work for Company; and Company and Contractor agree that this Contract shall remain in force until terminated as provided by its terms.

II. DEFINITIONS "Contract" and "Agreement" mean this Contract and any subsequent oral or written Work order or agreement (together with any drawings, specifications or other exhibits attached to it) between the parties for Work. "Work" means all labor, goods, materials and services required to be performed and furnished by Contractor under any Agreement. "Affiliate" means with respect to any relevant entity, any other entity that directly or indirectly Controls, is Controlled by, or is under common Control with, such relevant entity in question. "Control" means with respect to an entity, the ability or power, directly or indirectly, through one or more intermediaries, to direct or cause the direction of the management of such entity, whether through ownership of voting securities, by contract or otherwise.

III. PERFORMANCE Contractor represents and warrants that all Work shall be in strict accordance with and subject to all Contract terms and conditions, that it has adequate equipment in good working order and fully trained personnel capable of efficiently operating such equipment or performing any services provided under any Agreement, and that all Work shall be performed in a good and workmanlike manner, satisfactory and acceptable to Company.

IV. INDEPENDENT CONTRACTOR Contractor is and shall be an independent contractor with respect to Work, and neither Contractor nor its employees or subcontractors or their employees shall be deemed, for any purpose, to be the employee, agent, servant, or representative of Company in the performance of Work. Company shall have no direction or control of the Contractor or its employees and agents except in the results to be obtained. Work shall conform with all applicable specifications and meet the approval of Company and shall be subject to the general right of inspection by or for Company. The actual performance and superintendence of Work shall be by Contractor, but Company or its representative shall have unlimited access to Contractor's operations to determine whether Work is being performed by Contractor in accordance with the Contract.

V. EMPLOYMENT CONTRIBUTIONS AND BENEFITS Contractor agrees to accept full and exclusive liability for the payment of and to pay when due any and all premiums, contributions and taxes for Workers Compensation Insurance and Unemployment Insurance and for old age pensions, annuities and other retirement benefits imposed by or pursuant to Federal or State law and measured by the wages, salaries or other remuneration paid to persons employed by Contractor; and Contractor further agrees to indemnify and hold Company harmless against any liability for any such premiums, taxes or contributions which may be assessed against Company with respect to Contractor, its employees or subContractors.

VI. TAXES AND FEES Contractor agrees to accept full and exclusive liability for the payment of and to pay when due all taxes, licenses and fees levied or assessed by any governmental agency on Contractor in connection with or incident to the performance of any Agreement. Contractor agrees to require the same covenant of and be liable for any breach of it by its subcontractors. Contractor agrees to reimburse Company on demand for all such local, state or federal taxes or governmental charges which Company may be required or deem it necessary to pay on account of employees of Contractor or its subcontractors, or Company may deduct such payments from any sums which may be or become due to Contractor from Company; Contractor agrees to furnish Company with timely, sufficient and accurate information to make such reports and to pay such taxes and governmental charges if requested by Company.

VII. LABOR AND MATERIAL Contractor shall pay all claims for labor and material related to the Work and shall not permit any liens of any kind to be fixed against the property of Company or the property of others arising out of claims of Contractor, its

employees, mechanics, materialmen, or subContractors; and upon the completion of the Work, Contractor shall furnish Company with evidence satisfactory to Company of the payment of all such claims. Contractor shall indemnify and hold harmless Company from and against all such claims or liens; and Contractor agrees, that, without waiver of any other rights or remedies available to Company, any sums due to Contractor from Company may be withheld and applied by Company toward the discharge or payment of any such claims or liens.

VIII. PAYMENT FOR WORK Payment for Work shall be as provided in Exhibit II or as provided in any Agreement. Payment for Work performed on a reimbursable-cost basis shall be made by Company to Contractor in accordance with Contractor's then-current rate schedule; Contractor shall furnish Company its rate schedule prior to commencing any such Work and notify Company in writing of any changes in the rate schedule. Neither payment for nor use of Work in whole or in part by Company shall constitute acceptance of any Work or materials which do not conform to Contract terms and specifications or settlement of any unsettled claims, liabilities, duties, liens or other encumbrances. Contractor shall keep accurate books and records of all Work, and, within two (2) years from the completion of Work under a particular Agreement or the termination of this Contract, whichever is earlier, Company or its representative shall have the right to inspect, copy and audit, during Contractor's normal business hours, its books and records of every description for the purpose of determining the accuracy of any charges, claims or demands relating to Work.

IX. COMPLIANCE In the performance of all Work, Contractor warrants and represents that it and its subContractors shall comply with all applicable statutes, ordinances, rules and regulations, including but not limited to those administered by the U.S. Occupational Safety and Health Administration, the U.S. Environmental Protection Agency, the U.S. Department of Transportation ("DOT") and state agencies exercising concurrent or similar jurisdiction; and Contractor shall indemnify and hold harmless Company from any and all claims or demands of a penal nature or civil penalties which may arise from violation of such statutes, ordinances, rules and regulations by Contractor or any subcontractor employed by it.

X. COMPANY PREMISES Contractor shall conform and shall require its employees, agents and subContractors to conform, while at or near the location of the Work or on Company's premises, to all requirements of Company, including, but not limited to, Company's rules of conduct, safety rules, Contractor safety policies, routes of ingress and egress and other requirements for the protection of persons or property. Contractor shall provide and take all safety precautions which the nature of the Work may require or indicate and keep the Work location free from accumulations of waste and rubbish. Upon completion of all Work, Contractor shall clean up and dispose all waste and rubbish generated by it or its subcontractors, collect unused material belonging to it or its subcontractors, and restore the location to as clean and orderly a condition as existed prior to commencement of the Work.

XI. ACCIDENT REPORTS Contractor shall report to Company in writing, as soon as practicable, all accidents or occurrences resulting in bodily injury, including death, or damage to or destruction of property arising out of or during the course of performance of any Agreement and, upon request, shall furnish Company with copies of all reports made by Contractor to Contractor's insurer or to others of such accidents and occurrences.

XII. DRUG-FREE WORKPLACE A. Contractor and each of its subcontractors performing Work at any Operational Facility shall establish and enforce within its organization an anti-drug program to assure a drug-free workplace. Contractor's anti-drug program shall include provisions for the auditing by Contractor of its subcontractors' anti-drug programs. "Operational Facility" means the entire premises of each Company processing plant, terminal, loading rack, pipeline, storage facility, warehouse, garage, shop, construction location and field worksite.

B. Contractor represents and warrants that it and its subcontractors shall assign and allow to Work at Operational Facilities only employees who have current negative drug screen results under their employer's anti-drug program. A current result is one based on the most recent drug screen performed within 12 months of a day on which Work is to be performed.

C. Before performing Work at any Operational Facility, Contractor shall furnish and cause each of its subcontractors to furnish Company with documentation of their respective anti-drug programs demonstrating that each program meets or exceeds the requirements of Company's Drug, Alcohol and Illegal Items Policy attached hereto as Exhibit III and meets or exceeds the requirements of any applicable law or regulation. Complete records of the anti-drug program shall be kept at Contractor's and each subcontractor's home office, respectively, and be available for audit by Company during regular office hours. Failure or refusal by Contractor or a subcontractor to establish and maintain a satisfactory anti-drug program, keep adequate records of it, or permit Company to audit compliance with it shall be grounds for immediate suspension of Contractor's and its subcontractors authorization to proceed with Work or termination of this Contract.

D. Before performing Work at any Operational Facility, Contractor and each subcontractor shall certify to Company in a writing signed by an authorized representative of the employer that each employee (identified by name, employee I.D. number and date of drug screen result) who will perform Work at the Operational Facility has a current negative drug screen result under the employer's anti-drug program. Such certification shall be kept current throughout the duration of the Work, and notice of any change in an employee's certified status shall be given by the employer to Company in writing immediately. Company may exclude from Operational Facilities any Contractor or subcontractor employee who does not have a current certification, and any delay in the performance of Work due to lack of properly certified employees will be for the account of Contractor.

E. On any pipeline or other DOT-regulated work, Contractor and its subcontractors shall also furnish Company with written certification of current random pool list and each employee's most recent negative drug screen results under DOT regulations.

XIII. INSURANCE A. Contractor, at its own expense, shall provide and maintain in force with insurance companies acceptable to Company the kinds of insurance and minimum amounts of coverage set forth in paragraph B, below, to cover all loss and liability for damages on account of bodily injury, including death, and damage to or destruction of property caused by or arising from

any and all activities carried on or any and all Work performed under any Agreement. Contractor shall cause its insurer to name Certificate Holder as an additional insured on its Auto, General and Excess Liability insurance policies and grant Certificate Holder a waiver of subrogation on its Workers• Compensation insurance policy. "Certificate Holder" shall have the meaning provided in the Certificate Holder Definition in Exhibit IV. If Contractor fails or refuses to carry out any of the provisions of this Article XIII, Company shall, in addition to any right to recover damages or obtain other relief, have the right to suspend Contractor's authorization to proceed with Work or terminate this Contract.

B. 1) WORKERS COMPENSATION (Including Occupational Disease) and EMPLOYER'S LIABILITY INSURANCE. Contractor's Workers• Compensation and Employer's Liability coverages shall apply to all employees, including borrowed servants, in accordance with the benefits afforded by the statutory Worker's Compensation Acts, USL & H and Maritime Acts applicable to the State, Territory or District of hire, supervision or place of accident. A waiver of subrogation to Certificate Holder is required. Policy limits shall not be less than:

Worker's Compensation: Statutory Limits.
Employer's Liability: $500,000, each accident; $500,000 Disease, policy limit; $500,000 Disease, each employee.

2) COMMERCIAL GENERAL LIABILITY INSURANCE, as primary policy over all others, covering premises, operations, products and completed operations, independent Contractors, and blanket contractual liability. The policy shall cover all liabilities arising out of explosion, collapse and underground ("XCU") hazards. The policy shall provide broad-form property damage, including completed operations, coverage. An "additional insured" endorsement naming Certificate Holder is required. Policy limits shall not be less than:

Bodily Injury: $500,000 per occurrence, $1 million aggregate.
Property Damage: $500,000 per occurrence, $1 million aggregate.
OR Combined Single Limit (CSL) of $1 million per occurrence, $2 million aggregate.

3) COMPREHENSIVE-AUTOMOBILE LIABILITY INSURANCE, as primary policy over all others, covering all owned, hired and non-owned automotive equipment. An "additional insured" endorsement naming Certificate Holder is required. Policy limits shall not be less than:

Bodily Injury: $500,000 per person, $500,000 per occurrence/accident.
Property Damage: $500,000 per occurrence.
OR Combined Single Limit of $1 million per occurrence.

4) EXCESS/UMBRELLA LIABILITY INSURANCE, to be primary excess over all others:

☒ 5 Million

5) Additional insurance and surety limits:

a) ☐ NONE REQUIRED.

b) ☐ ALL-RISK BUILDER'S RISK POLICY with limits of $_____, Minimum Deductible $_____.

c) ☐ CONTRACTOR'S EQUIPMENT FLOATER POLICY

d) ☐ OWNER/CONTRACTOR'S PROTECTIVE LIABILITY POLICY with minimum limits of $500,000 CSL.

e) ☐ CRANE COVERAGE -- LIFTER'S LIABILITY POLICY with limits of $500,000 CSL.

f) ☐ PROFESSIONAL LIABILITY INSURANCE covering acts, errors, omissions, malpractice, as applicable, potentially arising from or pertaining to any Work to be performed by Contractor, its employees, agents or subcontractors; policy limits shall not be less than $1 million per occurrence/claim; OR in lieu of such insurance, Contractor may furnish an irrevocable letter of credit in form and amount and with an issuer satisfactory to Company.

g) ☐ PERFORMANCE AND MAINTENANCE BOND. Upon execution of this Contract and prior to commencing performance hereunder, Contractor shall execute, with a surety Company satisfactory to Company, a Surety Bond to guarantee completion of the Work within the time provided, the payment of all claims and the fulfillment of all obligations arising, either directly or indirectly, under any Agreement, including but not limited to the defense of all litigation incidental to any Agreement to which Certificate Holder is made a party. The surety limits shall be not less than one hundred percent (100%) of the total estimated contract price or as agreed to by Company. In lieu of such surety bond, Contractor may cause to be issued an irrevocable letter of credit payable to the order of Company in such amount, in a form and with an issuer acceptable to Company; or, if acceptable to Company, Contractor may use a combination of surety bond, letter of credit, or corporate or personal guaranty.

h) ☒ POLLUTION LIABILITY

C. Contractor's insurance policies shall be endorsed as follows and in accordance with state law:

Worker's Compensation policy:

1) Blanket waiver of subrogation, OR 2) "The Insurers hereby waive their rights of subrogation against Certificate Holder and any individual, firm, or corporation, their subsidiaries, factors or assigns for whom or with whom the Assured may be working."

Primary General, Auto and Excess Liability Policies:

1) Blanket additional insured endorsement, OR 2) the Form of Additional Insured Endorsement in Exhibit IV.

D. Contractor represents and warrants that at all times during the term of this Contract it shall have furnished or caused to be furnished to Company an original, current certificate of insurance on forms acceptable to Company (most recent ACORD form) reflecting:

1) The kinds and amounts of insurance required above.
2) The insurance Company or companies carrying the required coverages.
3) The policy number and the effective and expiration dates of each policy.
4) That Certificate Holder will be given thirty (30)-day prior written notice of any material change in or termination of any policy.
5) That a waiver of subrogation under Contractor's Worker's Compensation policy has been issued to Certificate Holder.
6) That Certificate Holder has been named as an "Additional Insured" on Contractor's primary Auto & General Liability policies and Excess/Umbrella policies.
7) A Certificate Holder notation reading as shown in the Form of Certificate Holder Notation in Exhibit IV.

E . All policies shall provide that the insurance Company will notify Certificate Holder not less than thirty (30) days prior to the termination of any policy and before any changes are made which restrict or reduce the coverage provided or change the name of the insured.

F. Contractor shall require each of its subcontractors to provide the foregoing coverages as well as any other coverages that Contractor may consider necessary, all to be endorsed with the above-specified waiver of subrogation and additional insured wording; and any deficiency in the coverages, policy limits or endorsements of said subcontractors will be the sole responsibility of Contractor.

G. It is understood and agreed by Contractor and Company that the coverages granted to the Certificate Holder "additional insured" in Contractor's policies of insurance as required in this Contract are to apply on a primary basis over all other valid and collectible insurance owned by and or available to the "additional insured." It is further understood and agreed by Contractor and Company that such coverages provided by Contractor to the "additional insured" are applicable to liability associated with the operations, products, completed operations, premises, equipment and or vehicles contemplated by this Contract. Contractor shall be solely responsible for any deductible or self-insured retention associated with the coverages granted to the additional insured.•

XIV. INDEMNITY **EXCEPT AS EXPRESSLY LIMITED IN THIS CONTRACT, CONTRACTOR SHALL INDEMNIFY, DEFEND AND HOLD HARMLESS COMPANY, ITS DIRECTORS, OFFICERS, AGENTS AND EMPLOYEES AND THEIR SUCCESSORS, HEIRS AND ASSIGNS ("INDEMNIFIED PARTIES") FROM AND AGAINST ANY AND ALL CLAIMS, LOSSES, DAMAGES, CAUSES OF ACTION, SUITS, AND LIABILITY OF EVERY KIND AND CHARACTER (INCLUDING, BUT NOT LIMITED TO, ALL COSTS OF DEFENSE, SETTLEMENT AND REASONABLE ATTORNEY'S FEES) ("CLAIMS") RELATING TO, ARISING OUT OF OR INCIDENTAL TO ANY AGREEMENT OR SERVICES TO BE PROVIDED UNDER ANY AGREEMENT (REGARDLESS OF WHETHER SUCH SERVICES ARE LISTED OR NOT LISTED ON EXHIBIT I) WHICH MAY BE ASSERTED BY ANY THIRD PARTY, GOVERNMENTAL AGENCY OR ENTITY, CONTRACTOR, OR CONTRACTOR'S EMPLOYEES, AGENTS, CONTRACTORS, SUBCONTRACTORS OR THEIR EMPLOYEES OR AGENTS. THIS DUTY OF INDEMNIFICATION INCLUDES, BUT IS NOT LIMITED TO, CLAIMS RELATING TO OR ARISING OUT OF BREACH OF CONTRACT, DEATH, PERSONAL INJURY, PROPERTY DAMAGE OR LOSS (INCLUDING, WITHOUT LIMITATION, POLLUTION OR ENVIRONMENTAL DAMAGE), ANY THEORY OF STRICT LIABILITY, AND ANY CIVIL OR CRIMINAL FINES OR PENALTIES RELATING TO OR ARISING UNDER ANY CLAIM. WHERE A CLAIM IS THE RESULT OF THE JOINT OR CONCURRING NEGLIGENCE OF CONTRACTOR AND AN INDEMNIFIED PARTY, CONTRACTOR'S DUTY OF INDEMNIFICATION AS SET FORTH IN THIS ARTICLE XIV SHALL BE IN PROPORTION TO ITS ALLOCABLE SHARE OF SUCH JOINT OR CONCURRING NEGLIGENCE.**

In no event shall Contractor or Company be liable to the other for any loss of income or anticipated profits or loss of use of equipment or facilities caused by or arising from the performance of Work under this Contract; provided,

however, this limitation shall not apply to the extent that such damage is in any manner covered by and/or insured by a) Contractor's or any subContractor's policies of insurance, bonds or letters of credit required to be provided, carried and maintained pursuant to this Agreement or otherwise or b) policies of insurance naming Company or Contractor as certificate holder, named insured or additional insured, ; and, provided, further, if Company pays or owes to any person or entity that is not an affiliate of Contractor any costs, expenses or damages (including, without limitation, indirect, special, consequential, incidental, exemplary, punitive actual, direct and other damages) in settlement or satisfaction of any Claim and such costs expenses or damages are covered by any Contractor indemnity to Company under this Agreement, then Company may recover such costs, expenses or damages from Contractor.

XV. PATENTS AND LICENSES A. Contractor represents and warrants that the use or construction of any and all tools, equipment and processes furnished by Contractor and used in any Work does not and shall not infringe on any license or patent which has been issued or applied for; and, in addition to all other indemnifying provisions contained in this Contract, Contractor agrees to indemnify, defend and hold Company harmless from any and all claims, demands, and causes of action of every kind and character in favor of or made by any patentee, licensee or claimant of any right or priority to such tool, equipment or process, or the use or construction thereof, which may result from or arise out of furnishing or use of any such tool, equipment, or process by Contractor.

B. Contractor warrants that it has obtained, or will obtain, an assignment of any original work of authorship created by any of its employees or independent Contractors during the performance by Contractor of its duties and obligations under any Agreement. Contractor further warrants that it will disclose such original works of authorship to Company on a timely basis and will timely assign such rights to Company.

C. Contractor warrants that it has obtained, or will obtain, from its employees and independent Contractors an assignment of all rights in any new and useful process, machine, manufacture or composition of matter, and any new and useful improvement thereof made by any of them in the course of the performance of Contractor's duties and obligations under any Agreement. Contractor further warrants that it will promptly disclose any new and useful process, machine, manufacture or composition of matter and any new and useful improvement thereof made by any of its employees or independent Contractors in the course of the performance of Contractor's duties and obligations under any Agreement and will assign such rights to Company on demand.

XVI. SURVIVAL As part of the consideration for this Contract, Contractor hereby agrees that its provisions concerning indemnity, warranty, waiver of subrogation and patent infringement shall extend to and be enforceable by and shall inure to the benefit of any owner, joint owner, co-venturer, operator or non-operator for which Company is acting and shall survive completion of any Work and the termination of this Contract.

XVII. SUBCONTRACTING A. No subcontract may be awarded by Contractor unless approved in advance by Company in writing. Contractor shall be and remain primarily liable for all obligations assumed by Contractor under this Contract. Contractor's subcontracting of any portion of the Work shall not release or relieve Contractor from any obligation or liability under any Agreement. Contractor shall furnish Company with a true and complete copy of each subcontract awarded by Contractor within five (5) days after such subcontract is executed. Contractor shall oversee and be responsible for the performance of its subcontractors and keep accurate books, records and accounts and furnish such reports and information as Company may request relative to subcontracts.

B. Contractor represents and warrants that, prior to entry on Company's premises: 1) each subcontractor shall be given a copy of this Contract and any related Agreement (provided, however, Contractor may strike out or delete provisions pertaining to its compensation), 2) each subcontractor shall be familiar with each Contract term and condition, and 3) each subcontractor shall agree, to the extent of its respective portions of the Work, to perform fully each Contract term and condition.

XVIII. DEFAULT If Contractor breaches any warranty contained in any Agreement, or if any of Contractor's representations contained in any Agreement shall be found to be false, or if Contractor fails to prosecute the Work, or fails to make the progress set forth in any Agreement, or fails to pay any indebtedness when due, or fails to perform any of the conditions of or obligations assumed under any Agreement, or becomes insolvent, or if any voluntary or involuntary proceedings are instituted by or against Contractor in bankruptcy or insolvency, or if a receiver, trustee or assignee is appointed for the benefit of creditors of Contractor ("Events of Default"), Company may, if it so elects and without prejudice to any other rights or remedies it may have in law or equity:

1) suspend Contractor's authorization to proceed with Work,
2) remove Contractor from Company's Approved Contractor List,
3) terminate this Contract or any Agreement,
4) suspend payment in whole or in part under any Agreement until the Event of Default has been remedied, and/or,
5) take the Work remaining to be completed wholly or partly out of the hands of Contractor or any other person in whose hands or possession the Work or any part of it may be, in which event Company may award such Work to another Contractor. Contractor in such event, in the manner and to the extent directed by Company, and only to such extent, shall assign to Company all of the rights of Contractor under its work orders, purchase orders and subcontracts relating to the Work.

XIX. TERMINATION Either party may terminate this Contract by giving the other party thirty (30)-day prior written notice, but neither party shall, by the termination of this Contract, be relieved of its respective obligations and liabilities arising from or incidental to Work performed prior to termination. Except as expressly provided in this Contract, it may not be terminated during the performance of any Agreement.

XX. FORCE MAJEURE If either party is rendered unable, wholly or in part, by force majeure to carry out its obligations under any Agreement, then on such party giving notice and full particulars of such force majeure in writing to the other party as soon as practicable after the occurrence of the cause relied on, then the obligation of the party giving such notice, so far and only insofar as affected by such force majeure, shall be suspended during the continuance of any inability so caused, but for no longer period, and such cause shall be remedied with all reasonable dispatch. "Force majeure" means acts of God, strikes, lockouts or labor disputes involving a general stoppage of Work on the job, civil disturbance, military action, rules, regulations, orders or acts of governmental authority, or other similar causes beyond the control of Company or Contractor. The requirement that events of force majeure be remedied with all reasonable dispatch shall not require the settlement of labor matters when such course is inadvisable in the judgment of the party having the difficulty.

XXI. ENTIRE AGREEMENT This Contract and any Agreement represent the entire agreement of the parties. No provision of any delivery ticket, invoice or other instrument used by Contractor in describing any Work shall supersede the provisions of any Agreement. The terms of this Contract shall prevail over conflicting terms of any Agreement or Work order, oral or written.

XXII. TIME OF THE ESSENCE Time is expressly declared to be of the essence of all Agreements.

XXIII. NON-WAIVER No election by Company under this Contract shall constitute a waiver of any other rights or remedies available to it at law or in equity. Neither waiver by Company nor any amendment of any of the terms, provisions, or conditions of any Agreement shall be effective unless in writing and signed by an authorized representative of Company.

XXIV. NOTICES All notices to be given with respect to this Contract and any Agreement shall be given to Company and to Contractor, respectively, at the address first above written and shall be in writing, postage or delivery charges prepaid. All notices shall be effective upon actual receipt or refusal of delivery by the party to whom given. All sums due to Contractor under any Agreement shall be payable at 1100 Louisiana, Houston, Harris County, Texas 77002.

XXV. ASSIGNMENT This Contract shall inure to the benefit of the parties, their successors and assigns. No Agreement or any payment accruing under it is assignable by Contractor, nor may it be pledged by Contractor as security without the prior written consent of Company. Company may assign this Contract without limitation.

XXVI. GOVERNING LAW This Contract and all Agreements are and shall be deemed to be made and delivered in Harris County, Texas, and shall be governed by and construed in accordance with the law of the State of Texas, without regard for its principles of conflicts of laws. Any legal action arising under this Contract shall be brought in the courts of the State of Texas or of the United States for the Southern District of Texas, Houston Division, to which venue and non-exclusive jurisdiction each party expressly consents for itself and in respect of its property for all purposes.

XXVII. DISPUTES If Company and Contractor have a dispute under any Agreement, they both undertake to explore, in good faith, resolution of the dispute through negotiation, mediation or similar alternative dispute resolution techniques prior to filing litigation. If any litigation or other formal proceeding must be filed by either party to preserve its rights under a statute of limitations or other legal deadline during the pendency of any alternative dispute resolution technique, the party filing such action will not require the other party to answer (if such delay is permitted by applicable rules) and will do all that is otherwise necessary to stay the action until the pending alternative resolution technique is terminated. If either party believes the dispute is not suitable for such alternative dispute resolution techniques, or if such techniques do not produce results satisfactory to the parties, either party may proceed with litigation. If the parties are unable to resolve any dispute by the alternative dispute resolution techniques described above and either party proceeds with litigation, the losing party shall pay the prevailing party's reasonable attorneys' fees, costs and necessary disbursements in addition to any relief that a court may grant.

XXVIII. AUTHORIZED REPRESENTATIVE Contractor represents and warrants that the person executing this Contract and any Agreement on behalf of Contractor is a duly authorized representative of Contractor and is vested with full authority to bind Contractor.

XXIX. CONFIDENTIAL INFORMATION A. All information concerning the business, customers, products, processes and trade secret information of Company ("Confidential Information") which may come into the possession of Contractor during the course of the negotiation or performance of this Contract or any Agreement is confidential to Company, shall be used by Contractor for the sole purpose of providing services to Company under this Contract and shall not be disclosed by Contractor to any third party without the prior written consent of Company. All Confidential Information shall become and remain the property of Company and shall be deemed to have been entrusted to Contractor only for the limited purposes of this Contract, and Contractor will not, without the prior written consent of Company use, reproduce or copy, or permit the use, reproduction or copying of any Confidential Information; provided, however, Contractor may make adequate reproductions and copies for the purpose of carrying out the Work. All Confidential Information received or created by Contractor and any reproductions or copies thereof made by Contractor shall be delivered to Company at any time prior to termination of this Contract at the request of Company and shall be delivered to Company immediately upon termination of this Contract. Nothing contained in this Contract or in any disclosures made by Company under it shall be construed to grant to Contractor any license or other rights of Company in or to Confidential Information or under any copyright or patent which has been or may in the future be issued with respect to Confidential Information.

B. Contractor will not be bound by the provisions of this Article XXIX with respect to information which:

(1) was available to the public prior to receipt of such information by Contractor pursuant to any Agreement; or

(2) becomes available to the public subsequent to receipt of such information by Contractor pursuant to any Agreement and through no fault of Contractor; or

(3) was already in Contractor's possession and not acquired, either directly or indirectly, from Company under an obligation of confidentiality; or

(4) subsequently is obtained from a third party who is lawfully in possession of such information and who is not under a contractual or fiduciary obligation to Company or another person with respect to such information.

XXX. TENSE, GENDER AND NUMBER Unless expressly provided otherwise, the use in this Contract of the past, present or future tense shall include the others, the masculine, feminine or neuter gender shall include the others, and the singular or plural number shall include the other.

XXXI CONSTRUCTION The titles to the articles of this Contract are for the convenience of the parties, only; they are not a part of the Contract and shall have no effect in the construction or interpretation of it. In the event of a dispute over the meaning or application of any Agreement, it shall be construed fairly and reasonably and neither more strongly for nor against either party.

XXXII EXHIBITS The Exhibits checked below and attached to this Contract are incorporated in and made a part of it for all purposes:

_X_	Exhibit I	Scope of Work
_X_	Exhibit II	Price & Invoicing
_X_	Exhibit III	Drug, Alcohol & Illegal Items Policy
_X_	Exhibit IV	Insurance
___	Exhibit V	Schedule
___	Exhibit VI	Drawings & Attachments
___	Exhibit VII	General Requirements
___	Exhibit VIII	Consultant Terms & Conditions
___	Exhibit IX	Purchase Terms & Conditions

In the event of any conflict between the foregoing terms of this Contract and the Exhibits, the foregoing terms shall prevail.

EPCO HOLDINGS, INC.,

By: LEONARD MALLETT

Title: **SENIOR VICE PRESIDENT**

SOUTHERN WASTE SERVICES, INC., CONTRACTOR

By: _____

Title: PRESIDENT

EXHIBIT I

SCOPE OF WORK

Contractor's Work will be :

PROVIDE EMERGENCY RESPONSE SERVICES.

EXHIBIT II
PRICE AND INVOICING

TO BE DETERMINED AT THE TIME THE ORDER IS PLACED.

EXHIBIT III

EPCO HOLDINGS, INC.
POLICY

ILLEGAL AND UNAUTHORIZED ITEMS AT OPERATIONAL FACILITIES AND IN OPERATIONAL VEHICLES

Company is committed to providing a safe working environment for its employees, visitors, and contract personnel. THE POSSESSION, USE, SALE, TRANSFER, RECEIPT OR PRESENCE AND BEING UNDER THE INFLUENCE OF DANGEROUS DRUGS OR CONTROLLED SUBSTANCES (EXCEPT AS LAWFULLY PRESCRIBED FOR THE PERSON IN POSSESSION), DRUG PARAPHERNALIA OR ALCOHOLIC BEVERAGES ARE FORBIDDEN AT, UPON OR WITHIN COMPANY OPERATIONAL FACILITIES AND OPERATIONAL VEHICLES.

Operational facilities include the entire premises of all terminals, processing plants, loading racks, pipelines, storage, warehouses, garages, shops, field worksites and retail locations. Operational vehicles include all vehicles (tractors, trailers, transports and pickups) bearing an external company name, logo, trade name, trademark or placard. Dangerous drugs include all drugs and devices, which are prohibited by Federal or State law from being dispensed without a prescription. Controlled substances include cocaine, marijuana, narcotics and all other drugs and materials which are controlled under Federal or State law. Drug paraphernalia includes roach clips, gram scales and any other property or material, which Company deems is intended or has been adapted or modified for drug use. Alcoholic beverages include liquor, beer and wine, except liquor, beer and wine stored in passenger vehicles. "Under the influence" means having detectable levels of dangerous drugs, controlled substances or alcohol in the breath, blood or urine.

Employees will not be permitted to work while under the influence of drugs or alcohol. Individuals who appear to be unfit for duty will be released from duty and may be subject to a physical examination at a designated medical facility. Refusal to comply with a fitness-for-duty examination may result in disciplinary action up to and including DISCHARGE.

Any employee who uses or is found to be in possession or under the influence of these illegal or unauthorized items at, upon or within these Company facilities or vehicles will be relieved from duty immediately and subject to disciplinary action up to and including DISCHARGE. Others who use or are found to be in possession or under the influence of such items at, upon or within these Company facilities or vehicles will be removed from Company's vehicles and facilities and denied future admission to Company property.

Company reserves the right to search, inspect and submit to laboratory testing persons and property found at, upon or within Company facilities or vehicles. Entry onto operational facilities or vehicles constitutes consent to searches or inspections. Any employee who refuses to submit his person or property to search, inspection or testing or who refuses to consent to the release of medical information in connection with a company physical examination or relevant to any accident, injury or incident involving the employee and relating to the safety, health or welfare of the employee, other employees or the public will be relieved from duty immediately and subject to disciplinary action up to and including DISCHARGE; others at, upon or within Company facilities or vehicles who refuse to submit their persons or property to search, inspection or testing will be removed from and denied future admission to Company property.

Off-the-job illegal drug use which could adversely affect an employee's job performance or which could jeopardize the safety of other employees, the public, or company facilities, or where such usage adversely affects the public trust in the ability of the company to carry out its responsibilities, is also cause for disciplinary action, up to and including DISCHARGE. Employees who are arrested for off-the-job drug activity may be considered in violation of this policy. In deciding what action to take, the company will take into consideration the nature of the charges, the employee's present assignment and record with the company, and the impact of the employee's arrest upon the conduct of the company's business.

Employees who wish to report drug or alcohol use in violation of this policy should contact the appropriate Vice President in charge of their group or the Vice President -- Human Resources, directly. The company will make every effort to protect anonymity, and such information will be treated in confidence.

Company requires that all prescriptions and over-the-counter medications at Company operational facilities and Company operational vehicles be in original containers with prescriptions showing the name and doctor of the person in possession. As an employee, you have a responsibility to determine whether or not the use of a legal prescription may present a safety risk at work. You should ensure that your physician is aware of the nature of your job. Employees who feel, or who have been informed, that the use of a legal prescription or over-the-counter medicine may affect the employee's job performance, or may affect the safety of co-workers, members of the public or the employee, must report such drug use to the Safety Department so the Company can evaluate whether the employee may continue to work. The use or being under the influence of any legally prescribed drug or over-the-counter medicine is prohibited to the extent that such use or influence may affect the safety of co-workers or members of the public, the employee's job performance or the safe or efficient operation of the Company's facilities or vehicles.

EXHIBIT IV

INSURANCE

1. Certificate Holder Definition

"Certificate Holder" shall mean EPCO Holdings, Inc., Enterprise Products Partners L.P., Enterprise Products Operating LLC, EPCO, Inc., Texas Eastern Products Pipeline Company, LLC and each of their parent, subsidiary and affiliated companies, partners and joint venturers, and each owner or joint owner of any equipment or facility operated by them.

2. Form of Additional Insured Endorsement

It is agreed that such insurance as is afforded by the policy shall apply to EPCO Holdings, Inc., Enterprise Products Partners L.P., Enterprise Products Operating LLC, EPCO, Inc., Texas Eastern Products Pipeline Company, LLC. and each of their parent, subsidiary and affiliated companies, partners and joint venturers, and each owner or joint owner of any facility operated by one or more of them, as their interests may appear, to whom the named insured is obligated by contract to provide such insurance, but only to the extent of coverage required by such contracts as respects operations performed in connection with the insured and only if such contract was agreed to in writing or orally by the named insured or his/its representatives prior to the occurrence of any loss under such contract.

3. Form of Certificate Holder Notation

EPCO Holdings, Inc. Enterprise Products Partners L.P., Enterprise Products Operating LLC, EPCO, Inc. , Texas Eastern Products Pipeline Company, LLC. and each of their parent, subsidiary and affiliated companies, partners and joint venturers, and each owner or joint owner of any facility operated by one or more of them, as their interests may appear, arising from the work to be performed under oral or written contract.

P. O. Box 4324
Houston, Texas 77210
Attention: Corporate Risk

4. Additional Terms for Work to be Performed in Louisiana

In all cases where Contractor's employees (defined to include Contractor's direct, borrowed, special or statutory employees) are covered by Louisiana Worker's Compensation Act, LSA-R.S. 23:1021 *et seq.*, Company and Contractor agree that all Work performed by Contractor and its employees pursuant to any Agreement is an integral part of and essential to the ability of Company/Certificate Holder to generate Company/Certificate Holder's goods, products and services, for purposes of LSA-R.S. 23:1061(A)(1). Furthermore, Company and Contractor agree that Company/Certificate Holder is the principal or statutory employer of Contractor's employees; provided, however, this provision is included for the sole purpose of establishing a statutory employer relationship to obtain the benefits of LSA-R.S. 23:11031(C-E) and 23:1061(A) and is not intended to create an employer/employee relationship for any other purpose. Irrespective of Company/Certificate Holder's status as the statutory employer or special employer [as defined in LSA-R.S. 23:1031(C)] of Contractor's employees, Contractor shall remain primarily responsible for the payment of Louisiana worker's compensation benefits to its employees and shall not be entitled to seek contribution for any such payments from Company/Certificate Holder.

Contractor agrees that its worker's compensation insurance and employer's liability insurance policies shall be endorsed to designate Certificate Holder as an alternate employer and as a principal and statutory employer or borrowing employer.

FIGURE A.4 (Cont'd)

GARNER ENVIRONMENTAL SERVICES

EPCO, INC. AGREEMENT MANAGEMENT AND TRACKING SOLUTION ATRACK

Logged into (Prod) as *NJSchroeder*

Home Search ▸ Help ▸ My RAF's

Approval Center [SUBSCRIBE]

Contract: 2030 Contract Status: Approved

GARNER ENVIRONMENTAL SVC

ISNetworld Information [>>]

Contractor Grade: A

Garner Environmental Services, Inc.

ISN_Number	DOT D&A	Non DOT D&A	OQ	Expired	Updated
400-127586	SATISFACTORY	SATISFACTORY	N	N	3/1/2010

Safety
Current Status: Approved
Select Status: Approved
Review Date: 6/26/2000
☐ VP Approved

D&A Compliance
Current Status: Approved
Select Status: Approved
Compliance Date: 12/1/2008

Corporate Risk
Current Status: Approved
Select Status: Approved

Legal
Current Status: Approved
Select Status: Approved

Contract Management
Current Status: Approved
Select Status: Approved
External Contract#:
User Category:
Tied to Contract#:
Red Flag
☐ Yes
☐ Send Status Notification

Red Flag Comments...

Scope of Work

05/07/04

EMERGENCY REPSONSE AND RELATED SERVICES TO BE PERFORMED ON AS NEEDED, AS AVAILABLE BASIS

Notes

Contract Information

ContractForm:
☐ Standard ☑ Modified ☐ Other

Company: TRANSPORTATION
Originator: NOLAN EVERITT
OriginatorEmail:
StrategicAgreement: ☐ Yes ☑ No

ContractType: Evergreen
ContractDate: 3/15/2004
StartDate:
EndDate:

Services rendered for this contract will be conducted... ☑ Onshore ☐ Offshore

Contractor Information

ISN_Number:	400-127586
SupplierCode:	85517
ContractorAlias:	GARNER
Contractor:	GARNER ENVIRONMENTAL SVC
Addr1:	1717 WEST 13TH STREET
Addr2:	
City:	DEER PARK State: TEXAS Zip: 77536
Phone:	(281)-930-1200 Fax: (281)-478-0296 Email: sbourgeois@garner-es.com
WebPage:	www.garner-es.com

Audit Info

Last Audit Info and Date:

No Audit Date Detected

Record ID: **2030**

FIGURE A.4 (Cont'd)

T & T MARINE SALVAGE

EPCO, INC. AGREEMENT MANAGEMENT AND TRACKING SOLUTION ATRACK

Logged into (Prod) as *NJSchroeder*

Home Search ▸ Help ▸ My RAF's

Approval Center [SUBSCRIBE]

Contract: 5159 Contract Status: Approved

T&T MARINE SALVAGE INC

ISNetworld Information [>>]

Contractor Grade	T&T Marine Salvage, Inc. ISN_Number	DOT D&A	Non DOT D&A	OQ	Expired	Updated
A	400-129807		SATISFACTORY	N	N	10/5/2010

Safety
Current Status: Approved
Select Status: Approved
Review Date: 1/5/2010
☐ VP Approved

D&A Compliance
Current Status: Approved
Select Status: Approved
Compliance Date: 7/30/2009

Corporate Risk
Current Status: Approved
Select Status: Approved

Legal
Current Status: Approved
Select Status: Approved

Contract Management
Current Status: Approved
Select Status: Approved
External Contract#:
User Category:
Tied to Contract#:
Red Flag
☐ Yes
☐ Send Status Notification

Red Flag Comments...

Scope of Work

SERVICES ICLUDING BUT NOT LIMITED TO; OIL SPILL RESPONSE, PROVIDE VACUUM TRUCK SERVICE, DOCK INSPECTION, DOCK MAINTENANCE ON MOORING HOOKS, PROVIDE PUMPS FOR DAIN UPS, AND ROOF CLANING ON TANKS.

Notes

Contract Information

ContractForm:
☐ Standard ☑ Modified ☐ Other

Company: EPCO HOLDINGS
Originator: SCOTT BUTLER
OriginatorEmail:
StrategicAgreement: ☐ Yes ☑ No

ContractType: Evergreen
ContractDate: 8/2/2007
StartDate:
EndDate:

Services rendered for this contract will be conducted... ☐ Onshore ☐ Offshore

Contractor Information

ISN_Number:	400-129807
SupplierCode:	741880227
ContractorAlias:	
Contractor:	T&T MARINE SALVAGE INC
Addr1:	9723 TEICHMAN RD
Addr2:	
City:	GALVESTON State: TEXAS Zip: 77554
Phone:	409-744-1222 Fax: 409-744-5218 Email: kellyt@tandtmarine.com
WebPage:	

Audit Info

Last Audit Info and Date:

No Audit Date Detected

Record ID: **5159**

FIGURE A.4 (Cont'd)

ANDERSON POLLUTION CONTROL

EPCO HOLDINGS, INC.

WORK CONTRACT NO. **#4864**
ORIGINATOR: **CAREN GOZZI**
(Type/Print Department and Location)

EPCO HOLDINGS, INC.
SERVICE AGREEMENT (Rev. 07/06)

THIS CONTRACT is entered into this **6th** day of **FEBRUARY, 2007** in the City of Houston, Harris County, Texas, between EPCO Holdings, Inc., a Delaware Corporation, and its Affiliates, P. O. Box 4735, Houston, Texas 77210-4735 ("Company"), and:

ANDERSON POLLUTION CONTROL, INC.
(Full Legal Name)

A TEXAS CORPORATION
(State) (Corporation, Partnership or Sole Proprietorship)

1011 WEST LEWIS, SUITE A
(Address)

CONROE, TX 77301 ("Contractor").
(City) (State) (Zip)

IN CONSIDERATION of the mutual promises in this Contract and other good and valuable consideration, the parties agree as follows:

I. APPROVED CONTRACTOR LIST Upon execution of this Contract by Contractor and Company, Contractor shall be included on Company's Approved Contractor List, indicating Contractor's eligibility to perform Work for Company, and Company and Contractor agree that this Contract shall remain in force until terminated as provided by its terms.

II. DEFINITIONS "Contract" and "Agreement" mean this Contract and any subsequent oral or written Work order or agreement (together with any drawings, specifications or other exhibits attached to it) between the parties for Work. "Work" means all labor, goods, materials and services required to be performed and furnished by Contractor under any Agreement. "Affiliate" means with respect to any relevant entity, any other entity that directly or indirectly Controls, is Controlled by, or is under common Control with, such relevant entity in question. "Control" means with respect to an entity, the ability or power, directly or indirectly, through one or more intermediaries, to direct or cause the direction of the management of such entity, whether through ownership of voting securities, by contract or otherwise.

III. PERFORMANCE Contractor represents and warrants that all Work shall be in strict accordance with and subject to all Contract terms and conditions, that it has adequate equipment in good working order and fully trained personnel capable of efficiently operating such equipment or performing any services provided under any Agreement, and that all Work shall be performed in a good and workmanlike manner, satisfactory and acceptable to Company.

IV. INDEPENDENT CONTRACTOR Contractor is and shall be an independent contractor with respect to Work, and neither Contractor nor its employees or subcontractors or their employees shall be deemed, for any purpose, to be the employee, agent, servant, or representative of Company in the performance of Work. Company shall have no direction or control of the Contractor or its employees and agents except in the results to be obtained. Work shall conform with all applicable specifications and meet the approval of Company and shall be subject to the general right of inspection by or for Company. The actual performance and superintendence of Work shall be by Contractor, but Company or its representative shall have unlimited access to Contractor's operations to determine whether Work is being performed by Contractor in accordance with the Contract.

V. EMPLOYMENT CONTRIBUTIONS AND BENEFITS Contractor agrees to accept full and exclusive liability for the payment of and to pay when due any and all premiums, contributions and taxes for Workers= Compensation Insurance and Unemployment Insurance and for old age pensions, annuities and other retirement benefits imposed by or pursuant to Federal or State law and measured by the wages, salaries or other remuneration paid to persons employed by Contractor; and Contractor further agrees to indemnify and hold Company harmless against any liability for any such premiums, taxes or contributions which may be assessed against Company with respect to Contractor, its employees or subContractors.

VI. TAXES AND FEES Contractor agrees to accept full and exclusive liability for the payment of and to pay when due all taxes, licenses and fees levied or assessed by any governmental agency on Contractor in connection with or incident to the performance of any Agreement. Contractor agrees to require the same covenant of and be liable for any breach of it by its subcontractors. Contractor agrees to reimburse Company on demand for all such local, state or federal taxes or governmental charges which Company may be required or deem it necessary to pay on account of employees of Contractor or its subcontractors, or Company may deduct such payments from any sums which may be or become due to Contractor from Company; Contractor agrees to furnish Company with timely, sufficient and accurate information to make such reports and to pay such taxes and governmental charges if requested by Company.

VII. LABOR AND MATERIAL Contractor shall pay all claims for labor and material related to the Work and shall not permit any liens of any kind to be fixed against the property of Company or the property of others arising out of claims of Contractor, its employees, mechanics, materialmen, or subContractors; and upon the completion of the Work, Contractor shall furnish Company with evidence satisfactory to Company of the payment of all such claims. Contractor shall indemnify and hold harmless Company from and

against all such claims or liens; and Contractor agrees, that, without waiver of any other rights or remedies available to Company, any sums due to Contractor from Company may be withheld and applied by Company toward the discharge or payment of any such claims or liens.

VIII. PAYMENT FOR WORK Payment for Work shall be as provided in Exhibit II or as provided in any Agreement. Payment for Work performed on a reimbursable-cost basis shall be made by Company to Contractor in accordance with Contractor's then-current rate schedule; Contractor shall furnish Company its rate schedule prior to commencing any such Work and notify Company in writing of any changes in the rate schedule. Neither payment for nor use of Work in whole or in part by Company shall constitute acceptance of any Work or materials which do not conform to Contract terms and specifications or settlement of any unsettled claims, liabilities, duties, liens or other encumbrances. Contractor shall keep accurate books and records of all Work, and, within two (2) years from the completion of Work under a particular Agreement or the termination of this Contract, whichever is earlier, Company or its representative shall have the right to inspect, copy and audit, during Contractor's normal business hours, its books and records of every description for the purpose of determining the accuracy of any charges, claims or demands relating to Work.

IX. COMPLIANCE In the performance of all Work, Contractor warrants and represents that it and its subContractors shall comply with all applicable statutes, ordinances, rules and regulations, including but not limited to those administered by the U.S. Occupational Safety and Health Administration, the U.S. Environmental Protection Agency, the U.S. Department of Transportation ("DOT") and state agencies exercising concurrent or similar jurisdiction; and Contractor shall indemnify and hold harmless Company from any and all claims or demands of a penal nature or civil penalties which may arise from violation of such statutes, ordinances, rules and regulations by Contractor or any subcontractor employed by it.

X. COMPANY PREMISES Contractor shall conform and shall require its employees, agents and subContractors to conform, while at or near the location of the Work or on Company's premises, to all requirements of Company, including, but not limited to, Company's rules of conduct, safety rules, Contractor safety policies, routes of ingress and egress and other requirements for the protection of persons or property. Contractor shall provide and take all safety precautions which the nature of the Work may require or indicate and keep the Work location free from accumulations of waste and rubbish. Upon completion of all Work, Contractor shall clean up and dispose all waste and rubbish generated by it or its subcontractors, collect unused material belonging to it or its subcontractors, and restore the location to as clean and orderly a condition as existed prior to commencement of the Work.

XI. ACCIDENT REPORTS Contractor shall report to Company in writing, as soon as practicable, all accidents or occurrences resulting in bodily injury, including death, or damage to or destruction of property arising out of or during the course of performance of any Agreement and, upon request, shall furnish Company with copies of all reports made by Contractor to Contractor's insurer or to others of such accidents and occurrences.

XII. DRUG-FREE WORKPLACE A. Contractor and each of its subcontractos performing Work at any Operational Facility shall establish and enforce within its organization an anti-drug program to assure a drug-free workplace. Contractor's anti-drug program shall include provisions for the auditing by Contractor of its subcontractors' anti-drug programs. "Operational Facility" means the entire premises of each Company processing plant, terminal, loading rack, pipeline, storage facility, warehouse, garage, shop, construction location and field worksite.

B. Contractor represents and warrants that it and its subcontractors shall assign and allow to Work at Operational Facilities only employees who have current negative drug screen results under their employer's anti-drug program. A current result is one based on the most recent drug screen performed within 12 months of a day on which Work is to be performed.

C. Before performing Work at any Operational Facility, Contractor shall furnish and cause each of its subcontractors to furnish Company with documentation of their respective anti-drug programs demonstrating that each program meets or exceeds the requirements of Company's Drug, Alcohol and Illegal Items Policy attached hereto as Exhibit III and meets or exceeds the requirements of any applicable law or regulation. Complete records of the anti-drug program shall be kept at Contractor's and each subcontractor's home office, respectively, and be available for audit by Company during regular office hours. Failure or refusal by Contractor or a subcontractor to establish and maintain a satisfactory anti-drug program, keep adequate records of it, or permit Company to audit compliance with it shall be grounds for immediate suspension of Contractor's and its subcontractors authorization to proceed with Work or termination of this Contract.

D. Before performing Work at any Operational Facility, Contractor and each subcontractor shall certify to Company in a writing signed by an authorized representative of the employer that each employee (identified by name, employee I.D. number and date of drug screen result) who will perform Work at the Operational Facility has a current negative drug screen result under the employer's anti-drug program. Such certification shall be kept current throughout the duration of the Work, and notice of any change in an employee's certified status shall be given by the employer to Company in writing immediately. Company may exclude from Operational Facilities any Contractor or subcontractor employee who does not have a current certification, and any delay in the performance of Work due to lack of properly certified employees will be for the account of Contractor.

E. On any pipeline or other DOT-regulated work, Contractor and its subcontractors shall also furnish Company with written certification of current random pool list and each employee's most recent negative drug screen results under DOT regulations.

XIII. INSURANCE A. Contractor, at its own expense, shall provide and maintain in force with insurance companies acceptable to Company the kinds of insurance and minimum amounts of coverage set forth in paragraph B, below, to cover all loss and liability for damages on account of bodily injury, including death, and damage to or destruction of property caused by or arising from

any and all activities carried on or any and all Work performed under any Agreement. Contractor shall cause its insurer to name Certificate Holder as an additional insured on its Auto, General and Excess Liability insurance policies and grant Certificate Holder a waiver of subrogation on its Workers= Compensation insurance policy. "Certificate Holder" shall have the meaning provided in the Certificate Holder Definition in Exhibit IV. If Contractor fails or refuses to carry out any of the provisions of this Article XIII, Company shall, in addition to any right to recover damages or obtain other relief, have the right to suspend Contractor's authorization to proceed with Work or terminate this Contract.

B. 1) WORKERS= COMPENSATION (Including Occupational Disease) and EMPLOYER'S LIABILITY INSURANCE. Contractor's Workers= Compensation and Employer's Liability coverages shall apply to all employees, including borrowed servants, in accordance with the benefits afforded by the statutory Worker's Compensation Acts, USL & H and Maritime Acts applicable to the State, Territory or District of hire, supervision or place of accident. A waiver of subrogation to Certificate Holder is required. Policy limits shall not be less than:

Worker's Compensation: Statutory Limits.
Employer's Liability: $500,000, each accident; $500,000 Disease, policy limit; $500,000 Disease, each employee.

2) COMMERCIAL GENERAL LIABILITY INSURANCE, as primary policy over all others, covering premises, operations, products and completed operations, independent Contractors, and blanket contractual liability. The policy shall cover all liabilities arising out of explosion, collapse and underground ("XCU") hazards. The policy shall provide broad-form property damage, including completed operations, coverage. An "additional insured" endorsement naming Certificate Holder is required. Policy limits shall not be less than:

Bodily Injury: $500,000 per occurrence, $1 million aggregate.
Property Damage: $500,000 per occurrence, $1 million aggregate.
OR Combined Single Limit (CSL) of $1 million per occurrence, $2 million aggregate.

3) COMPREHENSIVE-AUTOMOBILE LIABILITY INSURANCE, as primary policy over all others, covering all owned, hired and non-owned automotive equipment. An "additional insured" endorsement naming Certificate Holder is required. Policy limits shall not be less than:

Bodily Injury: $500,000 per person, $500,000 per occurrence/accident.
Property Damage: $500,000 per occurrence.
OR Combined Single Limit of $1 million per occurrence.

4) EXCESS/UMBRELLA LIABILITY INSURANCE, to be primary excess over all others:

☒ $5 million

5) Additional insurance and surety limits:

a) ☒ NONE REQUIRED.

b) ☐ ALL-RISK BUILDER'S RISK POLICY with limits of $_____, Minimum Deductible $_____.

c) ☐ CONTRACTOR'S EQUIPMENT FLOATER POLICY

d) ☐ OWNER/CONTRACTOR'S PROTECTIVE LIABILITY POLICY with minimum limits of $500,000 CSL.

e) ☐ CRANE COVERAGE -- LIFTER'S LIABILITY POLICY with limits of $500,000 CSL.

f) ☐ PROFESSIONAL LIABILITY INSURANCE covering acts, errors, omissions, malpractice, as applicable, potentially arising from or pertaining to any Work to be performed by Contractor, its employees, agents or subcontractors; policy limits shall not be less than $1 million per occurrence/claim; OR in lieu of such insurance, Contractor may furnish an irrevocable letter of credit in form and amount and with an issuer satisfactory to Company.

g) ☐ PERFORMANCE AND MAINTENANCE BOND. Upon execution of this Contract and prior to commencing performance hereunder, Contractor shall execute, with a surety Company satisfactory to Company, a Surety Bond to guarantee completion of the Work within the time provided, the payment of all claims and the fulfillment of all obligations arising, either directly or indirectly, under any Agreement, including but not limited to the defense of all litigation incidental to any Agreement to which Certificate Holder is made a party. The surety limits shall be not less than one hundred percent (100%) of the total estimated contract price or as agreed to by Company. In lieu of such surety bond, Contractor may cause to be issued an irrevocable letter of credit payable to the order of Company in such amount, in a form and with an issuer acceptable to Company; or, if acceptable to Company, Contractor may use a combination of surety bond, letter of credit, or corporate or personal guaranty.

C. Contractor's insurance policies shall be endorsed as follows and in accordance with state law:

Worker's Compensation policy:

1) Blanket waiver of subrogation, OR 2) "The Insurers hereby waive their rights of subrogation against Certificate Holder and any individual, firm, or corporation, their subsidiaries, factors or assigns for whom or with whom the Assured may be working."

Primary General, Auto and Excess Liability Policies:

1) Blanket additional insured endorsement, OR 2) the Form of Additional Insured Endorsement in Exhibit IV.

D. Contractor represents and warrants that at all times during the term of this Contract it shall have furnished or caused to be furnished to Company an original, current certificate of insurance on forms acceptable to Company (most recent ACORD form) reflecting:

1) The kinds and amounts of insurance required above.
2) The insurance Company or companies carrying the required coverages.
3) The policy number and the effective and expiration dates of each policy.
4) That Certificate Holder will be given thirty (30)-day prior written notice of any material change in or termination of any policy.
5) That a waiver of subrogation under Contractor's Worker's Compensation policy has been issued to Certificate Holder.
6) That Certificate Holder has been named as an "Additional Insured" on Contractor's primary Auto & General Liability policies and Excess/Umbrella policies.
7) A Certificate Holder notation reading as shown in the Form of Certificate Holder Notation in Exhibit IV.

E. All policies shall provide that the insurance Company will notify Certificate Holder not less than thirty (30) days prior to the termination of any policy and before any changes are made which restrict or reduce the coverage provided or change the name of the insured.

F. Contractor shall require each of its subcontractors to provide the foregoing coverages as well as any other coverages that Contractor may consider necessary, all to be endorsed with the above-specified waiver of subrogation and additional insured wording; and any deficiency in the coverages, policy limits or endorsements of said subcontractors will be the sole responsibility of Contractor.

G. It is understood and agreed by Contractor and Company that the coverages granted to the Certificate Holder "additional insured" in Contractor's policies of insurance as required in this Contract are to apply on a primary basis over all other valid and collectible insurance owned by and or available to the "additional insured." It is further understood and agreed by Contractor and Company that such coverages provided by Contractor to the "additional insured" are applicable to liability associated with the operations, products, completed operations, premises, equipment and or vehicles contemplated by this Contract. Contractor shall be solely responsible for any deductible or self-insured retention associated with the coverages granted to the Additional insured.

XIV. INDEMNITY **EXCEPT AS EXPRESSLY LIMITED IN THIS CONTRACT, CONTRACTOR SHALL INDEMNIFY, DEFEND AND HOLD HARMLESS COMPANY, ITS DIRECTORS, OFFICERS, AGENTS AND EMPLOYEES AND THEIR SUCCESSORS, HEIRS AND ASSIGNS ("INDEMNIFIED PARTIES") FROM AND AGAINST ANY AND ALL CLAIMS, LOSSES, DAMAGES, CAUSES OF ACTION, SUITS, AND LIABILITY OF EVERY KIND AND CHARACTER (INCLUDING, BUT NOT LIMITED TO, ALL COSTS OF DEFENSE, SETTLEMENT AND REASONABLE ATTORNEY'S FEES) ("CLAIMS") RELATING TO, ARISING OUT OF OR INCIDENTAL TO ANY AGREEMENT OR SERVICES TO BE PROVIDED UNDER ANY AGREEMENT (REGARDLESS OF WHETHER SUCH SERVICES ARE LISTED OR NOT LISTED ON EXHIBIT I) WHICH MAY BE ASSERTED BY ANY THIRD PARTY, GOVERNMENTAL AGENCY OR ENTITY, CONTRACTOR, OR CONTRACTOR'S EMPLOYEES, AGENTS, CONTRACTORS, SUBCONTRACTORS OR THEIR EMPLOYEES OR AGENTS. THIS DUTY OF INDEMNIFICATION INCLUDES, BUT IS NOT LIMITED TO, CLAIMS RELATING TO OR ARISING OUT OF BREACH OF CONTRACT, DEATH, PERSONAL INJURY, PROPERTY DAMAGE OR LOSS (INCLUDING, WITHOUT LIMITATION, POLLUTION OR ENVIRONMENTAL DAMAGE), ANY THEORY OF STRICT LIABILITY, AND ANY CIVIL OR CRIMINAL FINES OR PENALTIES RELATING TO OR ARISING UNDER ANY CLAIM. WHERE A CLAIM IS THE RESULT OF THE JOINT OR CONCURRING NEGLIGENCE OF CONTRACTOR AND AN INDEMNIFIED PARTY, CONTRACTOR'S DUTY OF INDEMNIFICATION AS SET FORTH IN THIS ARTICLE XIV SHALL BE IN PROPORTION TO ITS ALLOCABLE SHARE OF SUCH JOINT OR CONCURRING NEGLIGENCE.**

In no event shall Contractor or Company be liable to the other for any loss of income or anticipated profits or loss of use of equipment or facilities caused by or arising from the performance of Work under this Contract; provided, however, this limitation shall not apply to the extent that such damage is in any manner covered by and/or insured by a) Contractor's or

any subContractor's policies of insurance, bonds or letters of credit required to be provided, carried and maintained pursuant to this Agreement or otherwise or b) policies of insurance naming Company or Contractor as certificate holder, named insured or additional insured, ; and, provided, further, if Company pays or owes to any person or entity that is not an affiliate of Contractor any costs, expenses or damages (including, without limitation, indirect, special, consequential, incidental, exemplary, punitive actual, direct and other damages) in settlement or satisfaction of any Claim and such costs expenses or damages are covered by any Contractor indemnity to Company under this Agreement, then Company may recover such costs, expenses or damages from Contractor.

XV. PATENTS AND LICENSES A. Contractor represents and warrants that the use or construction of any and all tools, equipment and processes furnished by Contractor and used in any Work does not and shall not infringe on any license or patent which has been issued or applied for; and, in addition to all other indemnifying provisions contained in this Contract, Contractor agrees to indemnify, defend and hold Company harmless from any and all claims, demands, and causes of action of every kind and character in favor of or made by any patentee, licensee or claimant of any right or priority to such tool, equipment or process, or the use or construction thereof, which may result from or arise out of furnishing or use of any such tool, equipment, or process by Contractor.

B. Contractor warrants that it has obtained, or will obtain, an assignment of any original work of authorship created by any of its employees or independent Contractors during the performance by Contractor of its duties and obligations under any Agreement. Contractor further warrants that it will disclose such original works of authorship to Company on a timely basis and will timely assign such rights to Company.

C. Contractor warrants that it has obtained, or will obtain, from its employees and independent Contractors an assignment of all rights in any new and useful process, machine, manufacture or composition of matter, and any new and useful improvement thereof made by any of them in the course of the performance of Contractor's duties and obligations under any Agreement. Contractor further warrants that it will promptly disclose any new and useful process, machine, manufacture or composition of matter and any new and useful improvement thereof made by any of its employees or independent Contractors in the course of the performance of Contractor's duties and obligations under any Agreement and will assign such rights to Company on demand.

XVI. SURVIVAL As part of the consideration for this Contract, Contractor hereby agrees that its provisions concerning indemnity, warranty, waiver of subrogation and patent infringement shall extend to and be enforceable by and shall inure to the benefit of any owner, joint owner, co-venturer, operator or non-operator for which Company is acting and shall survive completion of any Work and the termination of this Contract.

XVII. SUBCONTRACTING A. No subcontract may be awarded by Contractor unless approved in advance by Company in writing. Contractor shall be and remain primarily liable for all obligations assumed by Contractor under this Contract. Contractor's subcontracting of any portion of the Work shall not release or relieve Contractor from any obligation or liability under any Agreement. Contractor shall furnish Company with a true and complete copy of each subcontract awarded by Contractor within five (5) days after such subcontract is executed. Contractor shall oversee and be responsible for the performance of its subcontractors and keep accurate books, records and accounts and furnish such reports and information as Company may request relative to subcontracts.

B. Contractor represents and warrants that, prior to entry on Company's premises: 1) each subcontractor shall be given a copy of this Contract and any related Agreement (provided, however, Contractor may strike out or delete provisions pertaining to its compensation), 2) each subcontractor shall be familiar with each Contract term and condition, and 3) each subcontractor shall agree, to the extent of its respective portions of the Work, to perform fully each Contract term and condition.

XVIII. DEFAULT If Contractor breaches any warranty contained in any Agreement, or if any of Contractor's representations contained in any Agreement shall be found to be false, or if Contractor fails to prosecute the Work, or fails to make the progress set forth in any Agreement, or fails to pay any indebtedness when due, or fails to perform any of the conditions of or obligations assumed under any Agreement, or becomes insolvent, or if any voluntary or involuntary proceedings are instituted by or against Contractor in bankruptcy or insolvency, or if a receiver, trustee or assignee is appointed for the benefit of creditors of Contractor ("Events of Default"), Company may, if it so elects and without prejudice to any other rights or remedies it may have in law or equity:

1) suspend Contractor's authorization to proceed with Work,
2) remove Contractor from Company's Approved Contractor List,
3) terminate this Contract or any Agreement,
4) suspend payment in whole or in part under any Agreement until the Event of Default has been remedied, and/or,
5) take the Work remaining to be completed wholly or partly out of the hands of Contractor or any other person in whose hands or possession the Work or any part of it may be, in which event Company may award such Work to another Contractor. Contractor in such event, in the manner and to the extent directed by Company, and only to such extent, shall assign to Company all of the rights of Contractor under its work orders, purchase orders and subcontracts relating to the Work.

XIX. TERMINATION Either party may terminate this Contract by giving the other party thirty (30)-day prior written notice, but neither party shall, by the termination of this Contract, be relieved of its respective obligations and liabilities arising from or incidental to Work performed prior to termination. Except as expressly provided in this Contract, it may not be terminated during the performance of any Agreement.

XX. FORCE MAJEURE If either party is rendered unable, wholly or in part, by force majeure to carry out its obligations under any Agreement, then on such party giving notice and full particulars of such force majeure in writing to the other party as soon as practicable after the occurrence of the cause relied on, then the obligation of the party giving such notice, so far and only insofar as affected by such force majeure, shall be suspended during the continuance of any inability so caused, but for no longer period, and such cause shall be remedied with all reasonable dispatch. "Force majeure" means acts of God, strikes, lockouts or labor disputes involving a general stoppage of Work on the job, civil disturbance, military action, rules, regulations, orders or acts of governmental authority, or other similar causes beyond the control of Company or Contractor. The requirement that events of force majeure be remedied with all reasonable dispatch shall not require the settlement of labor matters when such course is inadvisable in the judgment of the party having the difficulty.

XXI. ENTIRE AGREEMENT This Contract and any Agreement represent the entire agreement of the parties. No provision of any delivery ticket, invoice or other instrument used by Contractor in describing any Work shall supersede the provisions of any Agreement. The terms of this Contract shall prevail over conflicting terms of any Agreement or Work order, oral or written.

XXII. TIME OF THE ESSENCE Time is expressly declared to be of the essence of all Agreements.

XXIII. NON-WAIVER No election by Company under this Contract shall constitute a waiver of any other rights or remedies available to it at law or in equity. Neither waiver by Company nor any amendment of any of the terms, provisions, or conditions of any Agreement shall be effective unless in writing and signed by an authorized representative of Company.

XXIV. NOTICES All notices to be given with respect to this Contract and any Agreement shall be given to Company and to Contractor, respectively, at the address first above written and shall be in writing, postage or delivery charges prepaid. All notices shall be effective upon actual receipt or refusal of delivery by the party to whom given. All sums due to Contractor under any Agreement shall be payable at 1100 Louisiana, Houston, Harris County, Texas 77002.

XXV. ASSIGNMENT This Contract shall inure to the benefit of the parties, their successors and assigns. No Agreement or any payment accruing under it is assignable by Contractor, nor may it be pledged by Contractor as security without the prior written consent of Company. Company may assign this Contract without limitation.

XXVI. GOVERNING LAW This Contract and all Agreements are and shall be deemed to be made and delivered in Harris County, Texas, and shall be governed by and construed in accordance with the law of the State of Texas, without regard for its principles of conflicts of laws. Any legal action arising under this Contract shall be brought in the courts of the State of Texas or of the United States for the Southern District of Texas, Houston Division, to which venue and non-exclusive jurisdiction each party expressly consents for itself and in respect of its property for all purposes.

XXVII. DISPUTES If Company and Contractor have a dispute under any Agreement, they both undertake to explore, in good faith, resolution of the dispute through negotiation, mediation or similar alternative dispute resolution techniques prior to filing litigation. If any litigation or other formal proceeding must be filed by either party to preserve its rights under a statute of limitations or other legal deadline during the pendency of any alternative dispute resolution technique, the party filing such action will not require the other party to answer (if such delay is permitted by applicable rules) and will do all that is otherwise necessary to stay the action until the pending alternative resolution technique is terminated. If either party believes the dispute is not suitable for such alternative dispute resolution techniques, or if such techniques do not produce results satisfactory to the parties, either party may proceed with litigation. If the parties are unable to resolve any dispute by the alternative dispute resolution techniques described above and either party proceeds with litigation, the losing party shall pay the prevailing party's reasonable attorneys' fees, costs and necessary disbursements in addition to any relief that a court may grant.

XXVIII. AUTHORIZED REPRESENTATIVE Contractor represents and warrants that the person executing this Contract and any Agreement on behalf of Contractor is a duly authorized representative of Contractor and is vested with full authority to bind Contractor.

XXIX. CONFIDENTIAL INFORMATION A. All information concerning the business, customers, products, processes and trade secret information of Company ("Confidential Information") which may come into the possession of Contractor during the course of the negotiation or performance of this Contract or any Agreement is confidential to Company, shall be used by Contractor for the sole purpose of providing services to Company under this Contract and shall not be disclosed by Contractor to any third party without the prior written consent of Company. All Confidential Information shall become and remain the property of Company and shall be deemed to have been entrusted to Contractor only for the limited purposes of this Contract, and Contractor will not, without the prior written consent of Company use, reproduce or copy, or permit the use, reproduction or copying of any Confidential Information; provided, however, Contractor may make adequate reproductions and copies for the purpose of carrying out the Work. All Confidential Information received or created by Contractor and any reproductions or copies thereof made by Contractor shall be delivered to Company at any time prior to termination of this Contract at the request of Company and shall be delivered to Company immediately upon termination of this Contract. Nothing contained in this Contract or in any disclosures made by Company under it shall be construed to grant to Contractor any license or other rights of Company in or to Confidential Information or under any copyright or patent which has been or may in the future be issued with respect to Confidential Information.

B. Contractor will not be bound by the provisions of this Article XXIX with respect to information which:

(1) was available to the public prior to receipt of such information by Contractor pursuant to any Agreement; or

(2) becomes available to the public subsequent to receipt of such information by Contractor pursuant to any Agreement and through no fault of Contractor; or

(3) was already in Contractor's possession and not acquired, either directly or indirectly, from Company under an obligation of confidentiality; or

(4) subsequently is obtained from a third party who is lawfully in possession of such information and who is not under a contractual or fiduciary obligation to Company or another person with respect to such information.

XXX. TENSE, GENDER AND NUMBER. Unless expressly provided otherwise, the use in this Contract of the past, present or future tense shall include the others, the masculine, feminine or neuter gender shall include the others, and the singular or plural number shall include the other.

XXXI. CONSTRUCTION. The titles to the articles of this Contract are for the convenience of the parties, only; they are not a part of the Contract and shall have no effect in the construction or interpretation of it. In the event of a dispute over the meaning or application of any Agreement, it shall be construed fairly and reasonably and neither more strongly for nor against either party.

XXXII. EXHIBITS. The Exhibits checked below and attached to this Contract are incorporated in and made a part of it for all purposes:

_X_	Exhibit I	Scope of Work
_X_	Exhibit II	Price & Invoicing
_X_	Exhibit III	Drug, Alcohol & Illegal Items Policy
_X_	Exhibit IV	Insurance
___	Exhibit V	Schedule
___	Exhibit VI	Drawings & Attachments
___	Exhibit VII	General Requirements
___	Exhibit VIII	Consultant Terms & Conditions
___	Exhibit IX	Purchase Terms & Conditions

In the event of any conflict between the foregoing terms of this Contract and the Exhibits, the foregoing terms shall prevail.

EPCO HOLDINGS, INC.

By: _____

Title: Senior Vice President

ANDERSON POLLUTION CONTROL, INC.

By: Thomas Anderson

Title: Sect / Treasurer

EXHIBIT I

SCOPE OF WORK

Contractor's Work will be: **TO PERFORM ENVIRONMENTAL CLEANUP, EMERGENNYY RESPONSE, REMEDIATOGN SERVICES, AND PIPELINE MAINTENANCE.**

EXHIBIT II

PRICE AND INVOICING

TO BE DETERMINED AT THE TIME THE ORDER IS PLACED.

EXHIBIT III

EPCO HOLDINGS, INC.
POLICY

ILLEGAL AND UNAUTHORIZED ITEMS AT OPERATIONAL FACILITIES AND IN OPERATIONAL VEHICLES

Company is committed to providing a safe working environment for its employees, visitors, and contract personnel. THE POSSESSION, USE, SALE, TRANSFER, RECEIPT OR PRESENCE AND BEING UNDER THE INFLUENCE OF DANGEROUS DRUGS OR CONTROLLED SUBSTANCES (EXCEPT AS LAWFULLY PRESCRIBED FOR THE PERSON IN POSSESSION), DRUG PARAPHERNALIA OR ALCOHOLIC BEVERAGES ARE FORBIDDEN AT, UPON OR WITHIN COMPANY OPERATIONAL FACILITIES AND OPERATIONAL VEHICLES.

Operational facilities include the entire premises of all terminals, processing plants, loading racks, pipelines, storage, warehouses, garages, shops, field worksites and retail locations. Operational vehicles include all vehicles (tractors, trailers, transports and pickups) bearing an external company name, logo, trade name, trademark or placard. Dangerous drugs include all drugs and devices, which are prohibited by Federal or State law from being dispensed without a prescription. Controlled substances include cocaine, marijuana, narcotics and all other drugs and materials which are controlled under Federal or State law. Drug paraphernalia includes roach clips, gram scales and any other property or material, which Company deems is intended or has been adapted or modified for drug use. Alcoholic beverages include liquor, beer and wine, except liquor, beer and wine stored in passenger vehicles. "Under the influence" means having detectable levels of dangerous drugs, controlled substances or alcohol in the breath, blood or urine.

Employees will not be permitted to work while under the influence of drugs or alcohol. Individuals who appear to be unfit for duty will be released from duty and may be subject to a physical examination at a designated medical facility. Refusal to comply with a fitness-for-duty examination may result in disciplinary action up to and including DISCHARGE.

Any employee who uses or is found to be in possession or under the influence of these illegal or unauthorized items at, upon or within these Company facilities or vehicles will be relieved from duty immediately and subject to disciplinary action up to and including DISCHARGE. Others who use or are found to be in possession or under the influence of such items at, upon or within these Company facilities or vehicles will be removed from Company's vehicles and facilities and denied future admission to Company property.

Company reserves the right to search, inspect and submit to laboratory testing persons and property found at, upon or within Company facilities or vehicles. Entry onto operational facilities or vehicles constitutes consent to searches or inspections. Any employee who refuses to submit his person or property to search, inspection or testing or who refuses to consent to the release of medical information in connection with a company physical examination or relevant to any accident, injury or incident involving the employee and relating to the safety, health or welfare of the employee, other employees or the public will be relieved from duty immediately and subject to disciplinary action up to and including DISCHARGE; others at, upon or within Company facilities or vehicles who refuse to submit their persons or property to search, inspection or testing will be removed from and denied future admission to Company property.

Off-the-job illegal drug use which could adversely affect an employee's job performance or which could jeopardize the safety of other employees, the public, or company facilities, or where such usage adversely affects the public trust in the ability of the company to carry out its responsibilities, is also cause for disciplinary action, up to and including DISCHARGE. Employees who are arrested for off-the-job drug activity may be considered in violation of this policy. In deciding what action to take, the company will take into consideration the nature of the charges, the employee's present assignment and record with the company, and the impact of the employee's arrest upon the conduct of the company's business.

Employees who wish to report drug or alcohol use in violation of this policy should contact the appropriate Vice President in charge of their group or the Vice President -- Human Resources, directly. The company will make every effort to protect anonymity, and such information will be treated in confidence.

Company requires that all prescriptions and over-the-counter medications at Company operational facilities and Company operational vehicles be in original containers with prescriptions showing the name and doctor of the person in possession. As an employee, you have a responsibility to determine whether or not the use of a legal prescription may present a safety risk at work. You should ensure that your physician is aware of the nature of your job. Employees who feel, or who have been informed, that the use of a legal prescription or over-the-counter medicine may affect the employee's job performance, or may affect the safety of co-workers, members of the public or the employee, must report such drug use to the Safety Department so the Company can evaluate whether the employee may continue to work. The use or being under the influence of any legally prescribed drug or over-the-counter medicine is prohibited to the extent that such use or influence may affect the safety of co-workers or members of the public, the employee's job performance or the safe or efficient operation of the Company's facilities or vehicles.

Comment [1]: Enterprise Products Company
Page Break

EXHIBIT IV

INSURANCE

1. Certificate Holder Definition

"Certificate Holder" shall mean EPCO Holdings, Inc., Enterprise Products Partners L.P., , Enterprise Products Operating L.P., EPCO, Inc. , Texas Eastern Products Pipeline Company, LLC and each of their parent, subsidiary and affiliated companies, partners and joint venturers, and each owner or joint owner of any equipment or facility operated by them.

2. Form of Additional Insured Endorsement

It is agreed that such insurance as is afforded by the policy shall apply to EPCO Holdings, Inc. , Enterprise Products Partners L.P., Enterprise Products Operating L.P.,, EPCO, Inc., Texas Eastern Products Pipeline Company, LLC. and each of their parent, subsidiary and affiliated companies, partners and joint venturers, and each owner or joint owner of any facility operated by one or more of them, as their interests may appear, to whom the named insured is obligated by contract to provide such insurance, but only to the extent of coverage required by such contracts as respects operations performed in connection with the insured and only if such contract was agreed to in writing or orally by the named insured or his/its representatives prior to the occurrence of any loss under such contract.

3. Form of Certificate Holder Notation

EPCO Holdings, Inc. Enterprise Products Partners L.P., Enterprise Products Operating L.P., EPCO, Inc. , Texas Eastern Products Pipeline Company, LLC. and each of their parent, subsidiary and affiliated companies, partners and joint venturers, and each owner or joint owner of any facility operated by one or more of them, as their interests may appear, arising from the work to be performed under oral or written contract.

P. O. Box 4324
Houston, Texas 77210
Attention: Corporate Risk

4. Additional Terms for Work to be Performed in Louisiana

In all cases where Contractor's employees (defined to include Contractor's direct, borrowed, special or statutory employees) are covered by Louisiana Worker's Compensation Act, LSA-R.S. 23:1021 *et seq.*, Company and Contractor agree that all Work performed by Contractor and its employees pursuant to any Agreement is an integral part of and essential to the ability of Company/Certificate Holder to generate Company/Certificate Holder's goods, products and services, for purposes of LSA-R.S. 23:1061(A)(1). Furthermore, Company and Contractor agree that Company/Certificate Holder is the principal or statutory employer of Contractor's employees; provided, however, this provision is included for the sole purpose of establishing a statutory employer relationship to obtain the benefits of LSA-R.S. 23:1031(C-E) and 23:1061(A) and is not intended to create an employer/employee relationship for any other purpose. Irrespective of Company/Certificate Holder's status as the statutory employer or special employer [as defined in LSA-R.S. 23:1031(C)] of Contractor's employees, Contractor shall remain primarily responsible for the payment of Louisiana worker's compensation benefits to its employees and shall not be entitled to seek contribution for any such payments from Company/Certificate Holder.

Contractor agrees that its worker's compensation insurance and employer's liability insurance policies shall be endorsed to designate Certificate Holder as an alternate employer and as a principal and statutory employer or borrowing employer.

FIGURE A.4 (Cont'd)

ECO-LOGICAL

EPCO, INC. AGREEMENT MANAGEMENT AND TRACKING SOLUTION ATRACK

Logged into (Prod) as *NJSchroeder*

Home Search ▸ Help ▸ My RAF's

Approval Center [SUBSCRIBE]

Contract: 4756 Contract Status: Approved

ECO-LOGICAL ENVRIONMENTAL SERVICES INC

ISNetworld Information [>>]

Contractor Grade	Eco-Logical Environmental Services ISN_Number	DOT D&A	Non DOT D&A	OQ	Expired	Updated
B	400-128570	SATISFACTORY	SATISFACTORY	N	N	7/31/2010

Safety
Current Status: Approved
Select Status: Approved
Review Date: 12/4/2008
☐ VP Approved

D&A Compliance
Current Status: Approved
Select Status: Approved
Compliance Date: 11/11/2010

Corporate Risk
Current Status: Approved
Select Status: Approved

Legal
Current Status: Approved
Select Status: Approved

Contract Management
Current Status: Approved
Select Status: Approved
External Contract#:
User Category:
Tied to Contract#:
Red Flag
☐ Yes
☐ Send Status Notification

Red Flag Comments...

Scope of Work

EMERGENCY RESPONSE. SERVICES INCLUDING BUT NOT LIMITED TO CONSULTING, GROUNDWATER AND SOIL REMEDIATION.

Notes

Contract Information

ContractForm:
☑ Standard ☐ Modified ☐ Other

Company: EPCO HOLDINGS
Originator: LINDA APARICIO
OriginatorEmail:
StrategicAgreement: ☐ Yes ☑ No

ContractType: Evergreen
ContractDate: 11/6/2006
StartDate:
EndDate:

Services rendered for this contract will be conducted... ☐ Onshore ☐ Offshore

Contractor Information

ISN_Number:	400-128570
SupplierCode:	53604
ContractorAlias:	
Contractor:	ECO-LOGICAL ENVRIONMENTAL SERVICES INC
Addr1:	200 MARKET STREET
Addr2:	
City:	MIDLAND State: TEXAS Zip: 79703
Phone:	800-375-0100 Fax: 432-520-*7737 Email: anna@eco-logical.com
WebPage:	www.eco-logical.com

Audit Info

Last Audit Info and Date:

No Audit Date Detected

Record ID: **4756**

FIGURE A.4 (Cont'd)

TALON LPE

EPCO, INC. AGREEMENT MANAGEMENT AND TRACKING SOLUTION ATRACK

Logged into (Prod) as *NJSchroeder*

Home Search ▸ Help ▸ My RAF's

Approval Center [SUBSCRIBE]

Contract: 4650 Contract Status: Approved

TALON LPE

ISNetworld Information [>>]

Contractor Grade	Talon/LPE, LTD ISN_Number	DOT D&A	Non DOT D&A	OQ	Expired	Updated
B	400-130251			N	N	11/9/2010

Safety
Current Status: Approved
Select Status: Approved
Review Date: 7/27/2006
☐ VP Approved

D&A Compliance
Current Status: Approved
Select Status: Approved
Compliance Date: 5/16/2008

Corporate Risk
Current Status: Approved
Select Status: Approved

Legal
Current Status: Approved
Select Status: Approved

Contract Management
Current Status: Approved
Select Status: Approved
External Contract#:
User Category:
Tied to Contract#:
Red Flag
☐ Yes
☐ Send Status Notification

Red Flag Comments...

Scope of Work

ENVIRONMENTAL SERVICES INCLUDING BUT NOT LIMITED TO; REMEDIATION PROJECTS FOR THE MID-AMERICA AND SEMINOLE PIPELINES, ENVIRONMENTAL AUDITS, DUE DILIGENCE REVIEWS, ENVIRONMENTAL PERMITS PREPARATION AND WASTE DISPOSAL.

Notes

Contract Information

ContractForm:
☑ Standard ☐ Modified ☐ Other

Company: EPCO HOLDINGS
Originator: ALVARO PARRA
OriginatorEmail:
StrategicAgreement: ☐ Yes ☑ No

ContractType: Evergreen
ContractDate: 6/14/2006
StartDate:
EndDate:

Services rendered for this contract will be conducted... ☐ Onshore ☐ Offshore

Contractor Information

ISN_Number:	400-130251
SupplierCode:	52740
ContractorAlias:	TALON DRILLING, LP D/B/A
Contractor:	TALON LPE
Addr1:	921 NORTH BIVINS
Addr2:	
City:	AMARILLO State: TEXAS Zip: 79107
Phone:	512-913-2987 Fax: 210-568-2191 Email: lcurrie@talonlpe.com
WebPage:	www.llano-permian.com

Audit Info

Last Audit Info and Date:

No Audit Date Detected

Record ID: **4650**

APPENDIX B

WORST CASE DISCHARGE ANALYSIS AND SCENARIO

Page

INTRODUCTION

This appendix identifies potential causes for oil discharges and discusses the response efforts that are necessary for successful mitigation. Included in this appendix are hypothetical scenarios for various types of spills that have the potential to occur along the system. It is anticipated that the Company will respond to spills in a consistent manner regardless of the location. Therefore, the guidelines discussed in this appendix will apply to all spills whenever possible.

DOT-PHMSA requires that pipeline operators calculate a worst case discharge amount for each response zone. The calculations and descriptions are as follows:

DOT- PHMSA Discharge Volume Calculation

- **Worst Case Discharge**
  The largest volume (Bbl) of the following:
  - *Pipeline's maximum release time (hrs), plus the maximum shutdown response time (hrs), multiplied by the maximum flow rate (bph), plus the largest line drainage volume after shutdown of the line section.*

  -- OR --

  - *Largest foreseeable discharge for the line section is based on the maximum historic discharge, if one exists, adjusted for any subsequent corrective action or preventive action taken.*

  -- OR --

  - *Capacity of the single largest breakout tank or battery of tanks within a single secondary containment system, adjusted for the capacity or size of the secondary containment system.*

Scenario Types

The occurrence of a Worst Case Discharge (WCD) could be the result of any number of scenarios along the pipeline system including:

- Piping rupture.
- Piping leak, under pressure and not under pressure.
- Explosion or fire.
- Equipment failure (e.g. pumping system failure, relief valve failure, or other general equipment relevant to operational activities associated with internal or external facility transfers).

The response actions to each of these scenarios are outlined in Section 3.1 and Figure 3.1. The response resources are identified in a quick reference format in Figure 2.6. Pipeline response personnel list/telephone numbers and other internal/external resources telephone numbers are detailed in Figures 2.2 and 2.5.

RESPONSE CAPABILITY SCENARIOS
SEMINOLE RESPONSE ZONE – RED LINE AND BLUE LINE

Red Line and Blue Line: (b) (7)(F)

Description

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.

The maximum historic discharge is not applicable for WCD covered by this plan. There are no breakout tanks associated with this pipeline; therefore, breakout tank calculations for WCD are also not applicable for this plan

The worst case discharge for the Seminole Zone Red and Blue Pipelines is (b) (7)(F) n. This line segment and worse case discharge volume is applicable for both the pipelines as this area experiences the highest throughput on each line. The worst case discharge volume is as follows:

Volume

This scenario would result in a release of (b) (7)(F) gasoline. The pipelines worst case discharge is calculated as:

(b) (7)(F)

Response Requirement

The Company has identified sufficient response resources, by contract or other approved means, to respond to a worst case discharge to the maximum extent practicable. These response resources include:

- Resources capable of arriving at the staging area within the applicable response level requirements for non-high volume areas (Level 1 = 12 hours; Level 2 = 36 hours; Level 3 = 60 hours).
- Resources capable of oil recovery in inclement weather conditions (i.e. heavy rain, snow, ice).

Notes:

- Contracted and manpower resources are detailed in Figure 2.6 and Appendix A.
- Telephone references are provided in Figures 2.2 and 2.5.

SEMINOLE RESPONSE ZONE - RED LINE AND BLUE LINE

Response Planning Volume Calculations

Location Data	
Location Type	Rivers and Canals
DOT - Area Type	Non-High Volume
WCD Product Type	Non-Persistent Oil
Product Group	1
Discharge Volumes/Calculations	
Worst Case Discharge - Based on EPA criteria (bbl)	(b) (7)(F)
Selected Calculation Factors (Based on EPA Tables)	
Removal Capacity Planning Volume - Percent Natural Dissipation	80%
Removal Capacity Planning Volume - Percent Recovered Floating Oil	10%
Removal Capacity Planning Volume - Percent Oil Onshore	10%
Emulsification Factor	1.0
Level 1 - On Water Oil Recovery Resource Mobilization Factor	15%
Level 2 - On Water Oil Recovery Resource Mobilization Factor	25%
Level 3 - On Water Oil Recovery Resource Mobilization Factor	40%
Response Planning Volume Calculation	
On-Water Recovery Volume (bbl)	5,564
Shoreline Recovery Volume (bbl)	5,564
Shoreline Cleanup Volume (bbl)	11,128

	Level 1	Level 2	Level 3
On-Water Recovery Cpcty (bbl/day)	834.6	1,391	2,225.6
On-Water Response Caps (bbl/day)	1,875	3,750	7,500
Additional Response Req'd (bbl/day)	0	0	0
Response Time (hrs)	12	36	60

APPENDIX C

EMERGENCY PREPLANNING

EMERGENCY PREPLANNING

Emergency preplanning is accomplished through safe operating procedures and maintenance procedures outlined in the Company Operations and Maintenance (O&M) Manual. The Company O&M Manual is designed to meet the requirements found in Title 49, Code of Federal Regulations, Part 195, Transportation of Hazardous Liquids by Pipeline.

C.1 LEAK DETECTION SYSTEMS

Leak detection systems utilized along the pipeline include:

C.1.A System-Level Indication

(b) (7)(F)

[redacted]

C.1.B Aerial Patrols

Aerial patrols of pipeline rights-of-ways are typically performed periodically as described in the O&M Manual. The pilot and/or observer shall notify Company personnel of all problems or potential problems observed on each line section flown.

C.1.C Continuing Secondary Surveillance

Continuing secondary surveillance is accomplished by operations and support departments, both Field and Corporate, through continuous review of all pipeline reports and records as described in the O&M Manual and initiating immediate action to prevent spills and correct hazardous conditions.

C.1.D On-Scene Observations

On-scene observation is accomplished utilizing regulatory-mandated and Company-implemented inspections, drills and surveys by Company operations and maintenance personnel. Valve inspections, pressure control device inspections and navigable waterway inspections are performed in accordance with requirements established to comply with federal and state regulations.

C.2 DISCHARGE PREVENTION SYSTEMS

Discharge prevention is accomplished through the following measures:

(b) (7)(F) [redacted]

- Discharge prevention is also accomplished through the use of general housekeeping procedures and leak inspection systems (see Appendix C.3).

C.3 LEAK INSPECTION SYSTEMS

Visual observations of facilities and pipelines are performed regularly during normal routine operations. When exposed portions of the pipeline are identified, visual observations are made to locate signs of corrosion leaks, coating loss or excessive wear. In cases of small leaks, pipeline clamps are used for temporary repair until a more permanent repair can be made. Records on all pipeline failures are kept maintained and are available to DOT/ PHMSA upon request.

Based on sound engineering judgment the pipeline is replaced or repaired as necessary.

C.3.A Visual Inspection

The pipeline and adjacent areas are visually inspected for leaks by either aerial observation or ground patrol with special attention given to locations where the pipeline crosses highways, railroad tracks, and bodies of water. These inspections will be conducted twenty six times a year not to exceed twenty one days apart.

C.3.B Integrity Testing

Integrity testing is performed periodically on pipelines and associated equipment as described in the O&M Manual.

C.3.C Cathodic Protection

Pipelines are coated and have cathodic protection. These pipelines are subject to periodic cathodic protection inspections.

C.3.D External Corrosion Control

Whenever buried portions of the pipeline are exposed for any reason, the pipe will be examined for evidence of external corrosion, coating deterioration, and cathodic protection effectiveness. If corrosion is found, a detailed evaluation will be performed to determine the extent of corrosion. Exposed portions of the pipeline are painted and/or coated for corrosion protection. Additional details can be found in the O&M Manual.

C.3.E Valve Maintenance

Valves and overpressure devices are subject to regular inspections as described in the O&M Manual.

APPENDIX D

TRAINING AND DRILLS

D.1 RESPONSE TEAM TRAINING

The Company provides training related to discharge prevention, testing and response, including measures to repair pipeline ruptures and mitigate discharges. The Training Methods address oil discharges from the pipeline from several perspectives: human health and safety, rupture control and repair operations, pollution control, and overall (crisis) management of the emergency.

The competency of each training program is closely monitored by the Training Section through observation of and/or participation in actual training sessions.

Through the various training methods described below The Company's training program is intended to ensure the following results:

That all personnel know:

- Their responsibilities under the Plan.
- The name, address and procedures for contacting the operator on a 24-hour basis.
- The name of, and procedures for contacting the Qualified Individual on a 24-hour basis.

That all reporting personnel know:

- The pipelines and response zone details for the affected area (Figure 1.3).
- The telephone number of the National Response Center and other required notifications (Section 2.0).
- The notification process. (Section 2.0).

That all response personnel know:

- The characteristics and hazards of the oil discharged (Section 3.0 and Appendix I - MSDS).
- The conditions that are likely to worsen emergencies, including the consequences of pipeline malfunctions, and the appropriate corrective actions.
- The steps necessary to control any accidental discharge of oil and to minimize the potential for fire, explosion, toxicity or environmental damage (Section 3.0).

Oil Spill Response Plan Review

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

D.1 RESPONSE TEAM TRAINING (Cont'd)

HAZWOPER (29 CFR 1910.120)

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

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

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

Incident Command System

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

Training Records

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

Training Records Maintenance

Emergency response training records are maintained at the Company's Houston Office in the EHS&T Training Group's records. Training records for response personnel will be maintained for as long as personnel have duties in this response plan.

D.1 RESPONSE TEAM TRAINING (Cont'd)

Contractor Training

The Company also recognizes that contract personnel must also have sufficient training to respond emergency response situations. The Company communicates this training need to its key contractors during contract negotiations and often specifically spells out this requirement in its contracts. The Company also tends to use well-known spill response contractors whose reputation and experience levels help ensure personnel who respond will be trained to appropriate levels.

Training Qualifications

As no formalized method of certifying training instructors has been provided by OSHA, the Company ensures the competency of its instructors and training organizations by selecting trainers and/or organizations with professional reputations and extensive hands-on and classroom experience in their subject matter. The Company personnel with responsibility to coordinate the training program also conduct periodic informal audits of training courses selected for The Company training program to ensure their suitability for the program.

D.2 RESPONSE TEAM EXERCISES

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

TRIENNIAL CYCLE		
Total Number	**Frequency**	**Exercise Type/Description**
12	Quarterly	QI Notification Exercise
3	Annually	Equipment Deployment Exercise *(Facility-owned equipment)*
3	Annual	Response Team Tabletop Exercise
3	Annual	Equipment Deployment Exercise *(facilities with OSRO-owned equipment)*
3	3 per Triennial Cycle	Unannounced Exercise *(not a separate exercise)* Actual response can be considered as an unannounced exercise. Credit can also be given for unannounced equipment deployment and Response Team tabletop exercises.
NOTES: 1) All response plan components must be exercised at least once in the Cycle. 2) TGLO Regulated facilities shall contact TGLO during annual Tabletop Exercise.		

D.2 RESPONSE TEAM EXERCISES (Cont'd)

Quarterly QI Notification Exercise

- **Scope:** Exercise communication between pipeline personnel and the QI(s) and/or designated alternate(s). At least once each year, one of the notification exercises should be conducted during non-business hours.

- **Objective:** Contact must be made with a QI or designated alternate, as identified in the Plan.

- **General:** All personnel receiving notification shall respond to the notification and verify their receipt of the notification. Personnel who do not respond should be contacted to determine whether or not they received the notification.

Annual Equipment Deployment Exercise (for operator and/or OSRO equipment)

- **Scope:** Demonstrate ability to deploy spill response equipment identified in the ICP.

  - May consist entirely of operator owned equipment, or a combination of OSRO and operator equipment.
  - The number of equipment deployment exercises conducted should be such that equipment and personnel assigned to each response zone are exercised at least one a year. If the same personnel and equipment respond to multiple zones, they need only exercise once per year. If different personnel and equipment response to various response zones, each must participate in an annual equipment deployment exercise.

- **Objective:** Demonstrate personnel's ability to deploy and operate response equipment. Ensure that the response equipment is in proper working order.

- **General:** The Facility may take credit for actual equipment deployment to a spill, or for training sessions, as long as the activities are properly documented.

Annual Response Team Tabletop Exercise

- **Scope:** Exercise the response team's organization, communication, and decision-making in managing a spill response. Each team identified within the plan must conduct an annual Response Team Tabletop Exercise.

- **Objective:** Exercise the response team in a review of the following:

  - Knowledge of the Plan.
  - Proper notifications.
  - Communications system.
  - Ability to access an OSRO.
  - Coordination of internal spill response personnel.
  - Review of the transition from a local team to a regional team.

D.2 RESPONSE TEAM EXERCISES (Cont'd)

Annual Response Team Tabletop Exercise (Cont'd)

- Ability to effectively coordinate response activity with the National Response System (NRS) Infrastructure.
- Ability to access information in the Area Contingency Plan.

- **General:** A minimum of one Response Team Tabletop Exercise in a triennial cycle will involve a Worst-Case Discharge scenario.

Government-Initiated Unannounced Exercise

- **Scope:** Demonstrate ability to respond to a worst case discharge spill event.

- **Objectives:** Designated emergency response team members should demonstrate adequate knowledge of their Response Plan and the ability to organize, communicate, coordinate, and respond in accordance with that plan.

- **General:** Maximum of 20 unannounced PHMSA exercises conducted annually for the pipeline industry as a whole. A single owner or operator will not be required to participate in a PHMSA-initiated unannounced exercise, if they have already participated in one within the previous 36 months.

Area Exercises

- **Objective:** The purpose of the area exercise is to exercise the entire response community in a particular area. An area is defined as "that geographic area for which a separate and distinct Area Contingency Plan has been prepared, as described in OPA 90." The response community includes the federal, state, and local government and industry. The area exercises are designed to exercise the government and industry interface for spill response.

- **General:** The goal is to ensure that all areas of the country are exercised triennially. All of the area exercises will be developed by an exercise design team. The exercise design team is comprised of representatives from the federal, state, and local government and industry. A lead plan holder would lead each area exercise. The lead plan holder is the organization (government or industry) that holds the primary plan that is exercised in the area exercise. The lead plan holder would have the final word on designing the scope and scenario of the exercise.

D.2 RESPONSE TEAM EXERCISES (Cont'd)

Exercise Documentation

- All exercises should be documented and maintained at the Region Office; documentation should specify:

  - The type of exercise;
  - Date and time of the exercise;
  - A description of the exercise;
  - The objectives met in the exercise;
  - The components of the response plan exercised; and
  - Lessons learned.

- Exercise documentation should be kept on file for the required length of time depending on the regulating agency three (3) years for the U.S. Coast Guard and the Pipeline and Hazardous Materials Safety Administration of five (5) years for the U.S. Environmental Protection Agency).

D.3 PURPOSE OF REVIEW AND EVALUATION

This section provides procedures and information useful to responders for post incident/exercise review and evaluation. Post incident/exercise reviews should be conducted in a timely manner following an incident/exercise. The Plan should be evaluated to determine its usefulness during the incident/exercise and appropriate revisions should be made. All incident/exercise documentation should be included in the Plan evaluation process.

Outline of Review

Given below are items a team composed of outside people knowledgeable in spill response and key members of the response teams should examine. These questions are intended as guidelines only; many other questions are likely to be appropriate at each stage of a critique.

- ***Detection***

  - Was the spill detected promptly?
  - How was it detected?
  - By whom?
  - Could it have been detected earlier? How?
  - Are any instruments or procedures available to consider which might aid in spill detection?

D.3 PURPOSE OF REVIEW AND EVALUATION (Cont'd)

Outline of Review (Cont'd)

- ***Notification***
  - Were proper procedures followed in notifying government agencies? Were notifications prompt?
  - Was management notified promptly?
  - Was management response appropriate?
  - Was the Pipeline owner/operator notified promptly? If so, why, how, and who? If not, why not?
- ***Assessment/Evaluation***
  - Was the magnitude of the problem assessed correctly at the start?
  - What means were used for this assessment?
  - Are any guides or aids needed to assist spill evaluation?
  - What sources of information were available on winds and on water currents?
  - Is our information adequate?
  - Was this information useful (and used) for spill trajectory forecasts? Were such forecasts realistic?
  - Do we have adequate information on product properties?
  - Do we need additional information on changes of product properties with time, i.e., as a result of weathering and other processes?
- ***Mobilization***
  - What steps were taken to mobilize spill countermeasures?
  - What resources were used?
  - Was mobilization prompt?
  - Could it have been speeded up or should it have been?
  - What about mobilization of manpower resources?
  - Was the local spill cooperative used appropriately?
  - How could this be improved?
  - Was it appropriate to mobilize the Pipeline owner/operator resources and was this promptly initiated?
  - What other corporate resources are available and have they been identified and used adequately?

D.3 PURPOSE OF REVIEW AND EVALUATION (Cont'd)

Outline of Review (Cont'd)

- ***Response - Strategy***
  - Is there an adequate spill response plan for the location?
  - Is it flexible enough to cope with unexpected spill events?
  - Does the plan include clear understanding of local environmental sensitivities?
  - What was the initial strategy for response to this spill?
  - Is this strategy defined in the spill plan?
  - How did the strategy evolve and change during this spill and how were these changes implemented?
  - What caused such changes?
  - Are there improvements needed? More training?
- ***Response - Resources Used***
  - What resources were mobilized?
  - How were they mobilized?
  - How did resource utilization change with time? Why?
  - Were resources used effectively?
    - Contractors
    - Government agencies
    - Company resources
    - Cooperatives
    - Volunteers
    - Consultants
    - Other (e.g., bird rescue centers)
  - What changes would have been useful?
  - Do we have adequate knowledge of resource availability?
  - Do we have adequate knowledge of waste disposal capabilities?
- ***Response - Effectiveness***
  - Was containment effective and prompt?
  - How could it have been improved?
  - Should the location or the local cooperative have additional resources for containment?
  - Was recovery effective and prompt?
  - How could it have been improved?
  - Should the location or the local cooperative have additional resources for recovery of spilled product?

D.3 PURPOSE OF REVIEW AND EVALUATION (Cont'd)

Outline of Review (Cont'd)

- ***Response - Effectiveness (Cont'd)***
  - Was contaminated equipment disposed of promptly and safely?
  - Was there adequate in-house product separation, recovery, and disposal?
  - How could it have been improved?
  - Was there adequate outside disposal resources available?

- ***Command Structure***
  - Who was initially in charge of spill response?
  - What sort of organization was initially set up?
  - How did this change with time? Why?
  - What changes would have been useful?
  - Was there adequate surveillance?
  - Should there be any changes?
  - Were communications adequate?
  - What improvements are needed? Hardware, procedures, etc.
  - Was support from financial services adequate? Prompt?
  - Should there be any changes?
  - Is more planning needed?
  - Should financial procedures be developed to handle such incidents?

- ***Measurement***
  - Was there adequate measurement or estimation of the volume of product spilled?
  - Was there adequate measurement or estimation of the volume of product recovered?
  - Was there adequate measurement or estimation of the volume of product disposed of?
  - Should better measurement procedures be developed for either phase of operations?
  - If so, what would be appropriate and acceptable?

- ***Government Relations***
  - What are the roles and effects of the various government agencies which were involved?
  - Was there a single focal point among the government agencies for contact?

D.3 PURPOSE OF REVIEW AND EVALUATION (Cont'd)

Outline of Review (Cont'd)

- ***Government Relations (Cont'd)***
  - Were government agencies adequately informed at all stages?
  - Should there have been better focus of communications to the agencies?
  - Were government agencies adequately informed at all stages?
  - Were too many agencies involved?
  - Are any changes needed in procedures to manage government relations?
  - Examples of affected U.S. agencies (there may be others):
    - U.S. Coast Guard
    - Environmental Protection Agency
    - National Oceanographic Atmospheric Administration
    - Dept of Fish and Wildlife
    - State Parks
    - Harbors and Marinas
    - States
    - Cities
    - Counties
  - Was there adequate agreement with the government agencies on disposal methods?
  - Was there adequate agreement with the government agencies on criteria for cleanup?
  - How was this agreement developed?
  - Were we too agreeable with the agencies in accepting their requests for specific action items (e.g., degree of cleanup)?
  - Should there be advance planning of criteria for cleanup, aimed at specific local environmentally sensitive areas? (Such criteria should probably also be designed for different types of product.)

- ***Public Relations***
  - How were relations with the media handled?
  - What problems were encountered?
  - Are improvements needed?
  - How could public outcry have been reduced? Was it serious?
  - Would it be useful to undertake a public information effort to "educate" reporters about product and effects to it if spilled?
  - These areas should be investigated shortly after the incident to assure that actions taken are fresh in peoples' minds.

APPENDIX E

EVACUATION PLAN

E.1 EMERGENCY EVACUATION PROCEDURES

Minimizing employee and public exposure to hazardous substances is the highest priority activity at a pipeline emergency site. Often this must be done by notifying and/or evacuating employees and nearby residents (or assisting local officials with this activity) and/or by halting or diverting traffic on roads and railroads from the emergency area.

This section is a general procedure for response to a vapor cloud or other hazardous vapor release situation and is intended for use in conjunction with Fire Plans, Site Specific Plans, Site Safety & Health Plans, and other plans and procedures applicable to the work area.

In the event that a hazardous vapor situation is detected, evacuation of all people within the affected area may be the highest priority course of action depending on the circumstances. Large-scale evacuations may require the efforts of the entire Response Team and/or assistance from local emergency responders, again depending on site conditions. Phone numbers for local emergency responders are located in Section 2.0.

E.1.A Isolation of Potential Emergency Site

For all potential emergency situations, isolation of the area affected by employees and the general public will always be an immediate priority. Since each emergency is different, the size of the area to be isolated and the method of isolation will vary on a case by case basis.

In general, fenced pipeline installations such as pump stations can be isolated by controlling traffic at the installation's main gate. For situations on the pipeline right-of-way, the Response Team must quickly determine the size of the area potentially affected and work closely with local responders to make every effort to control all access to the area by road, rail or footpath.

In general, a potential emergency situation will be most easily isolated through the prompt enlistment of help from local responders (police, fire, etc.) to help control an area other than a fenced pipeline facility. Section 2.0 contains listings of how to contact these personnel.

E.1.B Pipeline Facility Evacuations

It is often difficult to determine when the quantity of vapors present constitute a hazard severe enough to warrant shutdown of operations and maintenance and the evacuation of the work site or pipeline, even when hazardous atmosphere detectors are in use.

Employees must ultimately use their own judgment based on the available information, in addition to previous experience and training, in making this decision. In all cases these judgments should be conservative, i.e., they should err on the side of safety and caution.

<u>The protection of human life must always take precedence over the protection of physical property or equipment.</u>

E.1 EMERGENCY EVACUATION PROCEDURES (Cont'd)

E.1.C Remote System Locations; Right-of-Way Locations

- Pipeline Control or the appropriate supervisor responsible for the remote location or line section will immediately shut down the appropriate lines and isolate the location to the extent possible by closing the appropriate remotely controlled block valves.

- Pipeline Control or the appropriate supervisor will notify the QI to start the response to the event. Dependent on the situation, the QI will send the appropriate personnel to the affected location to investigate. If an event is reported from the right-of-way, the QI will contact the appropriate pipeline operator who will be responsible for closing manual line block valves.

- Personnel responding to the affected location should always make an initial assessment of the site at a safe distance from the likely source point of the release. If the source point cannot be isolated without entering a vapor cloud or other hazardous situation, the investigating personnel should stay out of the hazardous area. A call for immediate assistance should be made to Pipeline Control and to the QI to begin notification of the appropriate members of the ERT, who are properly equipped to approach and isolate a release of this nature.

- The QI has responsibility for contacting the appropriate local officials for assistance in evacuating and isolating all persons from the affected area and controlling traffic and spectators if needed.

E.2 EVACUATIONS INVOLVING THE GENERAL PUBLIC

E.2.A Specific Procedure

- The Company's acting On-Scene Commander first assesses the incident and determines it is necessary to evacuate the public from the immediate affected area (local officials should be included in this decision making if time permits.

- Coordination of evacuation efforts is the responsibility of the On-Scene Commander, or the person assigned as the Liaison Officer.

- If the incident involves injured persons, refer to the appropriate Enterprise Emergency Response Plan.

- Local authorities such as the police, highway patrol and fire departments should be pressed into service assisting an evacuation, with the Company's On-Scene Commander or Liaison Officer acting as direct liaison to these officials.

E.2 EVACUATIONS INVOLVING THE GENERAL PUBLIC (Cont'd)

E.2.A Specific Procedure (Cont'd)

- All nearby occupied dwellings should then be visited and the inhabitants informed of the dangers as soon as possible. Evacuation instructions to residents must insist that all open flames including pilot lights and gas burners be extinguished if possible.

- Conduct evacuation on foot if necessary.

- Warn all evacuees against activities such as smoking, operating motor vehicles, using spark-producing appliances, etc. The Company should attempt to render whatever assistance is necessary to the evacuees.

- Keep the QI and/or Safety Officer informed of any evacuation efforts so they may pass along the latest information regarding such actions to other support personnel.

- In the interest of safety, the media and other members of the general public may need to be utilized to quickly inform people in the immediate area of an ongoing evacuation effort.

- Members of the press should be advised that electronic equipment such as camera lights and flashes can be potential sources of ignition when explosive vapors are present.

E.2.B Traffic Control

If an incident occurs near a road or railroad, local traffic may need to be halted or diverted from the immediate area. The assistance of local authorities should be solicited to enforce any necessary detours of local traffic until the hazardous situation can be stabilized. Railroads should be notified so they can halt rail traffic.

E.2.C Notification of Public Officials

The Company must be prepared to coordinate the Company's response to emergencies with public officials as appropriate. The QI or other appointee will interface with public officials on the appropriate seniority levels who are concerned about an emergency response in progress. The QI will meet directly with onsite incident commanders from other agencies in order to best coordinate response efforts. The Liaison Officer will act as Company liaison with various local emergency responders during the incident. The Environmental Situation Chief will act as liaison with federal and state-level environmental responders if necessary. The Safety Officer shall act as liaison with OSHA representatives if necessary.

APPENDIX F

DISPOSAL PLAN

F.1 OVERVIEW

A major oil spill response would generate significant quantities of waste materials ranging from oily debris and sorbent materials to sanitation water and used batteries. All these wastes need to be classified and **segregated** (i.e., oily, liquid, etc.), transported from the site, and treated and/or disposed of at approved disposal sites. Each of these activities demands that certain health and safety precautions be taken, which are strictly controlled by federal and state laws and regulations. This section provides an overview of the applicable state regulations governing waste disposal, and a discussion of various waste classification, handling, transfer, storage, and disposal techniques. It is the responsibility of the Environmental Unit to manage waste disposal needs during an oil spill cleanup.

F.2 WASTE CLASSIFICATION

Oily - Liquid Wastes

Oily liquid wastes (i.e., oily water and emulsions) that would be handled, stored, and disposed of during response operations are very similar to those handled during routine storage and transfer operations. The largest volume of oily liquid wastes would be produced by recovery operations (e.g., through the use of vacuum devices or skimmers). In addition, oily water and emulsions would be generated by vehicle operations (e.g., spent motor oils, lubricants, etc.), and equipment cleaning operations.

Non-Oily - Liquid Wastes

Response operations would also produce considerable quantities of non-oily liquid wastes. Water and other non-oily liquid wastes would be generated by the storage area and stormwater collection systems, vessel and equipment cleaning (i.e., water contaminated with cleaning agents), and office and field operations (i.e., sewage, construction activities).

Solid Wastes

A solid waste is defined as any discarded material provided that it is not specifically excluded under the regulations. These exclusions cover materials such as domestic sewage and mixtures of sewage discharged through a sewer system or industrial wastewater point source discharges.

A discarded material is any material which is abandoned (disposed of, burned or incinerated) or accumulated, stored or treated prior to being abandoned. A discarded material is also any material recycled or any material considered inherently wastelike. Recycled material is considered solid waste when used in a manner constituting disposal, placed on land or burned for energy recovery.

A solid waste may be considered a hazardous waste. A solid waste, as defined above, may be a hazardous waste if it is not excluded from regulation and is either a listed hazardous waste or exhibits the characteristics of a hazardous waste. A solid waste exhibits the characteristics of a hazardous waste if it exceeds the thresholds established in determining the following:

1) ignitability
2) corrosivity
3) reactivity
4) toxicity

F.2 WASTE CLASSIFICATION (Cont'd)

Solid Wastes (Cont'd)

A solid waste may also become a hazardous waste if it is mixed with a listed hazardous waste or, in the case of any other waste (including mixtures), when the waste exhibits any of the characteristics identified above.

Oily - Solid/Semi-Solid Wastes

Oily solid/semi-solid wastes that would be generated by containment and recovery operations include damaged or worn-out booms, disposable/soiled equipment, used sorbent materials, saturated soils, contaminated beach sediments, driftwood, and other debris.

Non-Oily - Solid/Semi-Solid Wastes

Non-oily solid/semi-solid wastes would be generated by emergency construction operations (e.g., scrap, wood, pipe, and wiring) and office and field operations (i.e., refuse). Vessel, vehicle, and aircraft operations also produce solid wastes.

F.3 WASTE HANDLING

A primary concern in the handling of recovered oil and oily debris is contaminating unaffected areas or recontaminating already cleaned areas. Oily wastes generated during the response operations would need to be separated by type and transferred to temporary storage areas and/or transported to incineration or disposal sites. Proper handling of oil and oily wastes is imperative to ensure personnel health and safety.

Safety Considerations

Care shall be taken to avoid or minimize direct contact with oily wastes. All personnel handling or coming into contact with oily wastes shall wear protective clothing. A barrier cream can be applied prior to putting on gloves to further reduce the possibility of oily waste absorption. Safety goggles shall be worn by personnel involved in waste handling activities where splashing might occur. Any portion of the skin exposed to oily waste should be washed with soap and water as soon as possible. Decontamination zones should be set up during response operations to ensure personnel are treated for oil exposure.

Waste Transfer

During response operations, it may be necessary to transfer recovered oil and oily debris from one point to another several times before the oil and oily debris are ultimately recycled, incinerated or disposed of at an appropriate disposal site. Depending on the location of response operations, any or all of the following transfer operations may occur:

- From portable or vessel-mounted skimmers into flexible bladder tanks, storage tanks of the skimming vessel itself, or a barge.
- Directly into the storage tank of a vacuum device.
- From a skimming vessel or flexible bladder to a barge.

F.3 WASTE HANDLING (Cont'd)

- From a vacuum device storage tank to a barge.
- From a barge to a tank truck.
- From a tank truck to a processing system (e.g., oil/water separator).
- From a processing system to a recovery system and/or incinerator.
- Directly into impermeable bags that, in turn, are placed in impermeable containers.
- From containers to trucks.

There are four general classes of transfer systems that may be employed to affect oily waste transfer operations:

- **Pumps:** Rotary pumps, such as centrifugal pumps, may be used when transferring large volumes of oil, but they may not be appropriate for pumping mixtures of oil and water. The extreme shearing action of centrifugal pumps tends to emulsify oil and water, thereby increasing the viscosity of the mixture and causing low, inefficient transfer rates. The resultant emulsion would also be more difficult to separate into oil and water fractions. Lobe or "positive displacement" pumps work well on heavy, viscous oils, and do not emulsify the oil/water mixture. Double-acting piston and double acting diaphragm pumps are reciprocating pumps that may also be used to pump oily wastes.

- **Vacuum Systems**: A vacuum truck may be used to transfer viscous oils but they usually pick up a very high water/oil ratio.

- **Belt/Screw Conveyors:** Conveyors may be used to transfer oily wastes containing a large amount of debris. These systems can transfer weathered debris laden oil either horizontally or vertically for short distances (i.e., 10 feet) but are bulky and difficult to set up and operate.

- **Wheeled Vehicles:** Wheeled vehicles may be used to transfer liquid wastes or oily debris to storage or disposal sites. These vehicles have a limited transfer volume (i.e., 100 barrels) and require good site access.

Table F-1 provides a comparative evaluation of 16 types of transfer systems that could be available for transfer operations.

F.4 WASTE STORAGE

Interim storage of recovered oil, oily and non-oily waste would be considered to be an available means of holding the wastes until a final management method is selected. In addition, the segregation of wastes according to type would facilitate the appropriate method of disposal. The storage method used would depend upon:

- The type and volume of material to be stored.
- The duration of storage.
- Access.

F.4 WASTE STORAGE (Cont'd)

During an oil spill incident, the volume of oil that can be recovered and dealt with effectively depends upon the available storage capacity. Typical short-term storage options are summarized in Table F-2. The majority of these options can be used either onshore or offshore.

If storage containers such as bags or drums are used, the container must be clearly marked and/or color-coded to indicate the type of material/waste contained and/or the ultimate disposal option. Bladder or pillow tanks would be acceptable, if the available space can support the weight of both the container and the product.

Fuel barges may be the best option for temporary storage of oil recovered in open waters. Depending on size, these vessels may be able to hold up to 6,000 barrels of oil and water. The barge deck can be used as a platform for operating oil spill clean-up equipment and storing containment boom.

Empty barges have four to six feet draft which would increase when these barges are filled with oil or loaded with cargo. Consequently, they may not be able to enter shallow, nearshore waters.

It may be difficult to offload recovered oil stored inside barges. Due to natural forces which affect spilled oil, recovered oil may be very viscous or emulsified, rather than free-flowing. It may be necessary to use steam to heat viscous oil before pumping it from the barge.

Steel or rubber tanks can be used to store oil recovered near the shoreline. To facilitate offloading, demulsifiers may be used to break emulsions prior to placing the recovered substance into the barges or storage tanks.

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

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

F.4 WASTE STORAGE (Cont'd)

Temporary storage sites should use the best achievable technology to protect the environment and human health. They should be set up to prevent leakage, contact, and subsequent absorption of oil by the soil. The sites should be bermed (1 to 1.5 meters high) and double lined with plastic or visqueen sheets 6-10 millimeters or greater in thickness, without joints, prior to receiving loose and bagged debris. The edges of the sheet should be weighted with stones or earth to prevent damage by wind, and the sheet should be placed on a sand layer or an underfelt thick enough to prevent piercing. A reinforced access area for vehicles at the edge of the site should be provided. In addition, the oily debris should be covered by secured visqueen or tarps and an adequate stormwater runoff collection system for the size and location of the site would be utilized. Additionally, the sites should be at least 3 meters above mean sea level.

Oily debris can be hauled to approved temporary storage sites in visqueen lined trucks or other vehicles. Burnable, non-burnable, treatable and re-usable materials can be placed in well defined separate areas at temporary storage sites.

When the last of the oily debris leaves a temporary storage site, the ground protection would be removed and disposed of with the rest of the oily debris. Any surrounding soil which has become contaminated with oil would also be removed for disposal or treatment. If the soils were removed for treatment, they may be replaced if testing proves acceptable levels have been achieved. Treatment and remediation is encouraged when feasible. The temporary storage should be returned to its original condition.

F.5 WASTE DISPOSAL

Techniques for Disposal of Recovered Oil

Recovery, reuse, and recycling are the best choices for remediation of a spill, thereby reducing the amount of oily debris to be bermed onsite or disposed of at a solid waste landfill. Treatment is the next best alternative, but incineration and burning for energy recovery have more options within the state. There are some limitations and considerations in incinerating for disposal. Environmental quality of incineration varies with the type and age of the facility. Therefore, when incineration becomes an option during an event, local air quality authorities would be contacted for advice about efficiency and emissions of facilities within their authority. Approval of the local air authorities is a requirement for any incineration option. Landfilling is the last option. Final disposal at a solid or dangerous waste landfill is the least environmentally sound method of dealing with a waste problem such as oily debris.

During an oil spill incident, the Company would consult with the federal and state On Scene Coordinator (OSC) to identify the acceptable disposal methods and sites appropriately authorized to receive such wastes. the Company maintains a list of approved disposal sites that satisfy local, state, and federal regulations and company requirements. This identification of suitable waste treatment and disposal sites would be prepared by the Environmental Unit in the form of an Incident Disposal Plan which must be authorized by the U.S. Coast Guard and/or the EPA. An Incident Disposal Plan would include predesignated interim storage sites, segregation strategies, methods of treatment and disposal for various types of debris, and the locations/contacts of all treatment and disposal site selections. Onsite treatment/disposal is preferred.

F.5 WASTE DISPOSAL (Cont'd)

In order to obtain the best overall Incident Disposal Plan, a combination of methods should be used. There is no template or combination of methods that can be used in every spill situation. Each incident should be reviewed carefully to ensure appropriate combinations of disposal methods are employed.

The different types of wastes generated during response operations would require different disposal methods. To facilitate the disposal of wastes, they should be separated by type for temporary storage, transport and disposal. Table F-3 lists some of the options that would be available to segregate oily wastes. The table also depicts methods that may be employed to separate free and/or emulsified water from the oily liquid waste.

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

Recycling

This technique entails removing water from the oil and blending the oil with uncontaminated oil. Recovered oil can be shipped to refineries provided that it is exempt from hazardous waste regulations. There it can be treated to remove water and debris, and then blended and sold as a commercial product.

The Company's designated disposal specialist is responsible for ensuring that all waste materials are disposed of at an internally approved disposal site.

Incineration

This technique entails the complete destruction of the recovered oil by high temperature thermal oxidation reactions. There are licensed incineration facilities as well as portable incinerators that may be brought to a spill site. Incineration may require the approval of the local Air Pollution Control Authority. Factors to consider when selecting an appropriate site for onsite incineration would include:

- Proximity to recovery locations.
- Access to recovery locations.
- Adequate fire control.
- Approval of the local air pollution control authorities.

In Situ Burning/Open Burning

Burning techniques entail igniting oil or oiled debris and allowing it to burn under ambient conditions. These disposal techniques are subject to restrictions and permit requirements established by federal, state and local laws. They would not be used to burn PCBs, waste oil containing more than 1,000 parts per million of halogenated solvents, or other substances regulated by the EPA. Permission for *in situ* burning may be difficult to obtain when the burn takes place near populated areas.

F.5 WASTE DISPOSAL (Cont'd)

As a general rule, *in situ* burning would be appropriate only when atmospheric conditions will allow the smoke to rise several hundred feet and rapidly dissipate. Smoke from burning oil will normally rise until its temperature drops to equal the ambient temperature. Afterwards, it will travel in a horizontal direction under the influence of prevailing winds.

Landfill Disposal

This technique entails burying the recovered oil in an approved landfill in accordance with regulatory procedures. Landfill disposal of free liquids is prohibited by federal law in the United States.

With local health department approval, non-burnable debris which consists of oiled plastics, gravel and oiled seaweed, kelp, and other organic material may be transported to a licensed, lined, approved municipal or private landfill and disposed of in accordance with the landfill guidelines and regulations. Landfill designation would be planned only for those wastes that have been found to be unacceptable by each of the other disposal options (e.g., waste reduction, recycling, energy recovery). Wastes would be disposed of only at Company-approved disposal facilities. The disposal specialist is responsible for ensuring that all waste materials are disposed of at a Company internally approved disposal site. Disposal at a non-approved facility would require approval by the disposal specialist prior to sending any waste to such a facility.

FIGURE F-1

COMPARATIVE EVALUATION OF OIL SPILL TRANSFER SYSTEMS

CHARACTERISTICS OF TRANSFER SYSTEMS	CENTRIFUGAL PUMP	LOBE PUMP	GEAR PUMP	INTERMESCHING SCREW	VALVE PUMP	FLEXIBLE IMPELLER	SCREW/AUGER PUMP	PROGRESSING CAVITY	PISTON PUMP	DIAPHRAGM PUMP	AIR CONVEYOR	VACUUM TRUCK	PORTABLE VACUUM PUMP	CONVEYOR BELT	SCREW CONVEYOR	WHEELED VEHICLES
High Viscosity Fluids	1	5	5	5	3	2	5	5	5	3	5	4	4	5	4	5
Low Viscosity Fluids	5	2	2	2	3	4	1	3	3	4	5	5	5	1	1	5
Transfer Rate	5	2	1	1	3	4	1	2	2	3	4	5	3	2	2	2
Debris Tolerance																
° Silt/Sand	5	3	1	1	1	4	5	5	3	4	5	5	5	5	5	5
° Gravel/Particulate	5	2	1	1	1	2	5	3	2	3	5	5	4	5	4	5
° Seaweed/Stringy Matter	2	3	4	3	2	2	4	4	3	3	4	4	3	5	4	5
Tendency to Emulsify Fluids	1	4	3	3	3	3	5	5	2	5	5	5	5	5	5	5
Ability to Run Dry	5	3	2	1	2	3	4	3	3	2	5	5	5	4	3	
Ability to Operate Continuously	5	3	2	2	2	3	3	3	4	4	3	3	3	3	2	4
Self Priming	1	3	2	2	2	5	1	5	4	4	5	5	5	5	5	
Suction/Head	2	3	2	2	3	4	1	5	5	2	5	4	3			
Back Pressure/Head	1	5	5	5	4	3	4	5	2	4	1	1	1	3	3	
Portability	5	3	3	2	4	4	3	2					2	1	1	
Ease of Repair	5	3	2	2	3	4	3	2	3	5	1	1	2	3	2	3
Cost	5	B	2	2	3	3	1	2	3	5	1	1	2	2	2	3
Comments	E,J	B	B	B,J		F	A	B	B,D	A,C,D	F,G,I	F,G,I	F,G			G,H,I

KEY TO RATINGS: 5 = Best; 1 = Worst

KEY TO COMMENTS:

A. Normally require remote power sources, thus are safe around flammable fluids.
B. Should have a relief valve in the outlet line to prevent bursting hoses.
C. Air powered units tend to freeze up in sub-freezing temperatures.
D. Units with work ball valves are difficult to prime.
E. Some remotely powered types are designed to fit in a tanker's butterworth hatch.
F. Can also pump air at low pressure.
G. Transfer is batch-wise rather than continuous.
H. Waste must be in separate container for efficient transfer.
I. Transportable with its own prime mover.
J. High shear action tends to emulsify oil and water mixtures.

FIGURE F-2

TEMPORARY STORAGE METHODS

CONTAINER	ONSHORE	OFFSHORE	SOLIDS	LIQUIDS	NOTES
Barrels	x	x	x	x	May require handling devices. Covered and clearly marked.
Tank Trucks	x	x		x	Consider road access. Barge-mounted offshore.
Dump/Flat Bed Trucks	x		x		May require impermeable liner and cover. Consider flammability of vapors at mufflers.
Barges		x	x	x	Liquids only in tanks. Consider venting of tanks.
Oil Storage Tanks	x	x		x	Consider problems of large volumes of water in oil.
Bladders	x	x		x	May require special hoses or pumps for oil transfer.

FIGURE F-3

OILY WASTE SEPARATION AND DISPOSAL METHODS

TYPE OF MATERIAL	SEPARATION METHODS	DISPOSAL METHODS
LIQUIDS		
Non-emulsified oils	Gravity separation of free water	Incineration Use of recovered oil as refinery/production facility feedstock
Emulsified oils	Emulsion broken to release water by: ● heat treatment ● emulsion breaking chemicals ● mixing with sand ● centrifuge ● filter/belt press	Use of recovered oil as refinery/production facility feedstock
SOLIDS		
Oil mixed with sand	Collection of liquid oil leaching from sand during temporary storage Extraction of oil from sand by washing with water or solvent Removal of solid oils by sieving	Incineration Use of recovered oil as refinery/production facility feedstock Direct disposal Stabilization with inorganic material Degradation through land farming or composting
Oil mixed with cobbles or pebbles	Screening Collection of liquid oil leaching from materials during temporary storage Extraction of oil from materials by washing with water or solvent	Incineration Direct Disposal Use of recovered oil as refinery/production facility feedstock
Oil mixed with wood, seaweed and sorbents	Screening Collection of liquid oil leaching from debris during temporary storage Flushing of oil from debris with water	Incineration Direct disposal Degradation through land farming or composting for oil mixed with seaweed or natural sorbents
Tar balls	Separation from sand by sieving	Incineration Direct disposal

APPENDIX G

MISCELLANEOUS FORM

Forms and Exercise Documentation File Maintenance Procedures

- Forms and exercise documentation records should be maintained in a separate file in the Facility's office filing system.
- These files must be available for presentation upon request by regulatory agency personnel.

NOTICE: This report is required by 49 CFR Part 195. Failure to report can result in a civil penalty not to exceed $25,000 for each violation for each day that such violation persists except that the maximum civil penalty shall not exceed $500,000 as provided in 49 USC 60122

Form Approved
OMB No. 2137-0047

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

ACCIDENT REPORT – HAZARDOUS LIQUID PIPELINE SYSTEMS

Report Date _____

No. _____
(DOT Use Only)

INSTRUCTIONS

Important: *Please read the separate instructions for completing this form before you begin. They clarify the information requested and provide specific examples. If you do not have a copy of the instructions, you can obtain one from the Office Of Pipeline Safety Web Page at* ***http://ops.dot.gov****.*

PART A – GENERAL REPORT INFORMATION

Check: ☐ **Original Report** ☐ **Supplemental Report** ☐ **Final Report**

1. a. Operator's OPS 5-digit Identification Number (if known) / / / / / /
   b. If Operator does not own the pipeline, enter Owner's OPS 5-digit Identification Number (if known) / / / / / /
   c. Name of Operator _____
   d. Operator street address _____
   e. Operator address _____
   City, County, State and Zip Code

IMPORTANT: IF THE SPILL IS SMALL, THAT IS, THE AMOUNT IS AT LEAST 5 GALLONS BUT IS LESS THAN 5 BARRELS, COMPLETE THIS PAGE ONLY, UNLESS THE SPILL IS TO WATER AS DESCRIBED IN 49 CFR §195.52(A)(4) OR IS OTHERWISE REPORTABLE UNDER §195.50 AS REVISED IN CY 2001.

2. Time and date of the accident
   / / / / / (hr.) / / / (month) / / / (day) / / / (year)

3. Location of accident
   (If offshore, do not complete a through d. See Part C.1)
   a. La itude: _____ Longitude: _____
   (if not available, see instructions for how to provide specific location)
   b. _____
   City, and County or Parish
   c. _____
   State and Zip Code
   d. Mile post/valve station O or survey station no. O
   (whichever gives more accurate loca ion)
   _____

4. Telephone report
   / / / / / / / (NRC Report Number) / / / (month) / / / (day) / / / (year)

5. Losses *(Estimated)*

Public/Community Losses reimbursed by operator:

Public/private property damage	$_____
Cost of emergency response phase	$_____
Cost of environmental remediation	$_____
Other Costs	$_____
(describe) _____	

Operator Losses:

Value of product lost	$_____
Value of operator property damage	$_____
Other Costs	$_____
(describe) _____	
Total Costs	$_____

6. Commodity Spilled OYes O No
(If Yes, complete Parts a hrough c where applicable)

a. Name of commodity spilled _____

b. Classification of commodity spilled:
- O HVLs /other flammable or toxic fluid which is a gas at ambient conditions
- O CO_2 or other non-flammable, non-toxic fluid which is a gas at ambient conditions
- O Gasoline, diesel, fuel oil or other petroleum product which is a liquid at ambient condi ions
- O Crude oil

a. Estimated amount of commodity involved :
- O **Barrels**
- O **Gallons (check only if spill is less than one barrel)**

Amounts:
Spilled : _____
Recovered: _____

CAUSES FOR SMALL SPILLS ONLY (5 gallons to under 5 barrels) : ***(For large spills [5 barrels or greater] see Part H)***

O **Corrosion** O **Natural Forces** O **Excavation Damage** O **Other Outside Force Damage**
O **Material and/or Weld Failures** O **Equipment** O **Incorrect Operation** O **Other**

PART B – PREPARER AND AUTHORIZED SIGNATURE

_____ (type or print) Preparer's Name and Title — _____ Area Code and Telephone Number

_____ Preparer's E-mail Address — _____ Area Code and Facsimile Number

_____ Authorized Signature — _____ (type or print) Name and Title — _____ Date — _____ Area Code and Telephone Number

PART C – ORIGIN OF THE ACCIDENT (Check all that apply)

1. Additional loca ion information
   a. Line segment name or ID _____
   b. Accident on Federal land other han Outer Continental Shelf O Yes O No
   c. Is pipeline interstate? O Yes O No

Offshore: O Yes O No *(completed if offshore)*
d. Area _____ Block # _____
State / / / or Outer Continental Shelf ☐

2. Location of system involved (*check all that apply*)
   ☐ Operator's Property
   ☐ Pipeline Right of Way
   ☐ High Consequence Area (HCA)?
   Describe HCA_____

3. Part of system involved in accident
   O Above Ground Storage Tank
   O Cavern or o her below ground storage facility
   O Pump/meter station; terminal/tank farm piping and equipment, including sumps
   O O her *Specify:* _____
   O Onshore **pipeline**, including valve sites
   O Offshore **pipeline**, including platforms

*If failure occurred on **Pipeline**, complete items a - g:*

4. Failure occurred on
   O Body of Pipe O Pipe Seam O Scraper Trap
   O Pump O Sump O Joint
   O Component O Valve O Metering Facility
   O Repair Sleeve O Welded Fitting O Bolted Fitting
   O Girth Weld
   Other *(specify)* _____

Year the component that failed was installed: / / / / /
5. Maximum operating pressure *(MOP)*
   a. Estimated pressure at point and ime of accident: _____ *PSIG*
   b. MOP at time of accident: _____ *PSIG*
   c. Did an over pressurization occur relating to the accident? OYes O No

a. Type of leak or rupture
   OLeak: O Pinhole O Connection Failure *(complete sec. H5)*
   O Puncture, diameter *(inches)* _____
   ORupture: O Circumferen ial – Separation
   O Longitudinal – Tear/Crack, length *(inches)* _____
   Propagation Leng h, total, both sides *(feet)* _____
   ON/A
   OOther _____

b. Type of block valve used for isola ion of immediate sec ion:
   Upstream: ☐ Manual ☐ Automatic ☐ Remote Control ☐ Check Valve
   Downstream: ☐ Manual ☐ Automatic ☐ Remote Control ☐ Check Valve

c. Length of segment isolated _____ ft
d. Distance between valves _____ ft
e. Is segment configured for internal inspec ion tools? OYes O No
f. Had there been an in-line inspection device run at the point of failure? O Yes O No O Don't Know
   O Not Possible due to physical constraints in the system
g. If *Yes*, type of device run (*check all that apply*)
   ☐ High Resolution Magnetic Flux tool Year run: _____
   ☐ Low Resolution Magnetic Flux tool Year run: _____
   ☐ UT tool Year run: _____
   ☐ Geometry tool Year run: _____
   ☐ Caliper tool Year run: _____
   ☐ Crack tool Year run: _____
   ☐ Hard Spot tool Year run: _____
   ☐ Other tool Year run: _____

PART D – MATERIAL SPECIFICATION

1. Nominal pipe size *(NPS)* / / / / / in.
2. Wall thickness / / / / / in.
3. Specification _____ SMYS / / / / / / /
4. Seam type _____
5. Valve type _____
6. Manufactured by _____ in year / / / / /

PART E – ENVIRONMENT

1. Area of accident
   O Under pavement O In open ditch
   O Underground O Above ground
   O Inside/under building O Under water
   O Other _____

2. Depth of cover: _____ inches

PART F – CONSEQUENCES

1. **Consequences** ***(check and complete all that apply)***

a.	Fatalities	Injuries
Number of operator employees:		
Contractor employees working for operator:		
General public:		
Totals:		

b. Was pipeline/segment shutdown due to leak? OYes O No
If Yes, how long? _____ days _____ hours _____ minutes

c. Product ignited OYes O No d. Explosion OYes O No
e. ☐ Evacuation *(general public only)* / / / / / people
Reason for Evacuation:
O Precautionary by company
O Evacuation required or initiated by public official

f. Elapsed time until area was made safe:
/ / / hr. / / / min.

2. **Environmental Impact**
   a. Wildlife Impact: Fish/aquatic O Yes O No; Birds O Yes O No; Terrestrial O Yes O No
   b. Soil Contamina ion O Yes O No
   If Yes, estimated number of cubic yards: _____
   c. Long term impact assessment performed: O Yes O No
   d. Anticipated remediation O Yes O No
   If Yes, check all that apply: ☐ Surface water ☐ Groundwater ☐ Soil ☐ Vegetation ☐ Wildlife

e. Water Contamination: O Yes O No (*If Yes, provide the following*)
   Amount in water _____ barrels

Ocean/Seawater	O No	O Yes
Surface	O No	O Yes
Groundwater	O No	O Yes
Drinking water	O No	O Yes (*If Yes, check below*)

O Private well O Public water intake

PART G – LEAK DETECTION INFORMATION

1. Computer based leak detection capability in place? O Yes O No

2. Was the release initially detected by? (check one):
   - O CPM/SCADA-based system with leak detection
   - O Static shut-in test or other pressure or leak test
   - O Local operating personnel, procedures or equipment
   - O Remote operating personnel, including controllers
   - O Air patrol or ground surveillance
   - O A third party
   - O Other (specify) _____

3. Estimated leak duration days ____ hours ____

PART H – APPARENT CAUSE

Important: *There are 25 numbered causes in this Part H. Check the box corresponding to the primary cause of the accident. Check one circle in each of the supplemental categories corresponding to the cause you indicate. See the instructions for guidance.*

H1 – CORROSION

1. ☐ External Corrosion

2. ☐ Internal Corrosion

(Complete items a – e where applicable.)

a. Pipe Coating
- O Bare
- O Coated

b. Visual Examination
- O Localized Pitting
- O General Corrosion
- O Other _____

c. Cause of Corrosion
- O Galvanic
- O Atmospheric
- O Stray Current
- O Microbiological
- O Cathodic Protection Disrupted
- O Stress Corrosion Cracking
- O Selective Seam Corrosion
- O Other _____

d. Was corroded part of pipeline considered to be under cathodic protection prior to discovering accident?
O No O Yes, Year Protection Started: /___/___/___/___/

e. Was pipe previously damaged in the area of corrosion?
O No O Yes ⇒ Estimated time prior to accident: /___/___/ *years* /___/___/ *months* *Unknown* ☐

H2 – NATURAL FORCES

3. ☐ Earth Movement ⇒ O Earthquake O Subsidence O Landslide O Other _____
4. ☐ Lightning
5. ☐ Heavy Rains/Floods ⇒ O Washouts O Flotation O Mudslide O Scouring O Other _____
6. ☐ Temperature ⇒ O Thermal stress O Frost heave O Frozen components O Other _____
7. ☐ High Winds

H3 – EXCAVATION DAMAGE

8. ☐ Operator Excavation Damage (including their contractors/Not Third Party)
9. ☐ Third Party *(complete a-f)*

a. Excavator group
O General Public O Government O Excavator other than Operator/subcontractor

b. Type: O Road Work O Pipeline O Water O Electric O Sewer O Phone/Cable
O Landowner-not farming related O Farming O Railroad
O Other liquid or gas transmission pipeline operator or their contractor
O Nautical Operations O Other _____

c. Excavation was: O Open Trench O Sub-strata (boring, directional drilling, etc…)

d. Excavation was an ongoing activity (Month or longer) O Yes O No If Yes, Date of last contact /___/___/___/

e. Did operator get prior notification of excavation activity?
O Yes; Date received: /___/___/ mo. /___/___/ day /___/___/___/___/ yr. O No
Notification received from: O One Call System O Excavator O Contractor O Landowner

f. Was pipeline marked as result of location request for excavation? O No O Yes *(If Yes, check applicable items i - iv)*
- i. Temporary markings: O Flags O Stakes O Paint
- ii. Permanent markings: O
- iii. Marks were (check one) : O Accurate O Not Accurate
- iv. Were marks made within required time? O Yes O No

H4 – OTHER OUTSIDE FORCE DAMAGE

10. ☐ Fire/Explosion as primary cause of failure ⇒ Fire/Explosion cause: O Man made O Natural
11. ☐ Car, truck or other vehicle not relating to excavation activity damaging pipe
12. ☐ Rupture of Previously Damaged Pipe
13. ☐ Vandalism

H5 – MATERIAL AND/OR WELD FAILURES

Material

14. ☐ Body of Pipe	⇒	O Dent	O Gouge	O Bend	O Arc Burn	O Other _____
15. ☐ Component	⇒	O Valve	O Fitting	O Vessel	O Extruded Outlet	O Other _____
16. ☐ Joint	⇒	O Gasket	O O-Ring	O Threads		O Other _____

Weld

17. ☐ Butt	⇒	O Pipe	O Fabrication			O Other _____
18. ☐ Fillet	⇒	O Branch	O Hot Tap	O Fitting	O Repair Sleeve	O Other _____
19. ☐ Pipe Seam	⇒	O LF ERW	O DSAW	O Seamless	O Flash Weld	
		O HF ERW	O SAW	O Spiral		O Other _____

*Complete a-g if you indicate **any** cause in part H5.*

a. Type of failure:
O Construction Defect ⇒ O Poor Workmanship O Procedure not followed O Poor Construction Procedures
O Material Defect

b. Was failure due to pipe damage sustained in transportation to the construction or fabrication site? O Yes O No

c. Was part which leaked pressure tested before accident occurred? O Yes, *complete d-g* O No

d. Date of test: /__/__/__/__/ yr. /__/__/ mo. /__/__/ day

e. Test medium: O Water O Inert Gas O Other _____

f. Time held at test pressure: /__/__/ hr.

g. Estimated test pressure at point of accident: _____ *PSIG*

H6 – EQUIPMENT

20. ☐ Malfunction of Control/Relief Equipment	⇒	O Control valve	O Instrumentation	O SCADA	O Communications
		O Block valve	O Relief valve	O Power failure	O Other _____
21. ☐ Threads Stripped, Broken Pipe Coupling	⇒	O Nipples	O Valve Threads	O Dresser Couplings	O Other _____
22. ☐ Seal Failure	⇒	O Gasket	O O-Ring	O Seal/Pump Packing	O Other _____

H7 – INCORRECT OPERATION

23. ☐ Incorrect Operation
a. Type: O Inadequate Procedures O Inadequate Safety Practices O Failure to Follow Procedures
O Other _____

b. Number of employees involved who failed a post-accident test: drug test: /__/__/__/ alcohol test /__/__/__/

H8 – OTHER

24. ☐ Miscellaneous, *describe:* _____

25. ☐ Unknown
O Investigation Complete O Still Under Investigation *(submit a supplemental report when investigation is complete)*

PART I – NARRATIVE DESCRIPTION OF FACTORS CONTRIBUTING TO THE EVENT *(Attach additional sheets as necessary)*

Form PHMSA F 7000-1 (01-2001) *Page 4 of 4*

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APPENDIX H

STATE REQUIREMENTS

Page

TEXAS GENERAL LAND OFFICE (TGLO) REQUIREMENTS

FIGURE H.1

NATURAL GAS LIQUIDS PIPELINES

FACILITY INFORMATION

GENERAL INFORMATION		
Facility Name:	Enterprise Products - Seminole Red and Blue Pipelines	
Addresses:	***Physical Address*** Varies	***Mailing Address*** P.O Box 4324 Houston, TX 77210-4324
Facility Lat./Long.:	Varies	
Mainline Number:	(713) 381-6500 or (866) 931-3726	
Contact Person:	Rodney Sartor, Manager – Plans & Remediation	
Primary Activity:	DOT-regulated pipeline system transporting natural gasoline, field grade butane and Y grade natural gas liquids and consisting of 6-16" pipeline. Additional line details are maintained on the TGLO Online Facility Database which is updated annually. Layout of this line is provided in Section 6.	
(b) (7)(F)	[redacted]	
Storage Tanks:	NA	
Average Daily Throughput:	Varies.	
Facility WCD:	See Appendix B, Pipeline WCD.	
Largest oil-handling vessel which docks at Facility:	NA	
Material Safety Data Sheets (MSDS):	MSDS's for common products transported by the pipeline are maintained in Appendix I.	

APPENDIX I

MATERIAL SAFETY DATA SHEETS (MSDS)

- MSDS for Natural Gasoline

MATERIAL SAFETY DATA SHEET

NATURAL GASOLINE

MID-AMERICA PIPELINE COMPANY, LLC
P. O. BOX 4324
HOUSTON, TEXAS 77210

24 HOUR EMERGENCY ASSISTANCE
800-331-3032 or 713-803-8707
CHEMTREC 800-424-9300

HAZARD RATING

LEAST 0 | SLIGHT 1 | MODERATE 2 | HIGH 3 | EXTREME 4

HEALTH	3
FIRE	3
REACTIVITY	0

I GENERAL

TRADE NAME	Natural Gasoline
OTHER NAMES	Straight – Run Gasoline (High Vapor Pressure Gasoline NC4-C8)
GENERIC NAME	PETROLEUM HYDROCARBONS
GENERIC NAME	NATURAL PETROLEUM GASOLINE
CAS NO.	8006-61-9

DOT Hazardous Materials Proper Shipping Name
GASOLINE

DOT Hazard Class
FLAMMABLE LIQUID

UN/IS No. 1257 or 1203

II SUMMARY OF HAZARDS

EXTREMELY FLAMMABLE! OSHA/NFPA CLASS-1A FLAMMABLE LIQUID
KEEP AWAY FROM HEAT, SPARKS, AND OPEN FLAME
MAY CAUSE IRRITATION TO EYES, SKIN, AND RESPIRATORY SYSTEM
AVOID LIQUID, MIST, AND VAPOR CNTAT. WASH THOROUGHLY AFTER HANDLING
MAY BE HARMFUL IF INHALED OR ABSORBED THROUGH SKIN
AVOID BREATHING VAPORS OR MIST. USE ONLY WITH ADEQUATE VENTILATION.
LONG-TERM EXPOSURE TO COMPLETELY VAPORIZED GASOLINE HAS CAUSED CANCER IN LABORATORY ANIMALS. VAPORS OR LIQUID PENETRATION OF SKIN CAN CAUSE CENTRAL NERVOUS SYSTEM (CNS) DEPRESSION AND/OR SYSTEMIC EFFECTS.
HARMFUL OR FATAL IF SWALLOWED! CONTAINS PETROLEUM DISTILLATES
IF SWALLOWED, DO NOT INDUCE VOMITING SINCE ASPIRATION INTO LUNGS WILL CAUSE CHEMICAL PNEUMONIA. OBTAIN PROMPT MEDICAL ATTENTION.
KEEP OUT OF REACH OF CHILDREN!

III FIRE AND EXPLOSION

Flash Point (Method)	Auto-Ignition Temperature (Method)	Flammable Limits (% Vol. In air) At Normal Atmospheric Temperature and Pressure
AP -45 Deg. F.	AP 535 Deg. F.	Lower AP 1.4 Upper AP 7.6
SEE "FIRE & EXPLOSION HAZARDS"	BASED UPON NFPA "GASOLINE"	BASED UPON NFPA "GASOLINE"

Fire and Explosion Hazards	EXTREMELY FLAMMABLE! THIS MATERIAL RELEASES VAPORS AT OR BELOW AMBIENT TEMPERATURES. WHEN MIXED WITH AIR IN CERTAIN PROPORTIONS AND EXPOSED TO AN IGNITION SOURCE, THESE VAPORS CAN BURN IN THE OPEN OR EXPLODE IN CONFINED SPACES. BEING HEAVIER THAN AIR, FLAMMABLE VAPORS MAY TRAVEL LONG DISTANCES ALONG THE GROUND BEFORE REACHING A POINT OF IGNITION AND FLASHING BACK.
Extinguishing Media	FOAM CO2 DRY CHEMICAL HALON WATER FOG OR SPRAY ARE OF VALUE IN COOLING TANKS AND CONTAINERS BUT MAY NOT ACHIEVE EXTINGUISHMENT. FOAM APPLICATION IS MOST EFFECTIVE METHOD OF EXTINGUISHMENT.
Special Firefighting Procedures	FOR FIRES INVOLVING THIS MATERIAL. DO NOT ENTER ANY ENCLOSED OR CONFINED FIRE SPACE WITHOUT PROPER PROTECTIVE EQUIPMENT. THIS MAY INCLUDE SELF-CONTAINED BREATHING APPARATUS TO PROTECT AGAINST THE HAZARDOUS EFFECTS OF COMBUSTION PRODUCTS AND OXYGEN DEFICIENCIES. IF FIREFIGHTERS CANNOT WORK UPWIND TO THE FIRE, RESPIRATORY PROTECTIVE EQUIPMENT MUST BE WORN. COOL TANKS AND CONTAINERS EXPOSED TO FIRE WITH WATER.

NATURAL GASOLINE

IV HEALTH HAZARDS

Summary of Acute Hazards	LIQUID, MIST OR VAPORS CAN CAUSE EYE, SKIN AND RESPIRATORY TRACT IRRITATION AND CNS DEPRESSION, ASPIRATION INTO THE LUNGS WILL CAUSE CHEMICAL PENUMONIA.

Route of Entry	SIGNS AND SYMPTOMS
Inhalation	EXPOSURE CAN CAUSE IRRITATION TO THE NOSE, THROAT AND LUNGS AND SIGNS OF CNS DEPRESSION (DIZZINESS, DROWSINESS, LOSS OF COORDINATION, COMA AND DEATH), DEPENDING ON THE CONCENTRATION AND DURATION OF EXPOSURE.
Eye Contact	MILD EYE IRRITATION MAY RESULT FROM CONTACT WITH LIQUID, MIST AND/OR VAPORS
Skin Absorption	LIQUID CAN PENETRATE SKIN TO CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION. VAPOR PENETRATION CAN ALSO CAUSE SYSTEMIC EFFECTS.
Skin Irritation	SKIN IRRITATION OR MORE SERIOUS DISORDERS MAY OCCUR UPON PROLONGED AND REPEATED CONTACT DUE TO SKIN DEFATTING.
Ingestion	IRRITATION OF THE MOUTH, THROAT AND GASTROINTESTINAL TRACT LEADING TO NAUSEA, VOMITING, DIARRHEA AND RESTLESSNESS, CNS DEPRESSION SIMILAR TO THAT CAUSED BY VAPOR INHALATION, ASPIRATION INTO LUNGS WILL CAUSE CHEMICAL PNEUMONIA.
Summary of Chronic Hazards and Special Health Effects	AN A.P.I.-SPONSORED STUDY HAS SHOWN THAT RATS AND MICE DEVELOPED CANCER FOLLOWING CHRONIC INHALATION EXPOSURE TO THE VAPORS OF UNLEADED GASOLINE. LONG-TERM EXPOSURE TO UNLEADED GASOLINE HAS ALSO PRODUCED KIDNEY DAMAGE IN LABORATORY ANIMALS. THE EXACT RELATIONSHIP BETWEEN THESE RESULTS AND POSSIBLE HUMAN EFFECTS IS NOT KNOWN. PERSONNEL WITH PRE-EXISTING SKIN DISORDERS, IMPAIRED LIVER OR KIDNEY FUNCTION, OR CENTRAL NERVOUS SYSTEM AND CHRONIC RESPIRATORY DISEASES SHOULD AVOID EXPOSURE TO THIS MATERIAL.

V PROTECTIVE EQUIPMENT & CONTROL MEASURES

Respiratory	USE NIOSH/MSHA-APPROVED RESPIRATOR WHEN VAPOR LEVELS EXCEED EXPOSURE LIMITS IN SECTION VI. USE FULL-FACEPIECE MASK ABOVE 600 PPM GASOLINE VAPORS, AND SUPPLIED-AIR OR SCBA EQUIPMENT ABOVE 1000 PPM.
Eye	EYE PROTECTION SHOULD BE WORN WHENEVER THERE IS A LIKELIHOOD OF SPLASHING OR SPRAYING LIQUID. CONTACT LENSES SHOULD NOT BE WORN. SUITABLE EYE WASH WATER SHOULD BE AVAILABLE.
Skin	AVOID PROLONGED AND/OR REPEATED SKIN CONTACT. IF CONDITIONS OR FREQUENCY OF USE MAKE CONTACT SIGNIFICANT, CLEAN AND IMPERVIOUS PROTECTIVE CLOTHING SUCH AS GLOVES, APRON, BOOTS, AND FACIAL PROTECTION SHOULD BE WORK.
Engineering Controls	USE ADEQUATE VENTILATION TO KEEP VAPOR CONCENTRATIONS OF THIS MATERIAL BELOW THE OCCUPATIONAL EXPOSURE LIMITS SHOWN BELOW IN SECTION VI (SEE SECTION XI).
Other Hygienic and Work Practices	USE GOOD PERSONAL HYGIENE PRACTICES. IN CASE OF SKIN CONTACT, WASH WITH MILD SOAP AND WATER OR A WATERLESS HAND CLEANER. IMMEDIATELY REMOVE SOAKED CLOTHING AND WASH THOROUGHLY BEFORE REUSE. DISCARD GASOLINE-SOAKED SHOES. RESPIRATOR USE SHOULD COMPLY WITH OSHA STANDARDS. CONTROL OCCUPATIONAL EXPOSURES BELOW 1 PPM "BENZENE" RATHER THAN THE 300 PPM GASOLINE TLV. NEVER SIPHON GASOLINE BY MOUTH. SEE SECTION XI FOR ADDITIONAL INFORMATION.

VI OCCUPATIONAL EXPOSURE LIMITS

Substance	
	MOTOR GASOLINE WHICH HAS SIMILAR HYDROCARBON COMPONENTS IS 300 PPM, 8 HOUR TWA
	BENZENE 1 PPM/8 HR TWA: 5 PPM STEL; 15 MINS. (OSHA)
	THE NTP & IARC LIST BENZENE AS A HUMAN "CARCIOGEN"
	SATURATED ALIPHATIC HYDROCARBONS C5 – C8 – 600 PPM, 8 HR. TWA (PENTANES – OSHA)

NATURAL GASOLINE

VII EMERGENCY AND FIRST AID

Inhalation	IMMEDIATELY MOVE PERSONNEL TO AREA OR FRESH AIR. FOR RESPIRATORY DISTRESS, GIVE AIR, OXYGEN, OR ADMINISTER CPR (CARDIOPULMONARY RESUSCITATION). IF NECESSARY, OBTAIN MEDICAL ATTENTION IF BREATHING DIFFICULTIES CONTINUE.
Eye Contact	VAPORS ARE NOT EXPECTED TO PRESENT AN EYE IRRITATION HAZARD. IF CONTACTED BY LIQUID/SOLID, IMMEDIATELY FLUSH THE EYE(S) GENTLY WITH WARM WATER FOR AT LEAST 15 MINUTES. SEEK MEDICAL ATTENTION IF PAIN OR REDNESS PERSIST.
Skin Contact	IMMEDIATELY REMOVE CONTAMINATED CLOTHING. WASH AFFECTED SKIN THOROUGHLY WITH SOAP AND WATER. IF IRRITATION PERSISTS, SEEK MEDICAL ATTENTION. WASH CLOTHING BEFORE REUSE, BUT DISCARD CONTAMINATED LEATHER SHOES/GLOVES.
Ingestion	DO NOT INDUCE VOMITING, SINCE ASPIRATION INTO THE LUNGS WILL CAUSE CHEMICAL PNEUMONIA. IF ASPIRATION OCCURS, PROMPTLY OBTAIN MEDICAL ATTENTION.
Emergency Medical Treatment Procedures	SEE ABOVE PROCEDURES.

VIII SPILL AND DISPOSAL

Precautions if Material is Spilled or Released	CONTAIN SPILL. REMOVE ALL IGNITION SOURCES AND SAFELY STOP FLOW OF SPILL. IN URBAN AREAS, CLEANUP AS SOON AS POSSIBLE. IN NATURAL ENVIRONMENTS, SEEK ADVICE FROM ECOLOGISTS. EVACUATE ALL NON-ESSENTIAL PERSONNEL. USE PROPER PROTECTIVE EQUIPMENT. BLANKET WITH FOAM OR USE WATER FOG TO DISPERSE VAPORS. PADS AND ABSORBENT MATERIAL CAN BE USED. GASOLINE WILL FLOAT ON WATER AND RESULTING RUNOFF MAY CREATE AN EXPLOSION OR FIRE HAZARD. COMPLY WITH ALL APPLICABLE LAWS. SPILLS MAY NEED TO BE REPORTED TO THE NATIONAL RESPONSE CENTER (800/424-8802). GASOLINE OR CONTAMINATED MATERIALS MAY BE HAZARDOUS TO HUMAN AND OTHER LIFE.
Waste Disposal Methods	MAXIMIZE PRODUCT RECOVERY FOR REUSE OR RECYCLING. DISPOSE OF PRODUCT & CONTAMINATED MATERIAL AS EPA "IGNITABLE HAZARDOUS WASTE" (D001). UNLESS PROVEN OTHERWISE, USE APPROVED TREATMENT, TRANSPORTERS, & DISPOSAL SITES IN COMPLIANCE WITH ALL LAWS. IF SPILL IS INTRODUCED INTO A WASTEWATER SYSTEM, THE CHEMICAL AND BIOLOGICAL OXYGEN DEMAND WILL LIKELY INCREASE. SPILL MATERIAL IS BIODEGRADABLE IF GRADUALLY EXPOSED TO MICROORGANISMS. A POTENTIAL DISPOSAL METHOD IS INCINERATION.

IX COMPONENTS

Component Name

This may not be a complete list of components

LIQUID HYDROCARBONS SEPARATED AS A LIQUID FROM NATURAL GAS CONSITING PRIMARILY OF:

N-CR – C8 HYDROCARBONS – 99.9%	(N-BUTANE,	NEOPENTANE,	ISOPENTANE,	PENTANE,	HEXANE)
NATURAL GASOLINE – 95-100%	(1-8%	1-35%	1-35%	1-25%	1-16%)
BENZENE – 0-5%					

Compositions given are typical values, not specifications

X PHYSICAL AND CHEMICAL DATA

Boiling Point AP 110 Deg. F.		Viscosity Units, Temp. (Method) N/A		Dry Point 250 Deg. F.	
Freezing Point AP N/A		Vapor Pressure 14 PSI @ 100 Deg. F.		Volatile Characteristics Complete	
Specific Gravity (H_2O = 1 at 60.2 Deg. F.) 0.5 – 0.7		Vapor Sp. Gr. (Air = 1.0 at 60-90 Deg. F. 2.0 – 3.9		Solubility In Water SLIGHT	Ph N/A
Hazardous Polymerization NOT EXPECTED TO OCCUR		Other Chemical Reactivity N/A		Stability STABLE	

Other Physical & Chemical Properties	BENEZENE (SEE SUPPLEMENT XIII)
Appearance and Odor	TRANSPARENT, COLORLESS TO LIGHT YELLOW-COLORED LIQUID WITH GASOLINE OR NAPHTHA ODOR
Conditions to Avoid	EXPOSURE TO HEAT, SPARKS OR OPEN FLAMES
Materials to Avoid	STRONG ACIDS, ALKALIES AND OXIDIZERS
Hazardous Decomposition Products	COMBUSTION MAY PRODUCE CARBON MONOZICE AND OTHER HARMFUL SUBSTANCES

NATURAL GASOLINE

XI ADDITIONAL PRECAUTIONS

Handling, Storage and Decontamination Procedures

STORE & TRANSPORT IN ACCORDANCE WITH ALL APPLICABLE LAWS. KEEP AWAY FROM HEAT, SPARKS, & OPEN FLAME! KEEP CONTAINERS CLOSED, PLAINLY LABELED, AND OUT OF CLOSED VEHICLES. CONTAINERS SHOULD BE ABLE TO WITHSTAND PRESSURES EXPECTED FROM WARMING AND COOLING IN STORAGE. GROUND ALL DRUMS AND TRANSFER VESSELS WHEN HANDLING. STORE IN COOL (80 Deg. F. OR BELOW) WELL VENTILATED LOCATION. ALL ELECTRICAL EQUIPMENT IN STORAGE AND/OR HANDLING AREAS SHOULD BE INSTALLED IN ACCORDANCE WITH APPLICABLE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE, N.F.P.A. KEEP OUT OF REACH OF CHILDREN! EMPTY CONTAINERS RETAIN SOME LIQUID AND VAPOR RESIDUES: HAZARD PRECAUTIONS MUST BE OBSERVED. USE OF ANY HYDROCARBON MIXTURE IN SPACE WITHOUT ADEQUATE VENTILATION MAY RESULT IN GENERATION OF HAZARDOUS LEVELS OF VAPOR AND/OR INADEQUATE OXYGEN FOR BREATHING. HAZARD PRECAUTIONS MUST BE OBSERVED WHEN HANDLING EMPTIES. "PETROLEUM DISTILLATE" – 16 CFR 1500.12(B)(3). USE SPECIAL FEDERAL LABELING IF ENTENDED, OR PACKED, FOR USE IN HOUSEHOLD OR BY CHILDREN.

XII REGULATORY INFORMATION

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA), TITLE III

SECTION 311/312 HAZARD CATEGORIES

IMMEDIATE (ACUTE)HEALTH HAZARD — DELAYED (CHRONIC)HEALTH HAZARD

FIRE HAZARD

SECTION 313

THIS PRODUCT CONTAINS THE FOLLOWING CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF SARA TITLE III, SECTION 313 AND 40 CFR 372

BENZENE CAS NUMBER 71-43-2

TOXIC SUBSTANCES CONTROL ACT (TSCA)

ALL COMPONENTS OF THIS PRODUCT ARE LISTED ON THE TSCA INVENTORY

COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION AND LIABILITY ACT (CERCLA)

THIS PRODUCT CONTAINS THE FOLLOWING CHEMICALS SUBJECT TO THE REPORTING REQUIREMENTS OF CERCLA

NATURAL GASOLINE — REPORTABLE QUANTITY (RQ), LBS. 1000#/454KG

CLEAN AIR ACT SECTION 111/112/311

CLASSIFIES BENZENE AS

HAZARDOUS AIR POLLUTANT" & " HAZARDOUS SUBSTANCE" WHEN SPILLED IN NAVIGABLE WATERS

XIII SUPPLEMENT

CHRONIC HEALTH EFFECTS:

BENZENE: REPEATED AND PROLONGED OVEREXPOSURE TO VAPORS CAN CAUSE TOXICITY TO BLOOD – FORMING TISSUES. SYMPTOMS MAY INCLUDE DECREASES IN BLOOD CELLS, APLASTIC ANEMIA, OR LEUKEMIA. CHROMOSOME ABERRATIONS HAVE BEEN OBSERVED IN THE WHITE BLOOD CELLS AND IN THE BONE MARROW OF WORKERS EXPOSED TO LEVELS OF BENZENE KNOWN TO BE ASSOCIATED WITH SIGNS OF BENZENE POISONING. STUDIES IN BOTH EXPERIMENTAL ANIMALS AND HUMANS INDICATE THAT BENZENE IS CARCINOGENIC. CAUSES CHROMOSOMAL ABERRATIONS, AND DAMAGES BONE MARROW. THE NATIONAL TOXICOLOGY PROGRAM (NTP) & THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (ARC) LIST BENZENE AS A "HUMAN CARCINOGEN". THERE WERE NO BENZENE-INDUCED EFFECTS NOTED IN STUDIES ON LABORATORY ANIMALS AFTER LONG-TERM EXPOSURE. HOWEVER, THE RISK OF BENZENE-INDUCED TOXICITY OR CARCINOGENICITY ASSOCIATED WITH GASOLINE IS STILL UNKNOWN.

The information contained in this Material Safety Data Sheet relates only to the specific chemical designated herein and may not be valid for such chemical used in combination with any other chemical or mixture, or in any particular process. The best of this Company's knowledge, the information contained herein is accurate as of the date of preparation; however, NO REPRESENTATION, GUARANTEE OR WARRANTY IS MADE AS TO ITS ACCURACY, RELIABILITY OR COMPLETENESS. It is the user's responsibility to satisfy itself of the suitability of such information for the user's particular purpose.

FOR ADDITIONAL INFORMATION OR IN CASE OF AN ACCIDENT INVOLVING BODILY INJURY OR PROPERTY DAMAGE IMMEDIATELY NOTIFY THE CORPORATE CLAIMS DEPARTMENT

* During Regular working hours: 7:30 a.m. to 4:00 p.m. Monday through Thursday; 7:30 to 12:30 Friday, contact the Corporate Claims Department at (713) 880-6650, (713) 880-6673, (713) 880-6657, (713) 880-6500. At this time give them full particulars and stand by for further instructions.
* Before and after regular working hours, and/or weekends or holidays, contact the 24 hour Seminole Control Center Office at 1-800-331-3032. In Houston area 713-803-8707.

CALL CHEMTREC 1-800-424-9300

FOR FURTHER ASSISTANCE IF HAZARDOUS MATERIALS ARE INVOLVED.

APPENDIX J

THREATENED AND ENDANGERED (T&E) SPECIES

Page

FIGURE J.1

T & E Species Common to all Counties in Texas

SPECIES (COMMON NAME)	STATUS
American Peregrin Falcon	T
Bald Eagle	T
Peregrin Falcon	T
Texas Horned Lizard	T

FIGURE J.2

T & E Species by County

County	Andrews	Austin	Brazoria	Burnet	Chambers	Coke	Concho	Fayette	Fort Bend	Gaines	Harris	Howard	Lee	Liberty	Martin	Mitchell	McCulloch	Runnels	San Saba	Sterling	Waller	Washington	Williamson
Species (Common Name)																							
Birds																							
American Peregrin Falcon	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
Attwater's Greater Prairie-Chicken		E							E												E		
Bachman's Sparrow														T									
Bald Eagle	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
Black-Capped Vireo				E		E	E										E	E	E	E			E
Eskimo Curlew			E																				
Interior Least Tern		E		E		E	E	E	E				E			E	E	E	E		E	E	
Golden-Cheeked Warbler				E			E										E		E				E
Peregrin Falcon	T	T	T	T	T	T	T	T		T	T	T	T	T	T	T	T	T	T	T	T	T	T
Piping Plover			T		T									T									
Reddish Egret			T		T																		
Red-Cockaded Woodpecker											E			E									
Sooty Tern			T																				
Swallow-Tailed Kite					T									T									
White-Faced Ibis		T	T		T				T		T			T							T	T	
White-Tailed Hawk		T	T						T		T										T		
Whooping Crane	E	E	E	E		E	E	E	E	E	E	E	E		E	E	E	E	E	E	E	E	E
Wood Stork		T	T		T			T	T		T		T	T							T	T	
Zone-Tailed Hawk																	T		T				
Fish																							
Blue Sucker								T														T	
Creek Chubsucker											T			T							T		
Paddlefish														T									
Smalltooth Sawfish			E		E						E												
Amphibians																							
Houston Toad		E							E		E		E	E							E	E	
Mollusks																							
False Spike Mussel		T	T	T			T	T	T				T				T		T		T	T	T
Louisiana Pigtoe					T						T			T									
Sandbank Pocketbook											T			T									
Smooth Pimpleback		T	T	T			T	T	T				T				T	T	T		T	T	T
Texas Fatmucket							T										T	T	T				
Texas Fawnsfoot		T	T	T			T	T	T				T				T	T	T		T	T	T
Texas Heelsplitter														T									
Texas Pigtoe											T			T									
Texas Pimpleback				T			T	T									T	T	T	T			
Mammals																							
Black Bear														T									
Gray Wolf	E			E		E	E			E		E			E	E	E	E	E	E			

County	Andrews	Austin	Brazoria	Burnet	Chambers	Coke	Concho	Fayette	Fort Bend	Gaines	Harris	Howard	Lee	Liberty	Martin	Mitchell	McCulloch	Runnels	San Saba	Sterling	Waller	Washington	Williamson
Mammals (cont.)																							
Jaguarondi			E																				
Louisiana Black Bear		T	T		T				T		T			T							T	T	
Ocelot			E																				
Rafinesque's Big-eared Bat											T			T									
Red Wolf		E	E	E	E		E	E	E		E		E	E			E	E	E		E	E	E
West Indian Manatee			E																				
Reptiles																							
Alligator Snapping Turtle		T	T		T				T		T			T							T	T	
Atlantic Hawksbill Sea Turtle			E		E																		
Green Sea Turtle			T		T						T												
Kemp's Ridley Sea Turtle			E		E						E												
Leatherback Sea Turtle			E		E						E												
Louisiana Pine Snake														T									
Loggerhead Sea Turtle			T		T						T												
Northern Scarlet Snake					T									T									
Smooth Green Snake		T			T						T												
Texas Horned Lizard	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T	T
Timber/Cane-brake Rattlesnake		T	T		T			T	T		T		T	T							T	T	T
Plants																							
Navasota Ladies'-Tresses								E														E	
Texas Poppy-Mallow						E										E		E					
Texas Prairie Dawn									E		E												

Note:
Species designated with a 'T' are classified as threatened species by the State of Texas and species designated with an 'E' are endangered.

REGULATORY CROSS REFERENCE

PAGE

DOT/PHMSA 49 CFR PART 194 CROSS REFERENCE		
§ 194.105	**BRIEF DESCRIPTION**	**LOCATION in PLAN**
(a)	... determine the worst case discharge ... provide methodology, including calculations, used to arrive at the volume.	App B
(b)	The worst case discharge is the largest volume, in barrels, of the following:	-----
(b)(1)	... maximum release time in hours, plus the maximum shutdown response time in hours, multiplied by the maximum flow rate expressed in barrels per hour, plus the largest line drainage volume after shutdown of the line section(s) ...; or	App B
(b)(2)	The largest foreseeable discharge for the line section(s) within a response zone, expressed in barrels, based on the maximum historic discharge, if one exists, adjusted for any subsequent corrective or preventative action taken; or	App B
(b)(3)	If the response zone contains one or more breakout tanks, the capacity of the single largest tank or battery of tanks within a single secondary containment system, adjusted for the capacity or size of the secondary containment system, expressed in barrels.	App B
(b)(4)	Operators may claim prevention credits for breakout tank secondary containment and other specific spill prevention measures as follows:…	App B
§ 194.107	**BRIEF DESCRIPTION**	**LOCATION in PLAN**
(a)	Each response plan must plan for resources for responding, to the maximum extent practicable, to a worst case discharge, and to a substantial threat of such a discharge.	App A
(b)	An operator must certify in the plan … reviewed NCP and each applicable ACP…	Foreword
(b)(1)	As a minimum to be consistent with the NCP as a facility response plan must:	-----
(b)(1)(i)	Demonstrate an operator's clear understanding of the function of the Federal response structure…	§ 4.0
(b)(1)(ii)	Establish provisions to ensure the protection of safety at the response site; and	§ 4.0 (Command), § 5.0
(b)(1)(iii)	Identify the procedures to obtain any required Federal and State permissions for using alternative response strategies such as in-situ burning and dispersants…	§ 6.8
(b)(2)	As a minimum, to be consistent with the applicable ACP the plan must:	-----
(b)(2)(i)	Address the removal of a worst case discharge and the mitigation or prevention of a substantial threat of a worst case discharge;	§ 3.0, App B, F
(b)(2)(ii)	Identify environmentally and economically sensitive areas;	§ 6.0
(b)(2)(iii)	Describe the responsibilities of the operator and operator and of Federal, State and local agencies in removing a discharge and in mitigating or preventing a substantial threat of a discharge; and	§ 4.0
(b)(2)(iv)	Establish the procedures for obtaining an expedited decision on use of dispersants or other chemicals.	§ 6.8
(c)	Each response plan must include:	----
(c)(1)	A core plan consisting of …	----
(c)(1)(i)	An information summary as required in § 194.113,	Fig 1.1
(c)(1)(ii)	Immediate notification procedures,	§ 2.0
(c)(1)(iii)	Spill detection and mitigation procedures,	§ 3.0
(c)(1)(iv)	The name, address, and telephone number of the oil spill response organization, if appropriate,	Fig 2.5, App A
(c)(1)(v)	Response activities and response resources,	§ 3.0, App A
(c)(1)(vi)	Names and telephone numbers of Federal, state, and local agencies which the operator expects to have pollution control responsibilities or support,	Fig 2.5
(c)(1)(vii)	Training procedures,	App D

DOT/PHMSA 49 CFR PART 194 CROSS REFERENCE (Cont'd)		
§ 194.107	**BRIEF DESCRIPTION**	**LOCATION in PLAN**
(c)(1)(viii)	Equipment testing,	App D.2
(c)(1)(ix)	Drill program – an operator will satisfy the requirement for a drill program by following the National Preparedness for Response Exercise Program (PREP) guidelines. An operator choosing not to follow PREP guidelines must have a drill program that is equivalent to PREP. The operator must describe the drill program in the response plan and OPS will determine if the program is equivalent to PREP.	App D.2
(c)(1)(x)	Plan review and update procedures;	§ 1.4
(c)(2)	An appendix for each response zone that includes the information required in paragraph (c)(1)(i)-(ix) of this section and the worst case discharge calculations that are specific to that response zone. An operator submitting a response plan for a single response zone does not need to have a core plan and a response zone appendix. The operator of a single response zone onshore pipeline shall have a single summary in the plan that contains the required information in § 194.113.7; and.	Integrated
(c)(3)	A description of the operator's response management system including the functional areas of finance, logistics, operations, planning, and command. The plan must demonstrate that the operator's response management system uses common terminology and has a manageable span of control, a clearly defined chain of command, and sufficient trained personnel to fill each position.	§ 4.0
§ 194.111	**BRIEF DESCRIPTION**	**LOCATION in PLAN**
(a)	Each operator shall maintain relevant portions of its response plan at the operator's headquarters and at other locations from which response activities may be conducted, for example, in field offices, supervisor's vehicles, or spill response trailers.	Foreword Distribution List
§ 194.113	**BRIEF DESCRIPTION**	**LOCATION in PLAN**
(a)	The information summary for the core plan, required by § 194.107, must include:	----
(a)(1)	The name and address of the operator.	Fig 1.1
(a)(2)	For each response zone which contains one or more line sections that meet the criteria for determining significant and substantial harm as described in § 194.103, a listing and description of the response zones, including county(s) and state(s).	Fig 1.1
(b)	The information summary for the response zone appendix, required in § 194.107, must include:	----
(b)(1)	The information summary for the core plan.	Fig 1.1
(b)(2)	The names or titles and 24-hour telephone numbers of the qualified individual(s) and at least one alternate qualified individual(s);	Fig 1.1
(b)(3)	The description of the response zone, including county(s) and state(s), for those zones in which a worst case discharge could cause substantial harm to the environment.	Fig 1.1
(b)(4)	A list of line sections for each pipeline contained in the response zone, identified by milepost or survey station number, or other operator designation.	Fig 1.1
(b)(5)	The basis for the operator's determination of significant and substantial harm.	Foreword
(b)(6)	The type of oil and volume of the worst case discharge.	App B

DOT/PHMSA 49 CFR PART 194 CROSS REFERENCE (Cont'd)		
§ 194.115	**BRIEF DESCRIPTION**	**LOCATION in PLAN**
(a)	Each operator shall identify and ensure, by contract or other approved means, the resources necessary to remove, to the maximum extent practicable, a worst case discharge and to mitigate or prevent a substantial threat of a worst case discharge.	App A
(b)	An operator shall identify in the response plan the response resources which are available to respond within the time specified, after discovery of a worst case discharge, or to mitigate the substantial threat of such a discharge.	App A
§ 194.117	**BRIEF DESCRIPTION**	**LOCATION in PLAN**
(a)	Each operator shall conduct training to ensure that:	-----
(a)(1)	All personnel know --	-----
(a)(1)(I)	Their responsibilities under the response plan	§ 4.0
(a)(1)(ii)	The name and address of, and the procedure for contacting, the operator on a 24-hour basis	§ 2.0, Fig 2.2
(a)(1)(iii)	The name of, and procedures for contacting, the qualified individual on a 24-hour basis	§ 2.0, Fig 1.1, Fig. 2.2
(a)(2)	Reporting personnel know --	-----
(a)(2)(I)	The content of the information summary of the response plan.	Fig 1.1
(a)(2)(ii)	The toll-free telephone number of the National Response Center	Fig 2.5
(a)(2)(iii)	The notification process	§ 2.0, Fig. 2.5
(a)(3)	Personnel engaged in response activities know --	-----
(a)(3)(I)	The characteristics and hazards of the oil discharged	Fig. 3.2, Fig. 3.3, App I
a)(3)(ii)	The conditions that are likely to worsen emergencies, including the consequences of facility malfunctions or failures, and the appropriate corrective actions.	§ 3.0
(a)(3)(iii)	The steps necessary to control any accidental discharge of oil and to minimize the potential for fire, explosion, toxicity, or environmental damage	§ 3.0
(a)(3)(iv)	The proper firefighting procedures and use of equipment, fire suits, and breathing apparatus	§ 3.0
(b)	Each operator shall maintain a training record for each individual that has been trained as required by this section. Theses records must be maintained in the following manner as long as the individual is assigned duties under the response plan	App D.1
(b)(1)	Records for operator personnel must be maintained at the operator's headquarters	App D.1
(b)(2)	Records for personnel engaged in response, other than operator personnel, shall be maintained as determined by the operator.	App D.1
(b)(3)	Nothing in this section relieves an operator from the responsibility to ensure that all response personnel are trained to meet the OSHA standards for emergency response operations in 29 CFR 1910.120 ...	App D.1

DOT/PHMSA 49 CFR PART 194 CROSS REFERENCE (Cont'd)		
§ 194.119	**BRIEF DESCRIPTION**	**LOCATION in PLAN**
(a)	Each owner shall submit two copies...	Distribution
(b)	...PHMSA will notify the operator of any alleged deficiencies...	-----
(c)	The operator...may petition PHMSA for reconsideration within 30 days...	-----
(d)	...PHMSA will approve the Response Plan...	-----
(e)	...The operator may submit a certification to PHMSA...that the operator has obtained, through contract or other approved means, the necessary private personnel and equipment to record, to the maximum extent practicable, to a worst case discharge...	Foreword (Operator's Statement)
(f)	...PHMSA may require an operator to provide a copy of the response plan to the OSC...	-----

Texas Oil Spill Prevention and Response Act of 1991
31 TAC Section 19.12 through 19.13 - Major Facilities

§ 19.12	DESCRIPTION OF GUIDELINE ITEM	LOCATION IN PLAN
(C)	For corporate applications, the application must be signed by an officer of at least the rank of vice-president. For partnerships...signed by a partner. All applications must also be signed by the person responsible for operation...(i.e. the facility manager or area manager).	Foreword
§ 19.13	**DESCRIPTION OF GUIDELINE ITEM**	**LOCATION IN PLAN**
(a)	Applicability....	-----
(b)	Implementation of plans....	Entire Plan
(c)	Required elements of discharge prevention and response plans....include the following information:	-----
(1)	the owner and operator of the facility;	Fig. 1.1
(2)	the person or persons in charge of the facility, as required by §19.16 of this title (relating to Person in Charge);	Fig. 1.1, App H
(3)	the name and address (both physical and mailing) of the facility;	Fig. 1.1, App H
(4)	a description of the facility, including:	-----
(A)	The location of the facility by latitude and longitude;	Fig. 1.1, App H
(B)	The facility's primary activity;	Fig. 1.1, App H
(C)	The types of oil handled, whether material safety data sheets (MSDS) have been prepared for them, and the location where the MSDS are maintained;	App I, App H
(D)	The storage capacity of each tank used for storing oil;	TGLO Online Facility Database*
(E)	The diameter of all lines through which oil is transferred;	TGLO Online Facility Database*, App H
(F)	The average daily throughput of oil at the facility; and	TGLO Online Facility Database*, App H
(G)	The dimensions and capacity in barrels of the largest oil-handling vessel which docks at the facility.	TGLO Online Facility Database*, App H
(5)	For a facility which normally does not have personnel on-site, a commitment to maintain in a prominent location a sign or placard....	App H
(6)	A general description of measures taken by the facility to prevent unauthorized discharges of oil;	App C
(7)	A plan to conduct an annual oil spill drill that entails notifying the GLO and National Response Center and keeping a log at the facility....	App D
(8)	If oil is transferred at the facility, emergency transfer procedures to be implemented if an actual or threatened unauthorized discharge of oil occurs at the facility;	§ 2.0, § 3.0
(9)	Strategic plans to contain and clean up unauthorized discharges of oil from the facility;	§ 3.0, § 6.0, App F
(10)	A statement that all facility personnel who might be involved in an oil spill response have been informed that detergents or other surfactants are proh bited....	App A
(11)	A description of any secondary containment or diversionary structures...including the methodology for determining that the structures or equipment are adequate....	App C
(d)	Additional requirements for facilities classified as intermediate....	N/A
(e)	Additional requirements for facilities classified as large.....	-----
(1)	Maps showing vehicular access to the facility, pipelines to and from the facility, and nearby residential or other populous areas;	Fig. 6.2
(2)	A site plan of the facility showing:	-----

* The TGLO Online Facility Database is reviewed annually for each regulated facility and updated as necessary.

Texas Oil Spill Prevention and Response Act of 1991
31 TAC Section 19.12 through 19.13 - Major Facilities (Cont'd)

§ 19.13	DESCRIPTION OF GUIDELINE ITEM	LOCATION IN PLAN
(A)	The location of all structures in which oil is stored;	App H
(B)	The location of all areas where oil is transferred at the facility; and	App H
(C)	Drainage and diversion systems at the facility, such as sewers, outfalls, catchment or containment systems or basins, sumps, and all watercourses into which surface runoff from the facility drains (all of which bay be shown on the site plan or maps);	App H
(3)	A plan to conduct an annual oil spill drill that includes the following elements:	-----
(A)	Notifying the GLO and National Response Center;	§ 2.0, App D
(B)	Notifying any third parties, such as discharge cleanup organizations, which have agreed to respond….	§ 2.0, App D
(C)	If the facility has spill response equipment stored on-site, deployment of a representative portion of the equipment which would be used to respond to the type of discharge most likely to occur at the facility; and	App A, App D
(D)	A log documenting when the annual drill was conducted and the facility personnel who participated in it;	App G
(4)	A detailed description of the facility's discharge prevention and response capability, including:	-----
(A)	Leak detection and safety systems to prevent accidental discharges of oil, including a description of equipment and procedures;	App C
(B)	Schedules, methods, and procedures for testing, maintaining, and inspecting storage tanks, pipelines, and other equipment used for handling oil;	App C
(C)	Schedules, methods, and procedures for conducting accidental discharge response drills;	App D
(D)	Whether the facility's oil spill response capability will primarily be based on contracts or agreements with third parties or on the facility's own personnel and equipment;	App A
(E)	Planned response actions, the chain of command, lines of communication, and procedures for notifying the GLO, emergency response and public safety entities, other agencies, and neighboring facilities in the event of an unauthorized discharge of oil;	§ 2.0, § 3.0, § 4.0
(F)	Oil spill response equipment and supplies located at the facility, their ownership and location, and the time required to deploy them;	App A
(G)	If the facility owns and maintains oil spill response equipment, the schedules, methods, and procedures for maintaining the equipment in a state of constant readiness for deployment;	App A
(H)	If the operator has entered into any oil spill response or cleanup contract or basic ordering agreements with a discharge cleanup organization, copies of the contracts or agreements or a narrative description of their terms;	App A
(I)	The worst case unauthorized discharge of oil reasonably likely to occur at the facility and the rationale used to determine the worst case unauthorized discharge;	App B, App H
(J)	A description and map of environmentally sensitive areas that would be impacted by the worst case unauthorized discharge and plans for protecting these areas if an oil spill occurs at the facility;	§ 6.0
(K)	A description of response strategies that would be implemented to contain and clean up the worst case unauthorized discharge;	§ 3.0, App A, App F
(L)	Information on the facility's program for training facility personnel on accidental discharge prevention and response;	App D
(M)	Information on facility personnel who have been specifically designated to respond to an oil spill, including any training they have received and where the training records are maintained;	Fig. 2.2, App D

Texas Oil Spill Prevention and Response Act of 1991 31 TAC Section 19.12 through 19.13 - Major Facilities (Cont'd)		
§ 19.13	**DESCRIPTION OF GUIDELINE ITEM**	**LOCATION IN PLAN**
(N)	Plans for transferring oil during an emergency; plans for recovering, storing, separating, transporting, and disposing of oily waste materials generated during an oil spill response; and	App F
(O)	Plans for providing emergency medical treatment, site safety, and security during an oil spill.	§ 3.0